

ABSTRAK

ANALISIS PENURUNAN KUALITAS BATUBARA BERDASARKAN PERBANDINGAN BATUBARA PIT *ALPHA* DAN *FINE COAL* DI AREA *STOCKPILE* KECAMATAN LOKPAIKAT, KABUPATEN TAPIN, PROVINSI KALIMANTAN SELATAN

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Daerah penelitian terletak di wilayah pertambangan PT. Bhumi Rantau Energi, Kecamatan Lokpaikat, Kabupaten Tapin, Provinsi Kalimantan Selatan yang termasuk dalam Cekungan Barito dengan Formasi Warukin sebagai formasi pembawa batubara. Penelitian ini bertujuan untuk mengetahui kondisi geologi daerah penelitian, karakteristik kualitas batubara Pit *Alpha* dan *Fine coal* di area *Stockpile*, tingkat penurunan kualitas batubara, serta faktor-faktor yang mempengaruhinya. Metode penelitian yang digunakan berupa pemetaan geologi dan pengambilan data kualitas batubara. Selanjutnya dilakukan tahap analisis data dan sintesis data. Berdasarkan kondisi geomorfologi, daerah penelitian terdiri atas bentuklahan antropogenik berupa bukaan tambang (An1) dan kolam tambang (*sump*) (An2). Stratigrafi daerah penelitian berdasarkan ciri litologi yang dominan dikelompokkan menjadi satu satuan batuan tidak resmi yaitu Satuan Batulanau Tapin yang berumur *Miosen* Tengah – *Miosen* Akhir. Hasil analisis kualitas batubara menunjukkan bahwa *Fine coal* di area *Stockpile* mengalami penurunan kualitas dibandingkan batubara Pit *Alpha* yang ditandai oleh peningkatan kandungan *moisture* dan kadar abu serta penurunan nilai kalor. Penurunan kualitas batubara dipengaruhi oleh paparan air hujan dan kelembapan lingkungan, ukuran partikel *Fine coal* yang lebih halus, serta kontaminasi material anorganik selama proses penanganan dan penyimpanan di area *Stockpile*

Kata kunci: Batubara, *Fine coal*, Kualitas Batubara, Penurunan kualitas, dan *Stockpile*

ABSTRACT

ANALYSIS OF COAL QUALITY DEGRADATION BASED ON THE COMPARISON OF PIT ALPHA COAL AND FINE COAL IN THE STOCKPILE AREA, LOKPAIKAT DISTRICT, TAPIN REGENCY, SOUTH KALIMANTAN PROVINCE

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The study area is located within the mining concession of PT. Bhumi Rantau Energi, in Lokpaikat Subdistrict, Tapin Regency, South Kalimantan Province, which is part of the Barito Basin, with the Warukin Formation serving as the coal-bearing formation. This study aims to determine the geological conditions of the study area, the quality characteristics of Pit Alpha coal and Fine coal in the Stockpile area, the rate of coal quality degradation, and the factors influencing it. The research methods employed include geological mapping and the collection of coal quality data. This was followed by data analysis and data synthesis. Based on geomorphological conditions, the study area consists of anthropogenic landforms in the form of mine openings (An1) and mine ponds (sumps) (An2). The stratigraphy of the study area, based on dominant lithological characteristics, is grouped into one unofficial rock unit, namely the Batulanau Tapin Unit, dating from the Middle to Late Miocene. The results of the coal quality analysis indicate that the Fine coal in the Stockpile area has experienced a decline in quality compared to the Pit Alpha coal, characterized by an increase in moisture content and ash content, as well as a decrease in calorific value. The decline in coal quality is influenced by exposure to rainwater and environmental humidity, the finer particle size of the Fine coal, and contamination by inorganic materials during handling and storage in the Stockpile area.

Keywords: Coal, Fine coal, Coal Quality, Quality Deterioration, and Stockpile