ABSTRAK

GEOLOGI DAN POLA SEBARAN LAPISAN BATUBARA PURWAJAYA, LOA JANAN, KUTAI KARTANEGARA, KALIMANTAN TIMUR

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Kalimantan Timur merupakan daerah penghasil batubara terbesar di Indonesia. Secara administratif, penelitian dilakukan pada daerah Purwajaya, Loa Janan, Kutai Kartanegara, Kalimantan Timur. Secara geomorfologi, daerah penelitian terdiri dari bentuk lahan Perbukitan Homoklin Denudasi (D1), Dataran Aluvial (F1), Lahan Bukaan Tambang (A1), dan Disposal (A2). Secara fisiografi, daerah penelitian termasuk ke dalam Cekungan Kutai yang terbentuk pada Zaman Paleogen dan terus berkembang hingga sekarang. Secara stratigrafi, daerah penelitian tersusun atas satuan batulempung Kampungbaru dengan litologi batulempung sisipan batupasir, batulanau, dan batubara yang terbentuk pada Miosen Akhir – Pliosen. Selama pembentukan Formasi Kampungbaru, Cekungan Kutai sedang mengalami fase tektonik inversi cekungan. Lokasi daerah penelitian berada pada Antiklinorium Samarinda yang terbentuk akibat inversi tersebut. Penelitian ini dilakukan untuk mengamati pola sebaran batubara pada daerah penelitian menggunakan pemetaan lapangan, penampang stratigrafi terukur, korelasi profil *borehole*, dan pemodelan sederhana dengan *software Minescape 5.7*. Pada daerah penelitian, ditemukan singkapan batubara teratur memanjang searah jurus lapisan batuan yaitu N040ºE – N060ºE dan lapisan menerus ke arah tenggara dengan kemiringan landai, dengan *seam* C teramati menipis ke arah timur laut akibat perubahan kondisi lingkungan pengendapan.

Kata kunci: Batubara, Formasi Kampungbaru, Geologi, Loa Janan, Pola Sebaran

ABSTRACT

GEOLOGY DAN COAL DISTRIBUTION PATTERN IN PURWAJAYA, LOA JANAN, KUTAI KARTANEGARA, KALIMANTAN TIMUR

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East Kalimantan is the largest coal-producing region in Indonesia. Administratively, the research was conducted in the Purwajaya, Loa Janan, Kutai Kartanegara, East Kalimantan. Geomorphologically, the research area consists of the Homoclinal Denudation Hills (D1), Alluvial Plains (F1), Mine Excavation (A1), and Disposal (A2) landforms. Physiographically, the research area is included in the Kutai Basin which was formed in the Paleogene Period and continues to develop until now. Stratigraphically, the research area is composed of the Kampungbaru mudstone unit which consist of mudstone intercalated with sandstone, siltstone, and coal formed in the Late Miocene – Pliocene. During the formation of the Kampungbaru Formation, Kutai Basin was undergoing a basin inversion tectonic phase. The location of the research area is within the Samarinda Anticlinorium which is the result of the inversion. This research was conducted to observe the coal distribution pattern in the research area using field mapping, measured stratigraphic cross-sections, borehole profile correlation, and simple modeling with Minescape 5.7 software. In the research area, regular coal outcrops were found extending in the direction of the rock layer strike, namely N040^{o}E – N060^{o}E and the layers continued to the southeast with a gentle slope and thinning of seam C is observed towards the northeast due to changes in depositional environmental conditions.

Keywords: Coal, Distribution Pattern, Geology, Kampungbaru Formation, Loa Janan