

Electrical resistivity imaging and bedrock elevation in UPM, Serdang, Malaysia

ABSTRACT

Electrical resistivity imaging surveys have been conducted in order to locate, delineate subsurface water resource and estimate its reserve. The resistivity imaging surveys carried out basically measures and maps the resistivity of subsurface materials. A 2-D geoelectrical resistivity technique was used. Resistivity measurement was carried out using an ABEM SAS 4000 terrameter with electrode selector system. A Wenner electrode configuration was employed. The field survey was conducted along four profiles providing continuous coverage. Colour-modulated sections of resistivity versus depth were plotted for all lines, giving an approximate image of the subsurface structure. The results showed that the layers associated with the resistivities between 30 m and 10000 m and are located at a depth varying from 8 to 36m.

Keyword: Electrical resistivity imaging; Resistivity imaging; Bedrock; Subsurface materials; Resistivity measurement