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## **APPLYING THE MODIFIED STRESS-STRAIN ELLIPSOID TO RE-DEFINE THE STRUCTURAL/ GEOLOGICAL PROVINCES OF SARAWAK, BRUNEI AND NW SABAH**

KUANG KOO SING

INNOVATIVE TECHNOLOGICAL GEO-EXPLORATION, AUSTRALIA

By applying the modified stress-strain ellipsoid, three main subplates can be defined in NW Borneo and its offshore. They are named, the Rajang, the Central Sarawak and the Baram-NW Sabah subplates. Their tectonics are dominated by the opening up of the South China Sea which since Cycle III or Stage IV caused a south easterly up tilt. Superimposed onto it are the anticlockwise rotation of Borneo during early tertiary, the cessation of subductions along the Lupar line, the Bukit Mersing line, and part of the Palawan Trough. The vast quantity of tertiary sediments brought down by the paleo river systems also has its impact.

By classifying their structural styles and its associated structuring mechanisms within the different subplates, one could define the various structural provinces. The important structuring mechanisms are (1) Thrustings, (2) Pull-aparts (3) Convergent wrenchings, (4) Divergent wrenchings and Diapirism. Due to the orientations of NW Borneo's paleo coastlines being virtually constant (NE-SW) since Cycle III or Stage IV, and its very gently dip, the structural provinces defined also correspond to its geological provinces.

The pre-Cycle III or pre-Stage IV structural styles are dominated by wrenching which is probably related to the propagation of the spreading axis of the opening up of the South China Sea. The accompanying anticlockwise rotations make it difficult to define its geological provinces.