

Faults in the Lower Detrital Member at Teluk China Mati, Pulau Tanjung Dendang

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Pulau Tanjung Dendang is situated at northeast of the Langkawi main island. It is an elongated island which is aligned in almost north- south direction. The whole island comprises the Setul Formation of Ordovician to Lower Devonian age. One third of the island (the northern part) consists of the Middle Ordovician dark grey limestone. The limestone is thickly bedded and fossiliferous. Two thirds of the island (the southern part) comprises the Upper Ordovician or possibly Silurian limestone. The limestone is dark grey and thickly bedded. Fossil has never been found from this part of the island. The Lower Detrital Member is in between the limestones. The Lower Detrital Member is exposed in Teluk China Mati, a small bay facing east. The exposed Lower Detrital Member consists of bedded dark grey mudstone and chert. Fault boundary was observed between the Middle Ordovician limestone on top of the Lower Detrital Member. The boundary between the Upper Ordovician limestone and the Lower Detrital Member has been interpreted to be thrust fault (Jones, 1981)

The bedded mudstone and chert are complexly folded and faulted. The folds vary from gentle open fold to tight isoclinal inclined fold. Sense of displacement on faults is determined by fault drag and offset layer. Fault planes are commonly filled with fault breccia and thin mylonites.

There are three groups of fold orientations. The first group is folds plunging to north northeast and south southwest. The second group is folds plunging to northwest and to southeast. The third is a small group of folds plunging to north. Two major sectors of fault orientation have been identified. The relationship between the faults and the folds will be discussed later.
