

Depositional Environment of Permian Tak Fa Formation, Nakhonsawan, Northern Thailand

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The carbonate rocks of the study area at Amphoe Tak Fa and Amphoe Takhli, Changwat Nakhon Sawan belong to the Tak Fa Formation, Saraburi Group. This formation crops out in the Khao Khwang Platform and consists of late Palaeozoic carbonate platform deposits. It reaches a thickness of 900 meters and crops out in a vast area. The exposures have been measured and samples were collected for petrographic study. The rock consists of limestones, argillaceous limestones, mudstones and dolomites with nodular and banded cherts, which comprise many invertebrate fossils such as fusulinids, ammonoid, pelecypod, gastropod, coral and bryozoa. Many of the fossils are silicified. The gastropod assemblage is currently under study and represents one of the most diverse faunas reported from SE Asia. The age of the rock is Yakhtashian or Artinskian (late Early Permian) to Midian or Capitanian (late Middle Permian). The study of carbonate facies and fauna indicates that the depositional environment was on shelf lagoon within the carbonate platform varying from shallow marine to barrier bar.