Stratigraphy of the Jentik Formation, the transitional sequence from the Setul Limestone to the Kubang Pasu Formation at Guar Sanai, Kampung Guar Jentik, Beseri, Perlis — a preliminary study

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The transitional sequence from the Setul Limestone to the Kubang Pasu Formation is well exposed at Guar Sanai, Kampung Guar Jentik, Beseri District, northwest Perlis, Malaysia. The rocks of the study area are divided into three major units: Upper Setul Limestone, Jentik Formation, and Kubang Pasu Formation.

The Upper Setul Limestone exposed in Guar Sanai contains *Scyphocrinites*, which gives it a late Silurian age.

The name Jentik Formation is proposed for the roughly 300 m thick sequence between the Setul Limestone and Kubang Pasu Formation. The Jentik Formation can be further divided into six informal units: (a) Unit 1; (b) Unit 2; (c) Unit 3; (d) Unit 4; (e) Unit 5; (f) Unit 6. Unit 1 consists mainly of black shales containing a Dacryoconarid-*Monograptus-Plagiolaria* faunal assemblage, which gives an early Devonian age. Unit 2 consists of light coloured, unfossiliferous sandstones and shales. Unit 3 is mainly thick red mudstone, interbedded with sandstone, sometimes showing graded bedding. A brachiopod-*Diacoryphe-Posidonomya* faunal assemblage gives it a late Devonian age. Unit 4 consists of well bedded, dark limestone, containing straight coned nautiloid fossils. Unit 5 is composed mainly of black mudstone interbedded with cherts, with slump structures. The base of the unit contains a brachiopod–gastropod fossil assemblage. Unit 6 consists mainly of thick beds of brownish red mudstone, interbedded with sandstone. The red mudstones contain a *Macrobole–*

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crinoid fossil assemblage, which is earliest Carboniferous in age. The Kubang Pasu Formation is suspected to be unconformably overlying the Jentik Formation.

The epicontinental sea that covered present day northwest Peninsular Malaysia during the Palaeozoic was probably density stratified. Transition from shelf carbonate, to black shale and redbed deposition could be due to shifting of the boundary between the oxygen minimum layer and the deeper oxic layer of the sea, triggered by sea level changes.