

## FIELD RELATIONSHIPS OF ROCK UNITS ALONG THE MALAYSIA-THAI BORDER, NENERING, HULU PERAK

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The spectacular outcrops along the 20-km border road of the Malaysia-Thai border at Hulu Perak show rocks with a vast span of geologic time from those of Early Ordovician-Early Devonian age through rocks of Upper Palaeozoic to those of Tertiary age.

Outcrops of two angular unconformities are clearly exposed, the first between the rocks of Early Ordovician-Early Devonian age (Kroh Formation) and that of Upper Palaeozoic (the Kati Formation) occurs in the SE portion of the road while the second occurs between the Kroh Formation and those of the Tertiary sediments (Nenering Tertiary deposit) at the NW portion of the road.

In the SE portion of the area, the Kroh Formation (which is part of the Baling Group), is made up of sandstone, shale, argillites and chert. The chert of the Kroh Formation just below the older angular unconformity here is highly folded. Above this unconformity is the sequence of rocks of the broadly folded Kati Formation starting with bedded chert, followed by chert conglomerate, and a metre thick zone of brecciated chert due to thrusting of the thick overlying fine sandstone beds (of up to 2 m thick with interbedded bands of thin argillites).

Towards the NW portion of the area, the Nenering Tertiary deposit which is made up of indurated gently dipping sandstones, mudstones and conglomerates with a basal conglomerate (with clasts as big as 1 foot) above the younger unconformity overlying the highly contorted phyllite, argillites and limestone of the Kroh Formation. The Tertiary deposit here is clearly an extension of the Betong Tertiary deposit of south Thailand.

A series of faults in the area have affected the Pre-Tertiary sequences which were subsequently eroded before the deposition of the Tertiary sediments. A consequence of this is the absence of the Kati Formation to the NW portion of the border road where the Tertiary sediments rest directly on the Kroh Formation. Along the 19 and 20 ms the chert is repeated twice by a series of NW directed thrusts.

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