Geology of the G. Sumalayang area, Johor

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The study area can be divided into 3 formations which were deposited during 2 different Eras, namely,

a) Late Palaeozoic Era
   i. Dohol Formation – Middle Permian
   ii. Sedili Volcanic Formation – Late Permian

b) Late Mesozoic Era
   i. Tebak Formation – Early Cretaceous

The Dohol Formation consists of argillaceous, calcareous and tuffaceous rocks. The fossiliferous limestone, the Sumalayang Limestone Member, contains fusulinid (family: *Fusulinidae* and *Schwagerinidae*). The fossil occurrence and rock types suggest a shallow marine depositional environment.

The Sedili Volcanic Formation overlies conformably the Dohol Formation. Composition of the pyroclastic rocks range from acid to intermediate, that is rhyolite to rhyodacite. From petrographic studies the constituents of the tuff are quartz, K-feldspar, plagioclase, muscovite and chlorite with quartz dominance (>70%) indicating high silica content.

The Tebak formation is a continental deposit with subhorizontal sandstone beds with the grains ranging from fine to coarse and the presence of pebbly-sandstone.

Based on structure analysis the study area shows 2 types of folds, namely open and closed folds plunging moderately 40° to the northwest.

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