

Kinematic analysis of striated fractures in Titiwangsa granitoid, Karak Highway (Selangor side)

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Reliable fault-sense indicators: bruised steps, pluck steps, accretionary steps, stoss spalls, trail ridges, fault roche moutonnees, prod depressions and prod ridges (Figure 1) establish the nature of motion on slickensided fracture planes in the Titiwangsa granitoid that outcrop in Selangor along the Karak Highway. In certain instances subsidiary structures: *en echelon* tension gashes and drag features, and fault separations provide additional information on the sense of fault motion.

Right lateral and left lateral fault motion took place most frequently along NNE-NE and along ENE-E trending, steeply inclined to vertical fractures, respectively. This movement pattern is consistent with lateral compression within the 33 to 48 degrees sector, which is about 20 degrees at variance with the regional compression direction of Peninsular Malaysia, but is compatible with the vergence of the Genting Thrust Belt. Therefore, contemporaneity of thrusting and lateral fault motion on these particular fractures is indicated.

Among those studied, a comparatively small number of vertical fractures indicates lateral motion in response to compression that acted normal to that in the established sector. It appears that the NW-SE compression resulted from relaxation of the NE-SW stress. Superimposed striae and other fault markings on a number of fracture planes represent isostatic adjustments through gravity faulting.

Fig: 1

