How active are Sabah Trough and Baram Line?

A comment on a letter by H.D.Tjia, sent to the Geological Society of Malaysia

Franz L Kessler

Email: franz@curtin.edu.my

Although the larger parts of the "Northwest Borneo Trench" are indeed seismically inactive, as rightfully stated by H.D.Tija in his letter, there are certain areas (such as the "allochthoneous sheet") that may have seen activity up to the late Pliocene – the picture below being a 2008 model, based on Shell seismic.

The exact location, and width of the Baram Line have been a matter of debate. In Simons *et al*. (2007), some evidence for tectonic activity in the area of the Baram Line is presented. Though the MW 5.2 earthquake of 1 May 2004 may not be in itself conclusive, or even directly related to the Baram Line, the differential relative speed of GPS-based block movements (between areas of Sabah (Kota Kinabalu) and Sarawak (Bintulu), for instance) speaks a stronger language.

Somewhere between KK and Bintulu, contemporaneous compression and/or strike slip movements in the order of 1-3 mm/year have to be inferred.

With evidence that the axis of Baram Delta oilfields immediately East to the Baram Line have been bent from NE/SW to NW/SE (again Pliocene, possibly younger)- see Tan *et al*. (1999) - this phenomenon occurring near to the edge of the "Northwest Borneo Trench" -could be seen as further circumstantial evidence for young tectonic activity along the SW edge of the "Northwest Borneo Trench", the so-called Baram Line.

In a nutshell, the "Northwest Borneo Trench" is predominantly inactive, but the SW boundary, the Baram Line, could be active.

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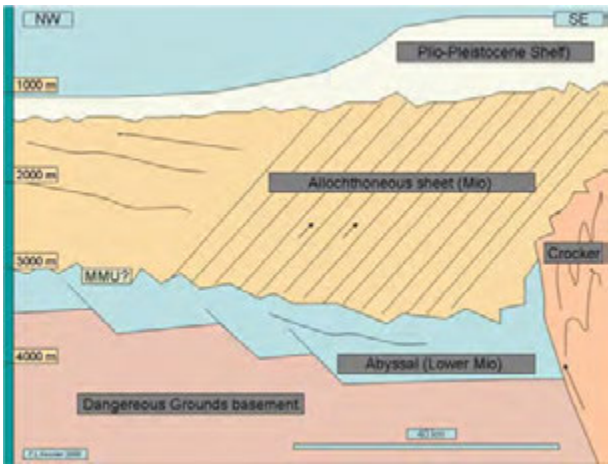

A section in coastal offshore Sabah

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 36, No. 1, January-March 2010