On the presence of pre-Carboniferous metasediments in the Eastern Belt: A structural view

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The geological map of Peninsular Malaysia shows that the oldest rock formation in the Eastern Belt is Carboniferous in age, consisting of mainly clastic sedimentary rocks. The rocks have been subjected to low grade regional metamorphism to become metaquatzite and phyllite and are generally known as metasediments. The metasediments are unconformably overlain by the Jurassic-Cretaceous continental deposits. Recent findings of plant fossils from the continental deposits in Bukit Keluang area, Terengganu indicate Late Permian age. The area was intruded by Permo-Carboniferous mafic to intermediate igneous rocks, followed by the Late Permian-Early Triassic biotite granite, the Late Triassic granite and finally by the Jurassic-Cretaceous dolerite dykes. Most of the interpreted Carboniferous metasediments show at least two episodes of folding trending north-northwest or south-southeast and north-south directions. However, in certain areas, these rocks indicate more complex structures with two generations of folding with the earliest trending east-northeast, followed by north-northwest trending folds. From a structural point of view, it is suggested that the more complicated metasediments with three generation of folds are of older (pre-Carboniferous) age. The earliest ENE trending folds were probably developed during the mid-Devonian orogeny that was interpreted based on structural studies in other areas.

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 30, No. 3, May-June 2004