

ERT

(Electrical Resistivity Tomography)



An Electrical Technique for Measuring Ground Resistivity in 2D

Advantages

- Non intrusive: no boreholes required, all equipment is deployed on the surface
- Portable and versatile: equipment can be deployed in most areas of open ground
- Most effective method of identifying voids
- Produces a “true-2D” profile as opposed to the “psuedo-2D” profile produced by surface seismic methods
- May delineate geological changes without strong impedance contrasts which would not be identified by seismic methods



Specifications

- Up to 72 electrodes deployed in a line at up to 5 m spacing
- Roll-along surveys possible, up to any length
- Depth of investigation equal to approximately 20% of the array length
- Profile depth tapers off towards the ends of the array
- Results can be displayed as 1D Vertical Electrical Soundings (VES), 2D profiles or a 3D model constructed from multiple profiles
- Topographic variation can be accommodated

Applications

- Mapping cavities: karst terrain, sinkholes, caves, archaeological features
- Groundwater detection
- Mapping bedrock & geological layers
- Informing grounding requirements for infrastructure
- Environmental: delineating landfills or contaminated land

