RINGKASAN

Daerah penelitian secara administratif terletak di Desa Muara Lawai, Merapi Timur, Lahat, Sumatra Selatan yang secara geologi berada pada Formasi Muaraenim yang berumur pengendapan Miosen Tengah - Pliosen. Geomorfologi daerah penelitian termasuk dalam daerah perbukitan berlereng landai (30-80 mdpl) dengan pola pengaliran sub-dendritik dengan Sungai Lawai sebagai sungai utama. Penelitian ini bertujuan untuk mengetahui kondisi geologi bawah permukaan, pola sebaran dan kemenerusan lapisan batubara di Blok Lawai Timur IUP PT. Budi Gema Gempita berdasarkan interpretasi data *well logging* dari 20 titik bor menggunakan *log gamma ray* dan *log density*, serta analisis geofisika untuk menentukan sifat fisik dan geologi dari lapisan batubara. Data yang diperoleh kemudian di interpretasikan menggunakan *software LogPlot* dan diolah menggunakan perangkat lunak *minescape 5.7*. Hasil penelitian menunjukkan bahwa daerah penelitian memiliki 8 *seam* batubara. Urutan dari *seam* termuda hingga paling tua yaitu *seam* 10A, *seam* 10B, *seam* 9, *seam* 9A, *seam* 9B, *seam* 8, *seam* 7A dan *seam* 7B. Ketebalan rata-rata disetiap *seam* bervariasi, dikendalikan oleh kondisi morfologi cekungan saat pengendapan lapisan batubara. Hasil korelasi dan bentuk model 2D memperlihatkan arah umum persebaran *seam* batubara relatif mengarah barat-timur dan termasuk kategori tidak teratur. Kemiringan lapisan batubara dikontrol oleh struktur antiklin asimetris dengan sumbu yang berarah Barat-Timur, dengan sudut kemiringan 15°-90° di sayap utara dan 10°-15° selatan. Kemenerusan lapisan batubara diarea penelitian terputus hal ini disebabkan oleh pengaruh struktur.

Kata Kunci *: Pola sebaran, kemenerusan, lapisan batubara, well logging, PT. Budi Gema Gempita, Sumatra Selatan.*

SUMARRY

The research area is administratively located in Muara Lawai Village, East Merapi, Lahat, South Sumatra, which is geologically located in the Muaraenim Formation, which is of Middle Miocene - Pliocene sedimentary age. The geomorphology of the research area includes a gently sloping hilly area (30-80 masl) with a sub-dendritic drainage pattern with the Lawai River as the main river. This study aims to determine the subsurface geological conditions, distribution patterns and continuity of coal seams in the East Lawai Block of PT. Budi Gema Gempita IUP based on the interpretation of well logging data from 20 drill points using gamma ray logs and density logs, as well as geophysical analysis to determine the physical and geological properties of the coal seams. The data obtained were then interpreted using LogPlot software and processed using Minescape 5.7 software. The results showed that the research area has 8 coal seams. The sequence from youngest to oldest seams is seam 10A, seam 10B, seam 9, seam 9A, seam 9B, seam 8, seam 7A and seam 7B. The average thickness of each seam varies, controlled by the morphological conditions of the basin during coal seam deposition. The results of the correlation and the shape of the 2D model show that the general direction of the coal seam distribution is relatively west-east and is categorized as irregular. The slope of the coal seam is controlled by an asymmetric anticline structure with an axis that is west-east, with a slope angle of 15°-90° on the north flank and 10°-15° south. The continuity of the coal seam in the study area is interrupted due to the influence of the structure.

Keywords: *Distribution pattern, continuity, coal seams, well logging, PT. Budi Gema Gempita, South Sumatra.*