

Polyphase deformation in the Telupid area, Sabah, Malaysia

Abstract

The Telupid area located in central Sabah consists of Mesozoic ophiolitic basement overlain by Cretaceous-Oligocene sediments. Detailed mapping of the area has recognised at least three main phases of deformation. The first deformation is characterised by folding and thrusting of basement rock and older Paleogene sediments trending N70E, with associated N-S left lateral horizontal faults. The second deformation is characterised by imbrication of the basement rock and overlying sediments to the NE, with associated NE-SW left lateral horizontal faults. The third deformation is characterised by thrusting of the earlier deformed basement rock and overlying sediments to the NW. The timing of deformation is uncertain, but based on regional consideration they are interpreted to have occurred during the Middle Eocene, early Lower Miocene and early Middle Miocene, respectively, related to major NW-SE compression in the Borneo region.