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Litho- and chronostratigraphy of Bukit Merah, Taiping Permo-Triassic Semanggol Formation based on fresh UTP 2014/2015 field mapping

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Regional reports (Hutchison 2009, Metcalfe 1998, Shashida 1995) suggested that between Late Devonian and middle Permian the north-northeast drifting Sibumasu Palaeo-Tethys Ocean amassed very thick deep marine ribbon cherts. By late Permian – middle Triassic, this basin accreted against East Malaya (Indochina), causing uplift and subsequent erosion of the cherts and clastics which redeposited as pebbly to coarse grained turbidites channel margin and levee. Further shallowing of the area brought in even coarser conglomerates and mudstone within upper submarine canyon fills during late Triassic.

Alexander (1959) introduced Semanggol Formation to define the Middle Triassic argillaceous-arenaceous rocks in the north of Perak to Kedah in general as reported by Burton (1988). Bukit Merah is northwest of Taiping, Perak and is also assigned to the Semanggol Formation (Foo Khong Yee, 1990). Foo (1990) stated that the formation at Gunung Semanggol area is an incomplete succession, due to the absence of top and bottom of the formation. The contacts with adjacent litho-stratigraphic units are either faulted or unexposed (Hutchison & Tan, 2009). Published litho-stratigraphic nomenclature categorize these deep water sediments as predominantly Triassic with Permian as the basal unit. Previous researcher divided the stratigraphy of Semanggol Formation into the Chert Member, Rhythmite Member and Conglomerate Member, in the order from oldest to the youngest. There is insufficient publication on the northern Perak area, especially on the Gunung Semanggol complex itself. Recent fieldwork conducted by UTP on the Bukit Merah, Gunung Semanggol area gave a new insight and opportunity to fill up some gap about the Semanggol Formation from new and old outcrops. A further four sub-members could be differentiated, probably from Early Permian to Recent. Thus far, there is no publication of igneous or volcanic evidence around Bukit Merah. However a new and different observation was made of an ex-quarry on the Gunung Semanggol east face, and two large blocks of conglomeratic body found on the western side of the southern Gunung Semanggol trigger a new hypothesis on the tectono-stratigraphy development of the Gunung Semanggol complex.

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