

ABSTRACT

Geology and Depositional Environmental Studies Coal Carrier Layer On Sandstone Sujau Formation at Segah Sub- District, Berau District, East Borneo Province

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Regional mapping is administratively located at Segah Sub-District, Berau District, East Borneo Province. Geographically located at coordinates UTM (Universal Transverse Mercator) mE 521 500 - 525 000 and 283 000 mE mN - 285000mN. Research area are one of PT. Ithaca Resources region. Area of the research is 3.5 x 2 km.

The operation of the research involves collecting data obtained from the field through the mapping , as for the stages of mapping that is: the preparation (field orientation, preparing instruments such as GPS, compass, geological hammer, and maps of the research area), at Field (observation and description of rocks, observation and measurement of geological structure, etc.), and the last data analysis (analysis masseral, petrographic, and geological structure).

Geomorphology in research area can be divided into 3 units of landforms, namely: hills of syncline landform (S1), plateau denudation landform (D1) and alluvial landforms (F1). Drainage pattern that developed in the reseacrh area is subdendritik. Stratigraphy research area are divided into three lithologies, Sujau claystone Unit (late Eocene), Sujau sandstone unit (late Eocene) and Aluvial. The contact stratigraphy Sujau claystone unit with Sujau sandstones Unit are conformity, whereas Sujau Sandstone Unit with alluvial are unconformity. Geological structure that developed in the research area are fractures with the general direction N225°E, and syncline Upright Horizontal Fold (Fluety, 1964).

Depositional environment of Sujau Claystone Unit were deposited on prodelta (Allen, et al., 1998) . While depositional environment of Sujau Sandstones Unit based on analysis of three aspects (physical, chemical, biological) were deposited on the environment delta front with sub-environments precipitation distributary channel - distributary mouth bar (Allen et al., 1998), whereas the coal contained in Sujau sandstone Unit, deposited on facies limno-telmatik with sub-facies bog (Diessel, 1992).