Syndepositional deformations in the Permo-Triassic and Latest Triassic to Cretaceous Central Basins of Peninsular Malaysia

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This contribution is aimed at presenting the various syndepositional structures that are found within the central Basins and its margins, to determine the nature of the Mesozoic Central Basin of Peninsular Malaysia. Numerous direct evidences for syn-sedimentary tectonism are found within the strata of the Central Basins. These include slumps, syn-sedimentary normal and strike-slip faults, syn-sedimentary folds, and shale injection structures. The evidence that comes from these syndepositional structures is that sedimentation is continuous with transcurrent tectonism. Although shallow syndepositional structures may or may not reflects the deep seated tectonisms, many features associated with these structures points to the interpretation that the Permo-Triassic Central basin has a graven geometry that is controlled by deep seated dextral; shear zones at depth. These include its association with dextral transcurrent basin margin faults (Bentong-Raub Zone), rapid facies changes within the basin and intermediate to acid volcanics and volcaniclastics. In addition, the presence of acid volcanic would suggest that the basin must be underlained by thinned continental crust and reflects the deep seated movements that have occurred. Similarly, the syndepositional structures in the Jurassic-Cretaceous strata support the interpretation that these deposits were deposited in small fault controlled basins. Their occurrences along the Lebir fault zone are taken to indicate that these basins were developed in a transtensional setting.

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