

THE SILANTEK AREA, SARAWAK: ITS GEOLOGY AND COAL

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The Silantek area is made up of sedimentary and igneous rocks.

The oldest sedimentary rock encountered in the study area is the Silantek Formation (Upper Eocene - Miocene ?). The formation comprises of shales, mudstones, siltstones, sandstones and coal seams. The authors have divided the formation into four facies based on lithology, sedimentary structures and environment of deposition which generally varies from deltaic to fluvial. The formation is non-conformable with the Bt. Tabong microgranite, G. Buri microgranodiorite and the Serlan Volcanic formation besides being overlain conformably by the Plateau Sandstone.

The rank of the coal in the Silantek Formation varies from medium volatile bituminous to anthracite rank. The coal has low sulphur and low ash content. Geochemical analysis and the petrography of the coal indicates that the paleoenvironment of the swamp is paralic.

The Plateau Sandstone comprises of polymict massive sandstone, conglomerate and subordinate argillites. Most part of the formation is deposited in a fluvial environment.

Igneous rocks in the study area include the Bt. Tabong microgranite (Late Cretaceous ?), G. Buri microgranodiorite (Late Cretaceous ?), Serlan Volcanic Formation (Upper Triassic), Bt. Tunggul dacite (Miocene ?) and numerous acidic to basic Miocene sills and dykes. The rock types of the Serlan Volcanic Formation include dacite and basaltic andesite. All these igneous rocks (except the sills and dykes which are not geochemically analysed) are calcalkaline. Geochemical analysis failed to show any genetical relationship between Bt. Tabong microgranite and G. Buri microgranodiorite.

The study area formed the northern limb of the Keteongau syncline with gentle southwards dipping strata. Four predominant sets of joints and lineaments are encountered. They are probably related to the Keteongau syncline. Faults observed have strikes similar to the joint directions.