

## ABSTRAK

# ANALISIS DATA GEOLISTRIK METODE *INDUCED POLARIZATION* (IP) UNTUK MENGETAHUI SEBARAN MINERAL LOGAM PADA DAERAH “FK” MENGGUNAKAN KONFIGURASI DIPOLE-DIPOLE

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Penelitian mengenai analisis data geolistrik metode *Induced Polarization* (IP) pada daerah “FK”. Secara stratigrafi, daerah penelitian tersusun atas Endapan Aluvium, Basal Bunga, Granit sukadana, dan Gunungapi Kerabai. Kejadian tektonik yang ada di Kalimantan menyebabkan melimpahnya sumber daya alam di daerah penelitian diantaranya yaitu mineral logam. Penelitian ini bertujuan untuk mengetahui sebaran dan besarnya sumberdaya mineral logam didaerah “FK”.

Pada penelitian ini menggunakan 8 lintasan dengan jarak spasi antar elektroda 20 meter. Arah orientasi lintasan pengukuran yaitu utara-selatan dengan panjang lintasan sejauh 580 meter. Tahap pengolahan data yakni dengan menggunakan *software Res2Dinv* sehingga diperoleh model penampang 2D resistivitas dan chargeabilitas, kemudian dilakukan pemodelan 3D untuk mengetahui besarnya sumberdaya mineral logam didaerah penelitian. Dari model 3D kemudian dilakukan *slicing* perkedalaman untuk mengetahui keberadaan dari mineral logam tersebut dikedalaman tertentu.

Hasil analisis didapatkan persebaran nilai resistivitas dari 20 - 1203  $\Omega\text{m}$ , sedangkan nilai chargeabilitas dari 10.3 - 300 msec. Untuk resistivitas  $<50 \Omega\text{m}$  diinterpretasi sebagai batupasir, resistivitas 50-200  $\Omega\text{m}$  diinterpretasi sebagai batupasir breksian, resistivitas 200-500  $\Omega\text{m}$  diinterpretasi sebagai breksi, dan resistivitas  $>500 \Omega\text{m}$  diinterpretasi sebagai batuan beku. Untuk chargeabilitas, keberadaan mineral logam terdapat pada chargeabilitas sedang - tinggi yaitu  $<176$  msec. Banyaknya sumberdaya mineral logam didapatkan sebesar 31,919,460 Ton.

**Kata Kunci :** *Induced Polarization, dipole-dipole*, resistivitas, chargeabilitas, mineral logam

## **ABSTRACT**

### **ANALYSIS OF GEOELECTRIC DATA INDUCED POLARIZATION (IP) METHOD TO KNOW THE DISTRIBUTION OF METAL MINERAL IN THE "FK" AREA USING DIPOLE-DIPOLE CONFIGURATION**

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*Research on the analysis of geoelectrical data using the Induced Polarization (IP) method in the "FK" area. Stratigraphically, the study area is composed of Alluvium, Flower Basalt, Sukadana Granite, and Kerabai Volcano. The tectonic events in Kalimantan have caused an abundance of natural resources in the research area, including metal minerals. This study aims to determine the distribution and size of metal mineral resources in the "FK" area.*

*In this study using 8 tracks with a spacing between the electrodes of 20 meters. The direction of the measurement path orientation is north-south with a track length of 580 meters. The data processing stage is by using Res2Dinv software to obtain a 2D resistivity and chargeability cross-sectional model, then 3D modeling is carried out to determine the amount of metal mineral resources in the research area. From the 3D model then depth slicing is carried out to determine the presence of these metallic minerals at certain depths.*

*The results of the analysis obtained a distribution of resistivity values from 20 - 1203  $\Omega\text{m}$ , while the chargeability values were from 10.3 - 300 msec. The resistivity of  $<50 \Omega\text{m}$  is interpreted as sandstone, resistivity of 50-200  $\Omega\text{m}$  is interpreted as breccia sandstone, resistivity of 200-500  $\Omega\text{m}$  is interpreted as breccia, and resistivity of  $>500 \Omega\text{m}$  is interpreted as igneous rock. For chargeability, the presence of metallic minerals is found in moderate to high chargeability, namely  $<176$  msec. The amount of metal mineral resources obtained was 31,919,460 tons.*

**Keywords** : *Induced Polarization, dipole-dipole, resistivity, chargeability, metallic minerals*