

SARI

Daerah penelitian berada di daerah Karang Raja, Kecamatan Muara Enim, Kabupaten Muara Enim, Sumatera Selatan. Formasi pembawa batubara pada daerah penelitian adalah Formasi Muara Enim Miosen Tengah – Akhir. Hal menarik yang dapat diteliti yaitu faktor geologi seperti lingkungan pengendapan berpengaruh terhadap kualitas batubara, karena Formasi Muara Enim terendapkan pada lingkungan delta maka pasokan sedimen dari sungai dan pasang surut air laut berubah - ubah, sehingga perlu dilakukan analisis kualitas batubara.

Penelitian dilakukan dengan pemetaan geologi permukaan dan analisis data bawah permukaan (data bor). Penentuan kualitas batubara dilakukan dengan analisis proksimat. Analisis proksimat merupakan analisis yang meliputi *moisture content*, *volatile matter*, *ash content* dan *fixed carbon* dari sampel batubara.

Berdasarkan hasil penelitian didapatkan geomorfologi tersusun oleh satuan bentuklahan perbukitan homoklin bergelombang lemah, perbukitan homoklin bergelombang sedang dan tubuh sungai. Stratigrafi daerah penelitian terdiri dari satuan batulempung Muara Enim, satuan batupasir Muara Enim dan endapan aluvial. Struktur geologi yang terbantuk yaitu sesar normal, kekar, *cleat* dan lapisan homoklin. Hasil analisis proksimat didapat nilai rata-rata *Total moisture* sebesar 38,38 % (ar). *Inherent moisture* 13,51 % (adb), Kadar abu (ash) 5,18 % (adb). *Volatile matter* 43,22 % (adb). *Fixed carbon* 36,4 % (adb), Total sulfur 0.24 % (ad), kalori 5657,5 (adb) kcal/kg. Hasil perhitungan *calorific value (dmmf)* didapatkan nilai 9859,11 Btu/lb dikategorikan *Subbituminous B*. Berdasarkan analisis geologi dan dikombinasikan dengan data analisis proksimat dapat mendukung interpretasi lingkungan pengendapan batubara yaitu pada lingkungan *lower delta plain*.

Kata kunci: Analisis Proksimat, Formasi Muara Enim, Karang Raja, Lingkungan pengendapan, Kualitas Batubara

ABSTRACT

The research area is in the Karang Raja area, Muara Enim District, Muara Enim Regency, South Sumatra. The coal-bearing formation in the study area is the Middle – Late Miocene Muara Enim Formation. The interesting thing that can be studied is that geological factors such as depositional environment affect the quality of coal, because the Muara Enim Formation was deposited in a deltaic environment, the supply of sediment from rivers and seawater fluctuates, so it is necessary to analyze the quality of coal.

The research was carried out by surface geological mapping and analysis of subsurface data (drill data). Determination of coal quality is carried out by proximate analysis. Proximate analysis is an analysis that includes moisture content, volatile matter, ash content and fixed carbon from coal samples.

Based on the research results, it was found that the geomorphology is composed of landform units of weakly undulating homocline hills, moderately undulating homocline hills and river. The stratigraphy of the study area consists of Muara Enim claystone units, Muara Enim sandstone units and alluvial deposits. The geological structures formed are normal faults, joints, cleats and homocline bed. The results of the proximate analysis obtained an average total moisture value of 38.38% (ar). Inherent moisture 13.51 % (adb), Ash content (ash) 5.18 % (adb). Volatile matter 43.22 % (adb). Fixed carbon 36.4% (adb), Total sulfur 0.24% (ad), calories 5657.5 (adb) kcal/kg. The calorific value (dmmf) calculation results obtained a value of 9859.11 Btu/lb categorized as Subbituminous B. Based on analysis geology and combined with proximate analysis data can support the interpretation of the coal depositional environment, namely in the lower delta plain environment.

Keywords: Coal Quality, Depositional environment, Karang Raja, Muara Enim Formation, Proximate Analysis.