ABSTRAK

IDENTIFIKASI LAPISAN BATUBARA BERDASARKAN ANALISIS WELL LOGGING & DATA PROKSIMAT PADA LAPANGAN "3HW"

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Penelitian ini dilakukan untuk mengidentifikasi lapisan batubara berdasarkan analisis data *geophysical well logging* dan data proksimat yang terletak di Kecamatan Teluk Pandan, Kabupaten Kutai timur, Kalimantan Timur. Penelitian ini bertujuan untuk mencari hubungan antara data *well logging* dengan Analisa proksimat batubara dan mencari sebaran kualitas batubara. Metode *well logging* digunakan untuk mengukur sifat fisis batuan secara vertical dalam lubang bor, dengan parameter utama berupa *gamma ray* dan *density*. Hasil interpretasi menunjukkan adanya 7 lapisan batubara (seam) dengan karakteristik densitas yang bervariasi. Melakukan crossplot dari data *well logging* yang berupa nilai *density* terhadap hasil Analisa proksimat batubara yang berupa nilai *total moisture, ash content, caloric value* sehingga didapatkan sebaran kualitas Batubara. Hubungan antara *density* dengan *total moisture* adalah semakin besar kandungan *moisture* maka semakin kecil nilai *density* batubara. Hubungan antara *density* dengan *ash content* adalah semakin besar kandungan *ash* maka semakin kecil nilai *density* batubara. Sedangkan hubungan antara *density* dengan *caloric value* adalah semakin besar nilai *density* maka akan semakin besar nilai kalori batubara. Sebaran nilai *total moisture* berkisar antara 12 - 15 %, nilai *ash content* berkisar antara 4 – 7 %, nilai *caloric value* berkisar antara 5700 – 6800 kcal/kg

Kata Kunci :*Well logging*, Proksimat, Kualitas batubara

ABSTRACT

IDENTIFICATION OF COAL LAYERS BASED ON WELL LOGGING ANALYSIS AND PROXIMATE AT THE "3HW" FIELD

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The research was conducted to identify coal layers based on geophysical well logging data analysis and proximate data located in Teluk Pandan District, East Kutai Regency, East Kalimantan. This study aims to find the relationship between well logging data and coal proximate analysis and to find the distribution of coal quality. Well logging methods were used to measure the physical properties of rocks vertically within the borehole, with primary parameters including gamma ray and density. The interpretation results indicate the presence of seven coal layers (seams) with varying density characteristics. A crossplot was created using well logging data (density values) against proximate analysis results (total moisture, ash content, and caloric value), thereby determining the distribution of coal quality. The relationship between density and total moisture is such that as moisture content increases, coal density decreases. The relationship between density and ash content is that the higher the ash content, the lower the coal density. Meanwhile, the relationship between density and caloric value is that the higher the density, the higher the coal's caloric value. The distribution of total moisture values ranges from 12–15%, ash content values range from 4–7%, and caloric value ranges from 5700–6800 kcal/kg.

Kata Kunci :*Well logging*, Proximate, Coal Quality