

## INTISARI

### **IDENTIFIKASI POTENSI ANDESIT MENGGUNAKAN METODE GEOLISTRIK KONFIGURASI *DIPOLE-DIPOLE* DI DESA HARGOREJO, KOKAP, KULON PROGO, YOGYAKARTA**

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Batu andesit banyak dijumpai di Kabupaten Kulon Progo, DIY, salah satunya Desa Hargorejo. Untuk mengetahui potensinya, dilakukan penelitian dengan menggunakan metode Geofisika yaitu metode Geolistrik. Tujuan penelitian ini untuk menentukan persebaran batu andesit dan zona prospek penambangan batu andesit berdasarkan korelasi nilai resistivitas antar lintasan pada daerah penelitian. Pengambilan data metode geolistrik resistivitas dilakukan dengan menggunakan konfigurasi *dipole-dipole*. Jarak elektroda yang digunakan yaitu 20 m. Pada pengukuran ini, diperoleh data sebanyak 10 lintasan dengan panjang masing-masing lintasan 300 meter. Pengolahan data dilakukan menggunakan perangkat lunak *Res2Dinv* untuk mendapatkan penampang 2D dengan nilai resistivitas. Pengolahan selanjutnya yaitu mengkorelasikan nilai resistivitas antar lintasan untuk mengetahui arah kemenerusan litologi batu andesit. Pengolahan terakhir yaitu pembuatan model 2D persebaran batu andesit menggunakan perangkat lunak *RockWorks 16*. Berdasarkan korelasi nilai resistivitas antar lintasan, daerah penelitian dapat dikelompokkan menjadi 3 litologi, yaitu litologi *soil* yang memiliki nilai resistivitas  $<50 \Omega\text{m}$ , litologi batu andesit lapuk yang memiliki nilai resistivitas  $50-134 \Omega\text{m}$  dan litologi batu andesit segar yang memiliki nilai resistivitas  $>134 \Omega\text{m}$ . Berdasarkan korelasi penampang resistivitas dan pemodelan 2D persebaran batu andesit terletak pada Barat dan juga Timur daerah penelitian, sehingga area yang direkomendasikan untuk kegiatan penambangan memiliki arah orientasi Timur-Barat.

**Kata kunci** : geolistrik, andesit, resistivitas, Kulon Progo

## **ABSTRACT**

### **IDENTIFICATION OF ANDESITE PROSPECTIVITY USING GEOELECTRIC DIPOLE-DIPOLE CONFIGURATION IN HARGOREJO VILLAGE, KOKAP, KULON PROGO, YOGYAKARTA**

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Andesites is commonly found in Kulon Progo Regency, DIY, one of which is in the village of Hargorejo. To know its potential, research using geoelectric method had been conducted. The purpose of this research is to determine andesite mining prospects zone based on the correlation of the resistivity value between each line in the study area. Geoelectric Resistivity method data acquisition was done by using dipole-dipole configuration. The distance between electrodes was 20 m. In this measurement, the data was obtained using 10 lines with each length measured at 300 meters. Data processing was done using the Res2Dinv software to get a 2D cross section consists of resistivity value. The next process was to correlate the resistivity value between each line to determine the direction of the andesite. The last process of the modelling was to make of 2D distribution of andesite using RockWorks 16 software. Based on the correlation of the resistivity value between those lines, the research area can be grouped into 3 lithologies, which soil that has a resistivity value of  $< 50 \omega\text{m}$ , weathered andesite that has a resistivity value of 50-134  $\Omega\text{m}$ , and fresh andesite that has resistivity value  $> 134 \omega\text{m}$ . Based on the correlation of the resistivity value at its cross-sections and 2D modelling of andesite, this lithology being distributed in the western and the eastern part of the research area, thus the recommended area for mining activities lies between East-west orientation.

**Keywords** : geoelectric, andesite, resistivity, Kulon Progo