

Vertical Electrical Sounding for Geotechnical Site Characterization

The study was made to determine the sedimentary thicknesses as well as to obtain the contact between high resistivity values associated to Ignimbrite and low resistivity values associated with Ignimbrite fractured and weathered with content of clays. This contact has been estimated approximately at 28 meters depth.



Objective: Geotechnical site characterization.

Survey site: San José - Costa Rica

Date: January 31, 2017

Instrument: SuperSting WiFi R8/IP/SP, manual cables (VES), using Schlumberger array.

Software: Inversion of data using EarthImager 1D inversion software.

Units: Meter and Ohmmeter

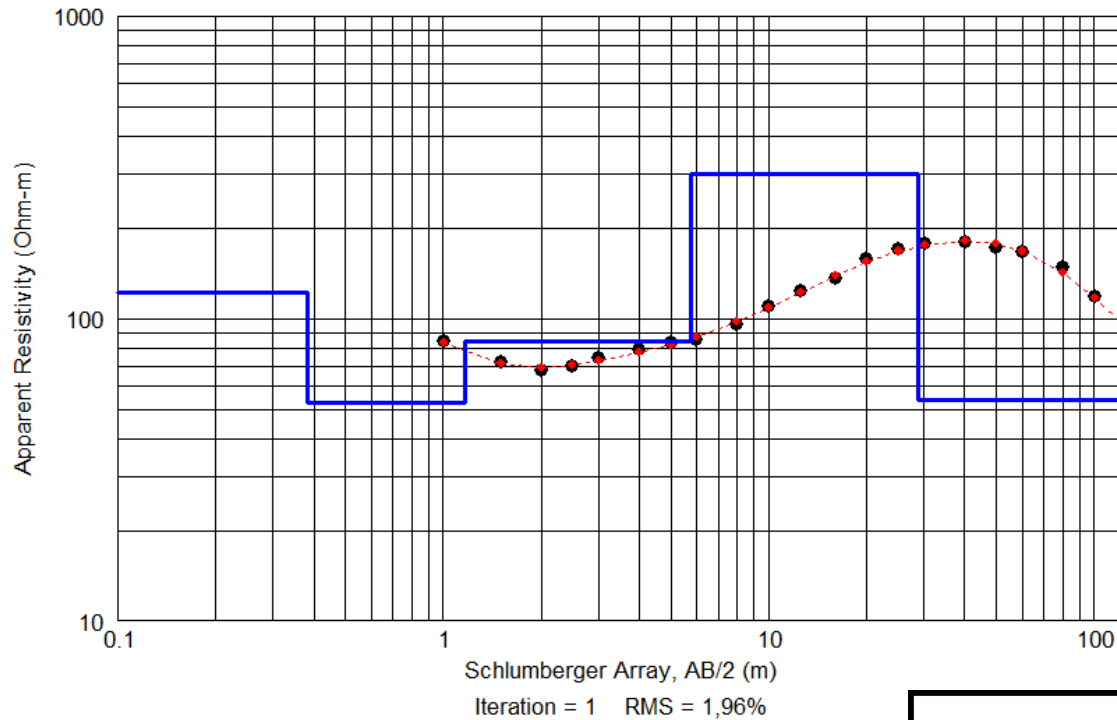
Data courtesy of



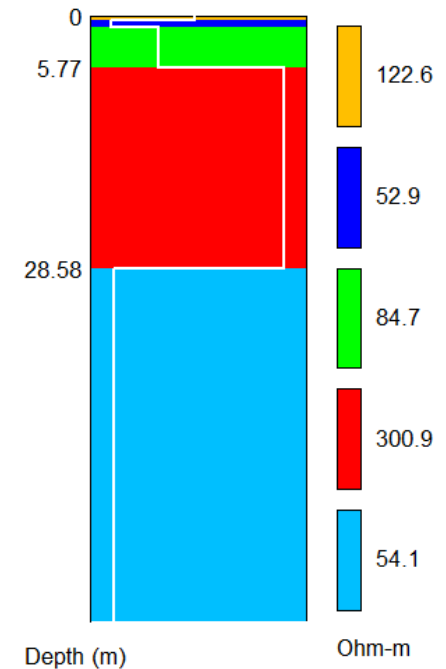
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Five layers were interpreted in this study. The sedimentary thickness up to Ignimbrite layer has been interpreted of approximately 5.77 meters. The high resistivity values found in the fourth layer with 300.9 Ohm-m have been associated as the Ignimbrite and the low resistivity values in the fifth layer associated with Ignimbrite fractured and weathered with content of clays. This contact has been estimated approximately at 28 meters depth. Ancient boreholes made in the area of study corroborate the interpreted lithology.

Measured and Modeled 1D Data



Layered Resistivity Model



Inverted Resistivity Model			
Layer#	Ohm-m	Thickness (m)	Accumulated Bottom Depth (m)
1	122.6	0.38	0.38
2	52.9	0.78	1.16
3	84.7	4.61	5.77
4	300.9	22.81	28.58
5	54.01	-	-

Data courtesy of

