INTISARI

Cekungan Barito merupakan salah satu cekungan di Kalimantan Selatan yang merupakan daerah penghasil batubara di Indonesia. Salah satu formasi pembawa batubara yang hadir di Cekungan Barito adalah Formasi Warukin yang berumur Miosen. Tujuan penelitian ini untuk mengetahui karakteristik maseral batubara, berupa dominansi maseral dan mikrofasies, serta tipe dan perkembangan *mire* tempat batubara terendapkan di daerah penelitian, yang digunakan untuk membantu studi geologi batubara daerah Kandangan, Kalimantan Selatan. Metode yang dilakukan berupa analisis petrografi organik, analisis proksimat dan ultimat pada *seam* L8, L5, L5B, M16, dan MS02 di daerah Kandangan yaitu pada wilayah IUP PT. Antang Gunung Meratus yang diambil menggunakan metode *ply by ply*. Hasil pengamatan petrografi batubara subbituminus pada formasi ini menunjukkan kelimpahan *vitrinite* yang dominan berkisar antara 41,34-74,04% vol, *liptinite* antara11,61-38,24% vol, *inertinite* antara 2,21-32,32% vol, dan *mineral matter* berkisar antara 0,17-1,98% vol yang didominasi oleh pirit. Data kadar abu berkisar 1,36-15,45 (% wt *air dry basis*). Data kadar sulfur berkisar 0,1-0,45 (% wt, *dry ash free*).

Berdasarkan asosiasi kelimpahan maseral, mikrofasies batubara dapat dikategorikan ke dalam lima kelompok, yaitu: (1) *gelovitrinite-rich group*, (2) *telovitrinite-rich group*, (3) *liptinite-telovitrinite-rich group*, (4) *inertinite-rich group,* dan (5) *telovitrinite-inertinite-rich group.* Bagian bawah dicirikan oleh *telovitrinite-inertinite-rich group.* Pada bagian tengah, tersusun oleh *inertinite-rich group* dan *telovitrinite-inertinite-rich group.* Bagian atas dicirikan oleh *gelovitrinite-rich group* dan *telovitrinite-rich groups*. Tipe *paleomire* yaitu *wet forest swamp* pada kondisi *limnic* dan *telmatic.* Vegetasi asal dominan tumbuhan berkayu namun tumbuhan perdu juga ditemukan dalam jumlah yang tidak sedikit. Tingkat gelifikasi sedang hingga tinggi menunjukkan bahwa gambut selalu tergenang oleh air. *Paleomire* yang berkembang berupa perulangan *topogenous mire* menuju *ombrogenous mire.*

Kata kunci : Formasi Warukin, petrografi organik, kandungan kimiawi, mikrofasies, *paleomire*

ABSTRACT

The Barito Basin is one of the basins in South Kalimantan and serves as a coal-producing region. One of the coal-bearing formations present in the Barito Basin is the Miocene Warukin Formation. The purpose of this research is to understand the characteristics of coal macerals, including the dominance of macerals and their microfacies, as well as the type and development of the mire where coal is deposited in the study area. This information is crucial for the coal geological study in the Kandangan region, South Kalimantan. The methods employed include organic petrography analysis, proximate and ultimate analysis on seams L8, L5, L5B, M16, and MS02 in the Kandangan area, PT. Antang Gunung Meratus, collected using the ply-by-ply method.The results of the subbituminous coal petrography examination in this formation show the dominance of vitrinite ranging between 41.34-74.04% vol, liptinite between 11.61-38.24% vol, inertinite between 2.21-32.32% vol, and mineral matter ranging from 0.17-1.98% vol, predominantly composed of pyrite. The ash content data ranges from 1.36-15.45 (% wt, air dry basis). The sulfur content data ranges from 0.1-0.45 (% wt, daf).

Based on the distribution of maceral abundance, coal microfacies can be categorized into five groups: (1) gelovitrinite-rich group, (2) telovitrinite-rich group, (3) liptinite-telovitrinite-rich group, (4) inertinite-rich group, and (5) telovitrinite-inertinite-rich group. The lower section is predominantly characterized by the telovitrinite-inertinite-rich group. In the middle section, the inertinite-rich group takes precedence, alternating with the telovitrinite-inertinite-rich group. The upper segment is primarily marked by the gelovitrinite-rich and telovitrinite-rich groups. The developed paleomire includes repetitions of topogenous mire and ombrogenous mire. The paleomire type is a wet forest swamp under limnic and telmatic conditions. The dominant original vegetation consists of woody plants, although shrubby plants are also found in significant amounts. Moderate to high gelification levels indicate that the peat was constantly inundated with water.

Keywords: *Warukin Formation, organic petrography, chemical content, Microfacies, Paleomire,*