

ABSTRAK

ANALISA PERSEBARAN BATUBARA DAN PENENTUAN STRIPING RATIO(SR) BERDASARKAN METODE GEOFISIKA WELL LOGGING PADA LAPANGAN MUARA BUNGO, JAMBI

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Batubara banyak digunakan sebagai bahan pembangkit, sumber tenaga maupun sebagai bahan untuk industri kecil. Potensi batubara di Indonesia yang begitu besar menjanjikan untuk terus dikembangkan. Tingginya cadangan batubara memungkinkan pemanfaatannya untuk dijadikan energi listrik serta pendukung kegiatan industri. Untuk itu diperlukan eksplorasi batubara untuk mendukung sektor industri seperti produksi baja, semen, aluminium dan bahan kimia.

Daerah telitian berada di Daerah Rantau Dukuh, Kecamatan Rantau Pandan, Kabupaten Muarabungo, Provinsi Jambi dengan koordinat $101^{\circ} 54'30,10''$ BT – $101^{\circ} 56'17,12''$ BT dan $1^{\circ}35'36,38''$ LS – $1^{\circ}36'42,70''$ LS atau di UTM Zona 47 Selatan Ekuator berada pada kisaran 823650 mT – 826950 mT dan 9821600 mU – 9823640 mU. Pengolahan data yang dilakukan pada penelitian ini adalah pengolahan log gamma ray dan log densitas atau log rapat massa. Pada log sinar gamma, *shale line* bisa digambarkan dengan pembacaan batulempung sebesar 100%. Pembacaan di bawah shale line menandakan bertambahnya kehadiran batupasir, batugamping, dan batubara, sedangkan pembacaan diatas shale line menunjukkan lapisan shale marine dengan kandungan uranium yang tinggi.

Dari perhitungan volume batuan penutupnya sebesar 176.863.620 M³, sedangkan volume lapisan batubaranya sebesar 19.734.858 M³, sehingga perhitungan $SR = \text{Volume batubara} / \text{Volume tanah penutup} = 19.734.858 \text{ M}^3 / 176.863.620 \text{ M}^3 = 1/8,96$. Dari perhitungan volume batuan penutupnya sebesar 78.385.785 M³ sedangkan volume lapisan batubaranya sebesar 17.984.617 M³, sehingga perhitungan $SR = \text{Volume batubara} / \text{Volume tanah penutup} = 17.984.617 \text{ M}^3 / 78.385.785 \text{ M}^3 = 1/4$.

Kata Kunci: Batubara, Striping Ratio

ABSTRACT

COAL DISTRIBUTION ANALYSIS AND DETERMINATION OF STRIPPING RATIO (SR) BASED ON WELL LOGGING GEOPHYSICS OF MUARABUNGO DISTRICT, JAMBI

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Coal is widely used as a generator, as a source of power and as a material for small industries. The great potential of coal in Indonesia promises to continue to be developed. The high coal reserves allow their utilization to be used as electrical energy and to support industrial activities. For this reason, coal exploration is needed to support industrial sectors such as steel, cement, aluminum and chemical production.

The research area is located in the Rantau Dukuh Region, Rantau Pandan District, Muarabungo Regency, Jambi Province with coordinates $101^{\circ} 54'30.10''$ BT - $101^{\circ} 56'17.12''$ BT and $1^{\circ}35'36.38''$ LS - $1^{\circ}36'42.70''$ LS or in UTM Zone 47 South Equator is in the range of 823650 mT - 826950 mT and 9821600 mU - 9823640 mU. Data processing conducted in this study is the processing of gamma ray log and density log or mass density log. In gamma ray logs, shale lines can be drawn with 100% clay readings. A reading below the shale line indicates an increase in the presence of sandstones, limestone, and coal, while a reading above the shale line shows a layer of marine shale with high uranium content.

From the calculation of the cover rock volume of 176,863,620 M³, while the volume of the coal seams amounted to 19,734,858 M³, so the calculation of $SR = \text{coal volume} / \text{volume of overburden} = 19,734,858 \text{ M}^3 / 176,863,620 \text{ M}^3 = 1 / 8.96$. From the calculation of the cover rock volume was 78,385,785 M³ while the volume of the coal bed was 17,984,617 M³, so the calculation of $SR = \text{coal volume} / \text{volume of overburden} = 17,984,617 \text{ M}^3 / 78,385,785 \text{ M}^3 = 1/4$.

Keyword: Coal, Striping Ratio