
Circular basin development in the Tangkulap – Kuamut area of Sabah

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The Bangan Basin south of Tangkulap in the interior of Sabah is a large faulted circular basin of concentric ridges of thick, shallow marine, Middle Miocene sandstones belonging to the Tanjong Formation. East of it around Kuamut is the Tangkong Basin which is filled with clay-rich sediments of equivalent age deposited in a deeper marine environment. Between these two Tanjong Formation basins are the sediments of the Kuamut Formation which consist of large and small blocks of rocks derived from the Chert-Spilite, Kulapis and Tanjong Formations embedded chaotically in a scaly clay matrix.

The older blocks in the Kuamut Formation (i.e. Chert-Spilite and Kulapis) were probably deposited first as submarine land slide or slump deposits within a rift valley that extends to the Cagayan Ridge and subsequently were squeezed up together with broken bits of the Tanjong Formation at the edge of the Bangan Basin in mud diapirs when the basin sank progressively as a giant load structure.

Exposures of the Upper Eocene Kulapis Formation on the northern margin of the Bangan Basin as well as in the clayey portion of the Tanjong Formation in the Tangkong Basin show a progressive decrease in structural disturbance away from the margins of the Bangan Basin.