

**IDENTIFIKASI STRUKTUR BAWAH PERMUKAAN DI SEKITAR
JALUR SESAR OPAK DI DUSUN PATEN DENGAN METODE
GEOLISTRIK KONFIGURASI *DIPOLE-DIPOLE***

Oleh:

Maria Widyati Lisia Rini Nabiada
NIM.11306144043

ABSTRAK

Penelitian ini bertujuan untuk mengetahui persebaran nilai resistivitas dan mengetahui struktur bawah permukaan di sekitar jalur sesar Opak di Dusun Paten berdasarkan data geolistrik. Lokasi penelitian terletak di Dusun Paten, Desa Srihardono, Kecamatan Pundong, Yogyakarta pada koordinat geografis 7° 56'34,2''LS sampai 7°56'54,94''LS dan 110°21'38,44''BT sampai 110°21'58,22'' BT.

Metode yang digunakan adalah metode geolistrik dengan konfigurasi dipole-dipole yang didasarkan pada nilai resistivitas batuan. Pengambilan data menggunakan alat *resistivitymeter* jenis *Naniura* NRD 22 S. Pengukuran dilakukan sebanyak 3 lintasan.

Hasil penelitian menunjukkan bahwa nilai resistivitas pada lintasan 1 berkisar antara 0,056-2000 Ω m, lintasan 2 berkisar antara 0,705-2700 Ω m, dan lintasan 3 berkisar antara 2,16 -1300 Ω m. Struktur bawah permukaan di sekitar jalur sesar Opak di Dusun Paten didominasi oleh batu lempung dengan nilai resistivitas 1-100 Ω m, batu gamping dengan resistivitas 500-10000 Ω m, dan endapan aluvium dengan resistivitas 1-20 Ω m.

Kata kunci: metode geolistrik, konfigurasi *dipole-dipole*, sesar Opak, Dusun Paten

**IDENTIFICATION OF UNDERGROUND STRUCTURE OF OPAK
FAULT LINE IN PATEN SUBVILLAGE WITH GEOELECTRIC
METHOD USING *DIPOLE-DIPOLE* CONFIGURATION**

By:

Maria Widyati Lisia Rini Nabiada
11306144043

ABSTRACT

This research was aimed to determine the distribution of resistivity value and to identify underground structure of Opak fault line in Paten subvillage using geoelectric data. Research location was located in Paten subvillage, Srihardono village, Pundong subdistrict, Yogyakarta. It has geographical coordinates of $7^{\circ}56'34,2''S$ to $7^{\circ}56'54.94''S$ and $110^{\circ}21'38.44''E$ to $110^{\circ}21'58.22''E$.

The method used was geoelectric method with dipole-dipole configuration based on resistivity value of rocks. Data acquisition used Naniura NRD 22 S resistivitymeter. The measurements were conducted for 3 lines.

The results showed that the value of resistivity for first line is between 0.056 to 2000 Ωm , second line was about 0.705 to 2700 Ωm , and for third line was about 2.16 -1300 Ωm . Subsurface structure in Opak fault line in Paten is dominated by clay with resistivity value of 1-100 Ωm , limestone with resistivity value of 500-10000 Ωm and alluvium with resistivity value of 1-20 Ωm .

Keywords: geoelectric method, dipole-dipole configuration, Opak fault, Paten subvillage