ABSTRAK

IDENTIFIKASI KEBERADAAN BATUBARA MENGGUNAKAN METODE RESISTIVITAS, KONFIGURASI WENNER-SCHLUMBERGER DI DAERAH "X", PROVINSI KALIMANTAN SELATAN

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Pengukuran menggunakan metode Resistivitas Konfigurasi Wenner-Schlumberger di daerah "X" Provinsi Kalimantan Selatan. Bertujuan melokalisir daerah yang diindikasikan berpotensi sebagai lapisan batubara dan mengetahui penyebaran serta kedalamannya di bawah permukaan, berdasarkan interpretasi penampang resistivitas 2D dan rekonstruksi model 3D. Perpindahan elektroda Metode Resistivitas Konfigurasi Wenner-Schlumberger dapat memberikan resolusi vertical dan horisontal.

Data yang digunakan berupa data sekunder berupa nilai potensial (mV), arus listrik (mA), hambatan listrik (Ohm), Faktor geometri (m), dan lokasi titik pengukuran geolistrik. Lintasan yang digunakan dalam penelitian ini berjumlah 8 lintasan pengukuran dengan arah lintasan N 90° E (Barat-Timur). Panjang rata-rata lintasan 480 meter dengan spasi antar titik pengukuran 10 meter. Pengolahan data pada penelitian ini menggunakan *software Res2Dinv* dengan *output* penampang model 2D dan dengan *software Rockwork* 14 dengan *output* model 3D.

Berdasarkan penampang *resistivity* 2D lapisan batubara memiliki *range* nilai resistivitas berkisar antara 200-300 Ohm.m serta diindikasikan berasosiasi dengan litologi batupasir dan batulempung. Kedalaman serta ketebalan lapisan batubara pada setiap lintasan bervariasi, dengan kedalaman berkisar 40-90 meter serta ketebalan lapisan batubara mencapai 5-15 meter. Kemenerusan lapisan batubara relatif arah Baratdaya ke Selatan.

Kata kunci :   Resistivitas, batubara, konfigurasi Wenner-Schlumberger.

ABSTRACT

IDENTIFICATION OF COAL EXISTENCE USING RESISTIVITY METHOD OF WENNER-SCHLUMBERGER CONFIGURATION IN "X" AREA, SOUTH KALIMANTAN PROVINCE

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Measurement using Wenner-Schlumberger configuration of Resistivity Method in "X" area, South Kalimantan Province. The aim of the research is to localize the area that indicated as a potential coal seams and determine the spread and depth below the surface, based on the interpretation of resistivity 2D profile and reconstruction of 3D model. Displacement electrode of Wenner-Schlumberger configuration can provide vertical and horizontal resolution.

The data used is secondary data, they are potential value (mV), electric current (m), electrical resistance (Ohm), the geometry factor (m), and the location of the geoelectric measurements. Total line that used in this study is 8 line with the line direction is N 90° E (West-East). The average of line length is 480 meters and the measurement spacing is 10 meters. The data processing in this research is used by software res2dinv with output of resistivity 2D profile and software rockwork 15 with out put of 3D model.

Based on the resistivity 2D profile the coal seam has a range of resistivity values ranged between 200-300 Ohm.m and indicated associated with sandstone and claystone lithology. The depth and thickness of coal seam at each line measurement is varies, with depth ranging from 40-90 meters and the thickness of coal seam reaches 5-15 meters. Continuous the coal seam direction is relative southwest to south.

Key Word: *Resistivity, Coal, Wener-Schlumberger configuration.*