

General Geology and Assessment of Extraction of Drainage Pattern in Jelawang River, Dabong, Kelantan

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This study was about the general geology and assessment of extraction of drainage pattern in Jelawang, Dabong, Kelantan. The purposes of this research were to produce a geological map of the study area, to extract the drainage pattern from the study area and to evaluate the accuracy of drainage pattern extraction from Digital Elevation Model (DEM). Field observation and mapping at the study area were done. Rock samples were collected for laboratory studies. The drainage pattern is extracted from two methods: (1) topographic map at scale 1:25000 and (2) Digital Elevation Model (DEM) extracted from SRTM data using ArcHydro tool. The study area consists of rocks from Permian until Triassic. The rocks included

are marble, volcanic origin rocks and sandstone. An acid intrusive granite is the igneous rocks that formed from the cooling of magma below the earth surface. By the finding of hornfel, marble and quartzite nearby the Stong Migmatic Complex, it can be the evidence of metamorphism that occurred due to the intrusion of granite. The obtained results of drainage pattern extracted by the two methods were evaluated using GPS points and visual interpretation. The results show that the drainage pattern extracted from the previous DEM using ArcHydro tool was more accurate comparing to those extracted from topographic maps at scale 1:25000 as this was proved by GPS points.