

Transpression in the strata of Pulau Kapas, Terengganu

MUSTAFA KAMAL SHUIB

Jabatan Geologi
Universiti Malaya
50603 Kuala Lumpur

The Kapas Island has suffered two successive dextral transpressive deformation episodes that lead to the development of a dextral strike-slip basin where the Kapas Conglomerate was deposited. During the first phase of brittle-ductile deformation (D_1) a series of close to tight folds trending NNW-SSE to NS were formed in the Permo-Carboniferous metasediment. These folds are commonly associated with NNW to NS axial plane parallel faults and shear zones with both strike-slip and reversed sense of displacement. The D_1 structures were reworked by D_2 events which amplified, rotated clockwise and refolded the earlier structures, along N-S D_2 dextral shear zones and NNW striking sinistral faults. This caused differential uplift and subsidence of the faulted blocks. Subsequent weathering and erosion of the metasediments caused deposition of the Kapas Conglomerate within the subsided blocks. Continued deformation during this deposition lead to the syn-sedimentary deformation of the conglomerate. If the conglomerate is Late Permian to Triassic in age, then this would imply that the D_1 and D_2 deformation must be of late Permian age with D_2 continuing into the Permo-Triassic. The D_1 and D_2 Late Permian dextral transpressive deformation, and rapid uplift followed by deposition of continental sediment in a strike slip basin is a major orogenic event which can be considered as part of a large scale deformation in the Eastern Belt that may relate to the oblique convergence of the two tectonic blocks of Peninsular Malaysia.