

**PENENTUAN HAMBATAN LISTRIK BATUAN
MENGUNAKAN METODE GEOLISTRIK KONFIGURASI
WENNER BERBASIS ARDUINO UNO**

Nama : Nur Afipah
Nim : 3204151003
Dosen Pembimbing : Zulkifli, S.Si.,M.Sc

Abstrak

Telah dilakukan pengukuran tahanan jenis bumi menggunakan alat penentuan hambatan listrik batuan menggunakan metode geolistrik konfigurasi Wenner berbasis Arduino Uno, penelitian ini bertujuan untuk mengetahui struktur bawah tanah yang ada disekitaran kampus Politeknik Negeri Bengkalis. Penelitian dilakukan dengan melakukan pengukuran selama 4 hari, pengukuran hari pertama, bentangan kabel dibuat bervariasi dan rata-rata jenis batuan yang dihasilkan kwarsa, andesit, garam batu, granit, gamping, batu pasir, kerikil kering. Pada hari kedua pengukuran bentangan AB dibuat konstan, yaitu 30 meter dan rata-rata jenis batuan yang diperoleh yaitu, *quartz* (kwarsa), *rock salt* (garam batu), granit, *limestone* (gamping), *sandstone* (batu pasir), *shales* (batu tulis), *dry gravel* (kerikil kering), andesit. Pada hari ketiga pengukuran bentangan AB dibuat konstan, yaitu 90 meter dan rata-rata jenis batuan yang diperoleh diantaranya, *quartz* (kwarsa), *rock salt* (garam batu), granit, *limestone* (gamping), *sandstone* (batu pasir), *dry gravel* (kerikil kering), andesit. Pada hari ketiga pengukuran bentangan AB dibuat konstan, yaitu 210 meter dan rata-rata jenis batuan yang diperoleh diantaranya, *quartz* (kwarsa), *rock salt* (garam batu), granit, andesit. Pada umumnya batuan *quartz* (kwarsa), *rock salt* (garam batu), granit, andesit selalu diperoleh dalam setiap pengukuran.

Kata Kunci : Geolistrik, Konfigurasi Wenner dan Tahanan jenis

***DETERMINATION OF ROCK ELECTRIC OBSTACLES USING
WENNER CONFIGURATION GEOLISTRIC METHOD BASED
ON ARDUINO UNO***

Name : Nur Afipah
Nim : 3204151003
Advisor : Zulkifli, S.Si., M.Sc

Abstract

Earth resistivity measurements have been carried out using a rock electrical resistance determination tool using the Arduino Uno based Wenner configuration geoelectric method, this study aims to determine the underground structure around the Bengkalis State Polytechnic. This research was conducted using the Arduino Uno-based Wenner configuration geoelectric method. Measurements were made for 4 days, the first day, the stretch of cable was varied and the average rock type produced was quartz, andesite, rock salt, granite, limestone, sandstone, dry gravel. On the second day AB measurements were made constant, which is 30 meters and the average rock type obtained was, quartz , rock salt, granite, limestone, sandstone, shales, dry gravel, andesite. On the third day the AB stretch measurements were made constant, ie 90 meters and the average rock type obtained including, quartz, rock salt, granite, limestone, sandstone, dry gravel, andesite. On the third day AB measurements were made constant, ie 210 meters and the average rock type obtained including, quartz, rock salt, granite, andesite. In general, quartz rock, rock salt, granite, andesite are always obtained in every measurement.

Keywords: Geoelectric, Wenner Configuration and Resitivity