

EU2.

**A RESISTIVITY SURVEY IN THE PREMISES OF UNIVERSITY
OF PERADENIYA AND EVALUATION OF THE SUBSURFACE
GEOLOGY OF THE AREA**

P.A. SAJEEWANI AND H.A. DHARMAGUNAWARDENA

Department of Geology, Faculty of Science, University of Peradeniya, Sri Lanka.

A geoelectrical resistivity survey was carried out using both resistivity profiling and sounding at the premises of the University of Peradeniya covering the area between the Department of Geology and the Faculty of Science. The purpose of the study was to evaluate the subsurface geological conditions in the area based on the apparent and formation resistivity values.

Fifteen resistivity sounding and twelve resistivity profiles were carried out and computer programme, G68 was used for interpretation of data. A resistivity contour map, cross sections of the subsurface and a map of the bed rock surface of the investigated area were prepared.

Geologically, the study area consists of hard rocks, namely charnockitic gneiss and marble with a mantle of residual and alluvial material. The resistivity profiling data reflects that the resistivity values could be easily related to the soil distribution pattern of the area; where low resistivity zones are associated with alluvial soils, whereas the high resistivity zones are in association with residual soil formations.

According to sounding data the depth to the bed rock varies from 3m to 20 m. The variation of these depths are significantly related to the geomorphology of the area. Moreover, different types of weathering profiles varying with the hydrological conditions could also be identified. Gravel beds of varying thickness and extension, were also found along Mahaweli river and Maha oya at several locations. It is expected to conduct a test drilling programme to confirm the findings.