

**HUBUNGAN ANTARA KARAKTERISTIK *VOLUME SHALE*
BATUBARA DAN KUALITAS BATUBARA BERDASARKAN
PEMERCONTOHAN *THICKNESS INTERVAL* DAERAH
MANGKALAPI KEC. SATUI, KAB. TANAH BUMBU, PROV.
KALIMANTAN SELATAN**

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INTISARI

Telah dilakukan penelitian batubara dengan menggunakan metode geofisika *well logging*. Penelitian dilakukan di daerah Mangkalapi, Kecamatan Satui, Kabupaten Tanah Bumbu, Propinsi Kalimantan Selatan.

Penelitian ini dilakukan pada empat titik bor. Penelitian menggunakan data *well logging* yang antara lain *log gamma ray*, *log density* dan *log caliper* dan data kualitas batubara yang diperoleh dari hasil uji laboratorium yang meliputi *total moisture*, *ash content*, dan *calorific value*. Pengambilan sampel batubara yang dilakukan untuk uji laboratorium menggunakan metode pemercontohan selang ketebalan (*thickness interval*). Berdasarkan metode ini diperoleh tiga kualitas dalam satu lapisan batubara, yaitu *coal roof*, *coal body*, dan *coal floor*. Berdasarkan hasil penelitian diperoleh nilai *volume shale* rata-rata dari tiap batubara. Hasil perhitungan *volume shale* tersebut kemudian dicocokkan dengan data kualitas batubara.

Dari hasil penelitian diperoleh bahwa batubara yang memiliki kualitas yang paling baik terdapat pada bagian *coal body*. Hal ini diindikasikan dari hasil uji laboratorium yang baik dan nilai *volume shale* rata-rata yang semakin kecil. Berdasarkan hal ini, dapat disimpulkan bahwa nilai *volume shale* memiliki keterkaitan terhadap parameter kualitas batubara yaitu *total moisture*, *ash content*, dan *calorific value*. Hubungan antara *volume shale* dan *total moisture* memiliki nilai dengan $R^2=80,4\%$. Semakin tinggi nilai *volume shale* maka akan semakin tinggi pula nilai *total moisture* nya (berbanding lurus). Hubungan antara *volume shale* dan *ash content* memiliki nilai dengan $R^2=79,9\%$. Semakin tinggi nilai *volume shale* maka akan semakin tinggi pula nilai *ash content* nya (berbanding lurus) Hubungan antara *volume shale* dan *calorific value* memiliki nilai dengan $R^2=80,4\%$. Semakin tinggi nilai *volume shale* maka akan semakin rendah *calorific value* (berbanding terbalik).

Kata kunci : *Well logging*, *log gamma ray*, *log density*, *log caliper*, *volume shale*, kualitas batubara, *thickness interval*

***CORRELATION BETWEEN CHARACTERISTIC OF VOLUME
SHALE AND COAL QUALITY BASED ON THICKNESS
INTERVAL SAMPLING IN MANGKALAPI AREA, SATUI
DISTRICT, TANAH BUMBU REGENCY, SOUTH KALIMANTAN
PROVINCE***

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ABSTRACT

Coal research has been done on Formasi Tanjung using geophysical well logging methods. The study was conducted in Mangkalapi area, Satui District, Tanah Bumbu Regency, South Kalimantan Province.

The research was conducted at four points of the drill. Research using well logging data includes gamma ray log, density log and caliper logs and coal quality data obtained from laboratory test results which includes the total moisture, ash content and calorific value. Coal sampling for laboratory tests performed using thickness interval method. From this method obtained three qualities in a single layer of coal, the coal roof, coal body, and the coal floor. Based on the research results obtained the value the average volume shale of each coal. Volume Shale calculation results are then matched with the data quality of coal.

From the results obtained that the coal which has the best quality of coal found on the body. It is indicated from the results of both laboratory tests and the average volume shale is getting smaller. Based on this, it can be concluded that the volume shale is related to coal quality parameters, namely total moisture, ash content and calorific value. The relationship between volume and total moisture shale has a value with $R^2 = 80.4\%$. The higher the value of the volume shale the higher the value of its total moisture (linear positive). The relationship between the volume of shale and ash content has a value with $R^2 = 79.9\%$. The higher the value of the shale volume the higher the value of its ash content (linear) relationship between the volume of shale and calorific value have a value with $R^2 = 80.4\%$. The higher the value of the volume shale, the lower calorific value (linear negative).

Keyword : Well logging, gamma ray log, density log, caliper log, volume shale, coal quality, thickness interval