The nature of Permian-Triassic junction in the rock sequence in central Pahang

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Established Permian rocks in the areas of central Jengka Triangle from Gunung Senyum to Kampung Awah, and in the areas to the south from Teriang to Bt. Bertangga in Central Pahang are the widespread intermediate volcanic rocks of andesitic composition and the localised limestone at Gunung Senyum and Kampung Awah. And established Triassic rocks within the same areas are the shales, turbiditic sandstones and conglomerates, with localised limestone lenses of the Semantan Formation.

The andesitic rocks, being intermediate in composition and rich in mafic minerals, have mostly been weathered to reddish brown clay soil. Limited exposure of fresh andesite can however be observed at the JKR quarry at Kampung Awah. Large andesite boulders excavated out from reddish brown soil can be seen at a development site near Kota Gelanggi to the northeast of the Jengka Triangle. And small andesite blocks can be seen in dark reddish brown soil along the main Felda Jengka road from Kg. S. Jerik to Bandar Pusat Jengka.

Rocks of the Semantan Formation exposed at road cuts have mostly undergone weathering into soil. Weathered shales are yellowish brown, yellowish red to reddish brown in colour and can be seen at road cuts along Mentakab-Temerloh by-pass road and at several localities along Temerloh-Maran road. It may occasionally be difficult to be sure of whether a soil is weathered andesite or weathered shales.

The nature of contact between the Permian andesite and the Triassic Semantan Formation rocks, i.e. whether there is a break or not (an unconformity or not) has not been firmly ascertained.

During a field round to supervise undergraduate students in central Pahang, probable contact of the Permian andesite rock with the Triassic Semantan Formation rocks were observed, one along the road from Teriang to Bt. Bertangga in the south, and another along the road from Kg. S. Jerik to Bandar Pusat Jengka in the north.

At the first locality, the rock strata of the Semantan Formation consist of weathered, interbedded, thinly bedded shales and sandstones, turbiditic in character, and are folded into several gentle synclines and anticlines. The cores of the anticlines are made up of reddish-brown 'soil' that looks very much like the soil from andesitic rock. There is no obvious break between the reddish brown 'soil' and the interbedded weathered shales and sandstones.

Andesite boulders and 'outcrops' were seen by the south bank of S. Pahang near Kg. Pesagi to the north of the former locality.

At the second locality along Kg. S. Jerik-Bandar Pusat Jengka, a road cut exposes weathered rock consisting of about 2 m thick massive reddish brown 'soil', followed by about 2.5 m thick, thinly interbedded weathered tuffaceous shale and sandstone. There is no apparent break between the two. The former looks very much like soil derived from the weathering of andesitic rock whilst the latter is best interpreted to belong to the rocks of the Semantan Formation.

If the interpretation, for the observation at both localities, that the massive reddish brown 'soil' is the weathered product of andesite (of Permian age) and the weathered, interbedded tuffaceous shale and sandstone is part of the rock of the Semantan Formation is correct, the two observations suggest that there is no apparent break between the Permian andesite and the Triassic Semantan Formation. Work on this is still going on.

It is noteworthy to mention that at around the border of Pahang and Kelantan, the limestone of the Gua Musang Formation is being interpreted to span from late Permian into early Triassic.

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