

RINGKASAN

Penelitian dilakukan pada PT. Berau Coal Kecamatan Sambaliung Kabupaten Berau Provinsi Kalimantan Timur. Daerah penelitian yang berada pada Cekungan Tarakan yang termasuk dalam bagian Sub-cekungan Berau pada Formasi Tersier Miosen Lati (Tml). TSS (*Total Suspended Solid*) merupakan parameter yang digunakan dalam baku mutu air yang telah diatur dalam PERDA PROV KALTIM NO 2 TAHUN 2011 TENTANG PENGOLAHAN KUALITAS AIR DAN PENGENDALIAN PENCEMARAN AIR. TSS (*Total Suspended Solid*) merupakan total padatan tersuspensi didalam air yang dipengaruhi oleh litologi batuan pada overperbadan batubara, air limpasan tambang harus memiliki nilai TSS (*Total Suspended Solid*) 300 mg/l sebelum dilepaskan ke sungai dan harus dilakukan treatment terhadap air agar sesuai dengan baku mutu air yang telah ditetapkan. Penelitian ini dilakukan untuk mengetahui persebaran litologi yang berpotensi meningkatkan nilai TSS (*Total Suspended Solid*) tinggi pada daerah penelitian. Metode yang dilakukan dalam penelitian ini berupa metode survey lapangan, yaitu suatu metode dengan melakukan pengambilan data lapangan yang kemudian dikompresikan terhadap data-data hasil analisis laboratorium berupa analisis sayatan petrografi dan analisis sifat fisik batuan. Pada daerah penelitian didapatkan sampel lapisan *Roof* dan *Floor* batubara yang merupakan batulempung dengan nilai densitas dan porositas yang berbeda beda. Peningkatan nilai TSS (*Total Suspended Solid*) dipengaruhi oleh nilai kuat tekan batuan dan sifat fisik batuan.

Kata Kunci: TSS (*Total Suspended Solid*) dan Sifat Fisik Batuan

SUMMARY

The research was conducted at PT. Berau Coal, Sambaliung District, Berau Regency, East Kalimantan Province. The research area is in the Tarakan Basin which is part of the Berau Sub-basin in the Tertiary Miocene Lati Formation (Tml). TSS (Total Suspended Solid) is a parameter used in water quality standards which has been regulated in KALTIM PROV REGIONAL PERDA NO 2 OF 2011 CONCERNING WATER QUALITY PROCESSING AND WATER POLLUTION CONTROL. TSS (Total Suspended Solid) is the total suspended solids in the water which is influenced by the rock lithology in the coal overburden, mine runoff water must have a TSS (Total Suspended Solid) value of 300 mg/l before being released into the river and the water must be treated so that it is in accordance with established water quality standards. This research was conducted to determine the distribution of lithology that has the potential to increase high TSS (Total Suspended Solid) values in the research area. The method used in this research is a field survey method, namely a method of collecting field data which is then compressed into data resulting from laboratory analysis in the form of petrographic incision analysis and analysis of the physical properties of rocks. In the research area, samples of the coal roof and floor layers were obtained which are claystone with different density and porosity values. The increase in the TSS (Total Suspended Solid) value is influenced by the compressive strength value of the rock and the physical properties of the rock.

Keywords: TSS (Total Suspended Solid) and Physical Properties of Rocks