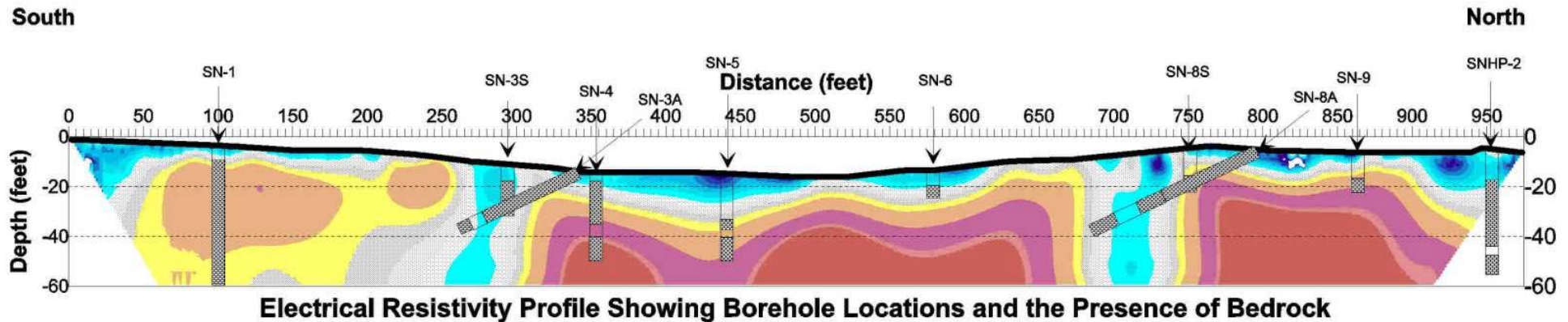
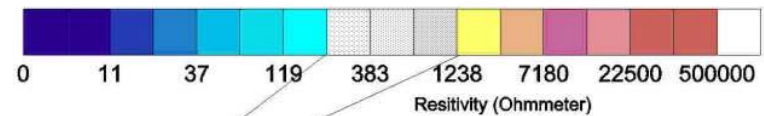


Karst Investigation



Vertical solution-widened clay-filled fractures, seen at a road cut in the area.



Transition zone from residual soil (blue), to limestone (yellow & red)

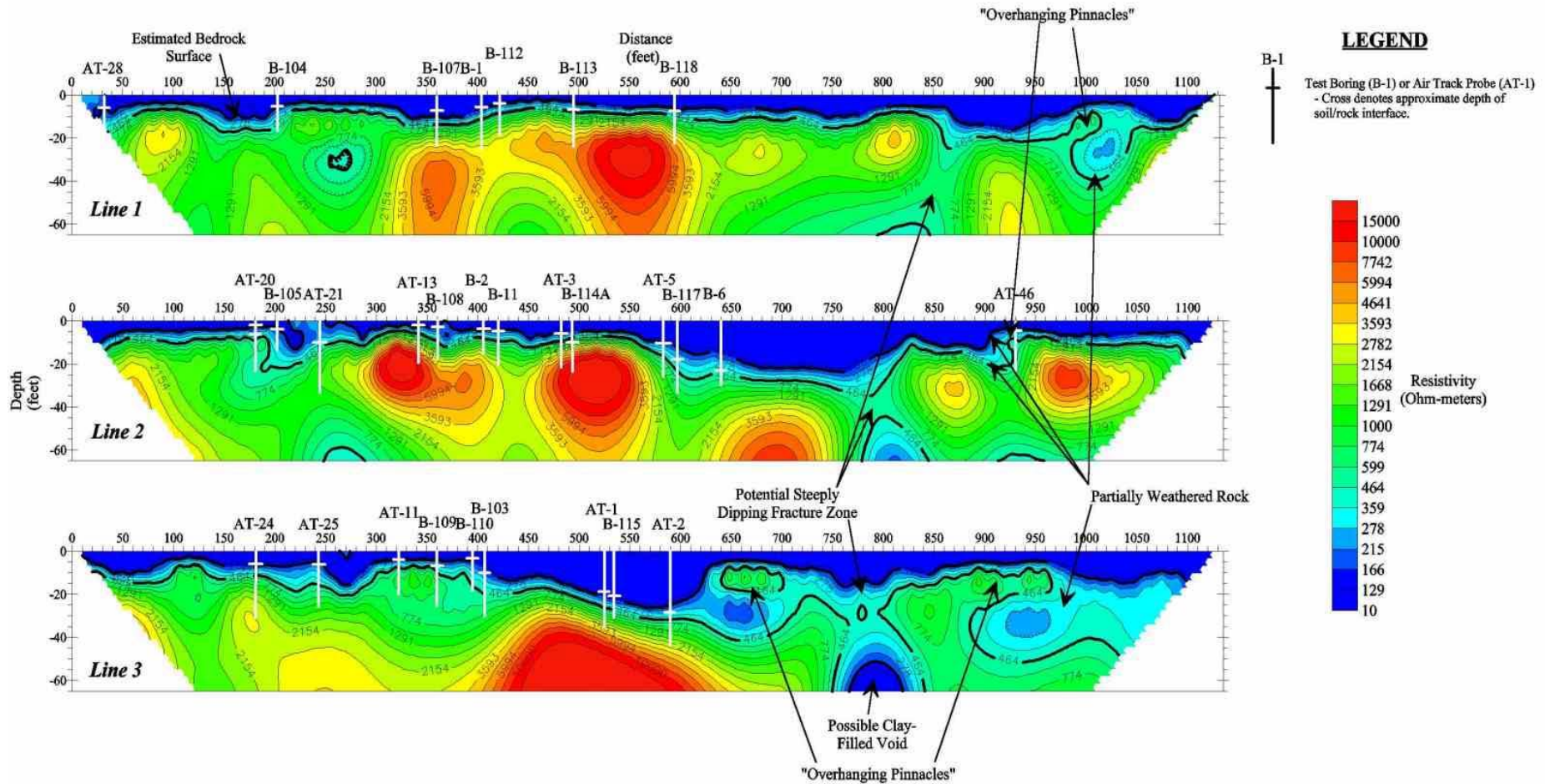
- Objective: To map the bedrock and its vertical solution-widened fractures
- Survey date: June 2000
- Location: Nashville, Tennessee
- Survey site: The site is underlain by Carters Limestone of Ordovician age. Vertical solution-widened fractures are of the main concern for the site development.
- Instrument: Sting/Swift, 56 electrodes at 5 ft spacing, with 9 roll-alongs (moving 14 electrodes each time)..
- Units: Feet and Ohmmeter

Courtesy of P.E. LaMoreaux & Associates, Inc. (PELA)
Oak Ridge, Tennessee

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Bedrock Mapping in Karst Terrain



- ✦ Boring lines show approximate locations and depths. Most borings were not located directly over the resistivity traverse and therefore some variation from the resistivity profile should be expected.
- ✦ Resistivity measurements were obtained at discrete electrode spacings.
- ✦ Resistivity contours were interpolated from the data points.
- ✦ Data was recorded in a dipole-dipole electrode array, using a Sting/Swift automatic resistivity system, with electrodes at 5 meter intervals.

- ✦ The three two-dimensional resistivity profiles presented show correlation between test borings and air track probes and the estimated bedrock surface from resistivity data in karst terrain. The thickened contours show estimated disintegrated rock and bedrock surfaces, respectively. Areas of very high resistivity were probed and determined to be dry, competent limestone.

Courtesy of
Schnabel Engineering

Web site <http://www.schnabel-eng.com>

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