Superimposed folding in the Triassic Semantan Formation, Temerloh, Pahang

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The rocks of the Semantan Formation which are well exposed in the Temerloh-Mentakab area, Pahang were folded with the axis plunging towards N145°E- N155°E. Generally they can be classified as inclined to overturned folds with one of the limbs gently dipping. The first generation slaty cleavage (S1) can be clearly seen in slightly weathered rocks. Reverse-right slip faults (RRSF) developed almost parallel to S1 followed by another set of RRSF that cut the S1 are interpreted as a back-thrust. Field observations indicate that the gently dipping limbs are refolded, to form second generation open and asymmetrical folds (f2) with the axis plunging towards N130°E- N135°E and second generation cleavages (S2) that intercept the S1. Left-normal slip faults are considered as the third generation faults and oriented almost parallel to S2. The last deformation resulted in the formation of normal-left slip fault and is considered as a result of reactivation of the RRSF that were formed almost at the same time with the formation of the first generation folds. The refolding and formation of two generations of cleavage in the rocks of the Semantan Formation show that the structural style in this rock formation differs from that of the Jurassic-Cretaceous Tembeling Group. Therefore, the widely reported Triassic orogenic compression in Malaysia Peninsular that has been disputed should be reconsidered and accepted.