

KARAKTERISTIK LAPISAN BATUBARA BERDASARKAN DATA WELL LOGGING, DI LAPANGAN “L 3” KECAMATAN TENGGARONG SEBERANG, KABUPATEN KUTAI KARTANEGARA, PROVINSI KALIMANTAN TIMUR

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ABSTRAK

Penelitian ini dilakukan di PT. Kitadin Embalut, Lapangan L 3, Kec. Tenggarong Seberang, Kabupaten Kutai Kartanegara, Provinsi Kalimantan Timur. Daerah penelitian ini masuk ke dalam Formasi Balikpapan yang merupakan formasi pembawa batubara. Penelitian menggunakan data *well logging*, log *gamma Ray* pada 6 sumur. Penelitian dilakukan dengan tujuan menganalisa defleksi kurva *well Logging* serta menghitung nilai *volume shale* untuk mengetahui karakteristik lapisan batubara dan hubungannya dengan kualitas batubara di daerah penelitian. Analisa data didukung oleh data uji laboratorium berupa kandungan abu, kalori, *total moisture* dan *total sulfur*

Berdasarkan hasil penelitian diketahui bahwa ketebalan batubara di daerah penelitian bervariasi. Kehadiran *parting* terbukti mempengaruhi kualitas batubara sehingga pada lapisan batubara yang sama kualitas dapat berbeda. Kehadiran *parting* dapat dilihat langsung dari kenampakan kurva log *gamma ray* yang dicirikan dengan peningkatan nilai *v shale* secara tiba-tiba. Abu merupakan pengotor pada lapisan batubara yang dapat menurunkan kualitas batubara. Nilai koefisien determinansi menunjukkan hubungan antara *v shale* dan abu batubara sangat kuat dengan $R^2 = 0,8059$ sehingga dapat dijelaskan pula bahwa *v shale* merupakan faktor dominan penurunan kualitas batubara.

Kata kunci : log *gamma ray*, *v shale*, abu, kalori, kualitas

CHARACTERISTIC OF COAL BASED ON WELL LOGGING DATA AT L3 FIELD, TENGGARONG SEBERANG DISTRICT, KUTAI KARTANEGARA REGENCY, EAST KALIMANTAN PROVINCE

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ABSTRACT

This research was done at Kitadin Embalut Company, L3 Field, Tenggara Seberang District, Kutai Kartanegara Regency, East Kalimantan Province. It area is part of Balikpapan Formation which is the coal barrier formation. Research using well logging data, gamma ray log at 6 wells. It aims to analyze the deflection of well logging curve and calculating the volume of shale to determine the characteristic of the coal seam and its relation to quality of coal in the reseach area. Data analysis is supported by laboratory data such as ash content, calorific value, total moisture and total sulfur.

Based on research results revealed that the thickness of the coal in the study area varies. The Presence of parting was proven to influence coal quality so that same seam have different quality. The present of parting can be seen directly from the appreance of gamma ray log kurve which is charactized with increased of shale volume value suddenly. Ash content is an impurity that can decrease quality value of coal seam. Coefficient of determination value shows the relationship between volume of shale and ash content of coal is very strong with $R^2 = 0.8059$ so it can be explained that volume of shale is a dominant factor to reduce coal quality

Keyword: gamma ray log, v shale, ash content, calorific value, quality