

RINGKASAN

PT. Karbon Kartanegara terletak di desa Sekatak, Kecamatan Sekatak Buji, Kabupaten Bulungan, Provinsi Kalimantan Utara dan memiliki 3 IUP, yang diberi nama Blok Selatan, Blok Tengah, Blok Utara. Potensi granit yang ada pada daerah tersebut ingin dimanfaatkan oleh PT. Karbon Kartanegara dengan cara membuka tambang. Ketiadaan data pendukung yang menyatakan sebaran dan sumberdaya granit pada 3 lokasi IUP PT. Karbon Kartanegara, mendorong dilakukannya eksplorasi.

Kegiatan eksplorasi dilaksanakan dengan melakukan pengukuran geolistrik resistivitas 2 dimensi menggunakan konfigurasi Wenner sebanyak 40 lintasan, yang mencakup 80% dari luas daerah penelitian. Penampang keadaan bawah permukaan dari hasil pengukuran resistivitas 2 dimensi digabungkan untuk dibuat permodelan 3 dimensi. Permodelan 3 dimensi digunakan untuk melakukan estimasi sumberdaya granit yang ada pada lokasi penelitian.

Berdasarkan hasil penelitian yang dilakukan, terdapat 2 jenis granit yaitu granit lapuk dan granit *fresh*. Pertama, granit lapuk memiliki nilai resistivitas 900 – 1.950 Ωm dan kedua granit *fresh* memiliki nilai resistivitas $>1.950 \Omega\text{m}$. Pada blok selatan volume granit lapuk sebesar 8.928.000 m^3 dan volume granit *fresh* sebesar 1.338.000 m^3 . Blok tengah volume granit lapuk sebesar 2.218.000 m^3 dan volume granit *fresh* sebesar 2.166.000 m^3 . Blok utara volume granit lapuk sebesar 5.842.000 m^3 dan volume granit *fresh* sebesar 3.614.000 m^3 .

Kata kunci: granit, geolistrik, permodelan, resistivitas, sumberdaya.

ABSTRACT

PT. Kartanegara Carbon is located in the village of Sekatak, Sekatak Buji Subdistrict, Bulungan Regency, North Kalimantan Province and has 3 IUP, named South Block, Middle Block, North Block. The potential for granite in the area to be used by PT. National Carbon by opening the mine. The absence of supporting data stating the distribution and granite resources at 3 locations of the IUP of PT. Carbon Kartanegara, encourages exploration.

Exploration activities are carried out by measuring geolistyrics of 2-dimensional resistivity using a Wenner configuration of 40 tracks, which covers 80% of the area of the research area. The appearance of subsurface conditions from the results of the 2-dimensional resistivity measurements are combined to create 3-dimensional modeling. 3-dimensional modeling is used to estimate the granite resources at the research location.

Based on the results of research conducted, there are 2 types of granite, weathered granite and fresh granite. Weathered granite has a resistivity value of $900 - 1.950 \Omega\text{m}$ and fresh granite has a resistivity value of $> 1.950 \Omega\text{m}$. In the southern block the weathered granite volume is $8.928.000 \text{ m}^3$ and the fresh granite volume is $1.338.000 \text{ m}^3$. The middle block of weathered granite volume is $2.218.000 \text{ m}^3$ and the fresh granite volume is $2.166.000 \text{ m}^3$. The northern block of weathered granite volume is $5.842.000 \text{ m}^3$ and the fresh granite volume is $3.614.000 \text{ m}^3$.

Keywords : granite, geoelectricity, modelling, resistivity, resource.