

DETECTION OF UNDERGROUND CAVITIES ELECTRICAL RESISTIVITY METHOD

Project:

Detection of underground cavities for the design of the foundations of a large housing project in Lybia – TAJOURA HOUSING PROJECT (Tripoly – Lybia)- 2009

Survey method:

Electrical resistivity tomography (lines with 48 or 72 electrodes, spacing of 3 m)

Survey area: 8 hectares

Main goal of the survey::

- Detect and map of underground cavities
- For any cavity, evaluating the depth (roof and floor) and the lateral dimensions
- Evaluate the geological stratigraphy

Obtained results:

- Detection of many cavities and tunnels («catacombs») at different levels, in the shallow part of the underground (8-10) m. the cavities show a strong electrical resistivity contrast compared with the surrounding rocks (calcarenite) and – for this reason – are easily recognizable
- Critical area mapping

Survey area n. 2 - Archaeological site n. 1 - Precinct P3G-East

Electrical resistivity tomography model: Section ERT 9

