

ABSTRAK

PENENTUAN LITHOLOGI DAN KORELASI ANTARA NILAI KALORI BATUBARA DENGAN *DENSITY LOG* BERDASARKAN DATA GEOFISIKA LOGGING DAERAH TAMBANG AIR LAYA KABUPATEN MUARA ENIM, PROVINSI SUMATERA SELATAN

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Daerah penelitian terletak di daerah Tambang Air Laya, Kecamatan Tanjung Enim, Kabupaten Muara Enim, Propinsi Sumatera Selatan. Berada di Kabupaten Muara Enim terletak ± 247 km di sebelah barat daya kota Palembang. Daerah penelitian ini berada pada Formasi Muara Enim yang mempunyai umur miosen atas sampai pliosen bawah, dan pada daerah penelitian terdapat intrusi batuan beku sedimen yang menyebabkan nilai kalori batubara lebih baik dari pada daerah yang tidak terdapat intrusi batuan beku. Penelitian ini menggunakan metode *well logging* dengan titik bor sebanyak 3 titik bor. Tujuan penelitian ini adalah untuk analisa dari hubungan data log densitas dengan nilai kalori *air dried basis* dan *air recived* lapisan batubara daerah Tambang Air Laya, Kecamatan Tanjung Enim, Kabupaten Muara Enim, Provinsi Sumatera Selatan. Hasil penelitian menunjukkan bahwa batubara pada daerah penelitian memiliki rata – rata nilai densitas 1.5 sampai 2.00 gr/cc, kalori ADB 6845.96 cal/gr dan kalori AR 6239.03cal/gr . Dengan menggunakan metode *trideline scatterplot bivariant* digunakan untuk mendapatkan hubungan korelasi dari 2 variabel, dimana pada daerah penelitian memiliki hubungan lemah sampai sedang. Dari hasil hubungan antara Hubungan antara *density air dried basis* dengan kalori memiliki variasi positif $R^2 = 0.5305 = 53.05\%$ dan hubungan antara *density air recived* memiliki variasi $R^2 = 0,5507 = 55.07 \%$.

Kata kunci :intrusi, *well logging*, *log density*, *air dried basis*, *air recived*

ABSTRACT

LITHOLOGY DETERMINATION AND CORRELATION BETWEEN THE VALUE OF COAL WITH CALORIE DENSITY LOG GEOPHYSICAL DATA BASED ON LOGGING OF TAMBANG AIRLAYA DISTRICT MUARA ENIM, PROVINCE SOUTH SUMATRA

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The study area is located in the area of Mine Air Laya, District Tanjung Enim, Muara Enim, South Sumatra Province. Being located in the district of Muara Enim ± 247km south-west of the city of Palembang. The study area is located in the Muara Enim Formation which has upper Miocene to Pliocene age the bottom, and in the research area are igneous intrusions of sediment that causes the calorific value of coal is better than the regions that are not igneous intrusions. This study uses a method well logging with drill point drill as many as 3 points. The purpose of this study was to analysis of log data density relationship with a calorific value of water and air dried basis recived coal seam mining area Air Laya, District Tanjung Enim, Muara Enim, South Sumatra Province. The results showed that the coal in the research area has average density value of 1.5 to 2:00 gr / cc, calories ADB 6845.96 cal / g and calories AR 6239.03cal / g. By using the scatterplot trideline bivariant used to obtain the correlation of two variables, whereas in the study area has a weak relationship to moderate correlation. From the results of the relationship between the relationship between the density of water dried with a calorie basis has a positive variation of $R^2 = 0.027 = 2.7\%$, and the relationship between the density of water recived have a positive variation of $R^2 = 0,5507 = 55.07 \%$.

Keywords: intrusion, well logging, log density, air dried base, air recived