

Stratigraphy and structure of the Late Paleozoic Bt. Jaya metasediments, Pahang Darul Makmur — paleogeographic and tectonic implications

AZHAR HAJI HUSSIN

Department of Geology

University of Malaya, 59100 Kuala Lumpur

The late Paleozoic Bt. Jaya metasediments are composed of a lower sandstone-shale unit (estimated thickness is 100 m) which passes upwards gradually and conformably into a predominantly shale unit (estimated thickness exceeds 300 m). *Schwagerina* fusulinids found in the upper unit date its sedimentation in the Early Permian times.

The sandstones in the lower unit are quartz wacke which are generally sheet sandbodies exhibiting poor internal grading. Several channel sandbodies are also present. Features generally attributed to wave or tide origin are not found in these metasediments. Within the lower unit, several slump sheets whose thicknesses vary from a few centimeters to a few ten of meters are found. There is a complete range of deformation style which affected these slumped beds: preserving the original sequence in the coherent type, partially preserving the sequence in the semi-coherent type and totally disrupting the sequence in the incoherent type. This deformational style together with the truncated tops of the slump sheets and welded contacts between them suggest soft sediment deformation penecontemporaneous with sedimentation. The depositional environment for this unit is a submarine slope below the wave base. The orientation of the paleoslope, determined from the direction of the overturning of the slump folds, strike broadly north-south and dip to the east.

In the upper shale unit, several beds of pebbly mudstone are found. Clasts in these beds are mainly older metasediments mixed with reworked shallow water fauna like molluscs, foraminiferas brachiopods and echinoids. Land plants are abundant in some beds. This unit is interpreted as a basinal deposit with some resedimented beds.

The vertical stratigraphic change from slope to basinal environments suggest the deepening of the basin in the Early Permian times and a cut in the supply of coarse clastics. The immediate post-Early Permian event affecting these metasediments was the intrusion of intermediate dykes followed by regional folding and metamorphism.
