

Near-Surface Geophysical Methods to Detect Anthropogenic Events

In 2012, experts of the Hungarian Institute of Geology and Geophysics (formerly ELGI, Eötvös Loránd Geophysical Institute of Hungary) performed a series of mappings in a test site of Bakony Mountains, Hungary. To detect and delineate an underground storage facility, various methods and devices were applied. Above and inside the military construction, resistivity and seismic profilings, transient (time-domain) and frequency-domain (slingram) mapping, as well as GPR (ground penetration radar) measurements were made. While the detection capacity of these methods (and instruments) was more or less known, based on earlier experience, the 2012 test measurements gave information concerning to the important factors in applying these methods during the continuation period of an on-site inspection (CPT of OSI). The required factors are:

- a., high productivity (high speed of mapping using the limited time window);
- b., good portability (even if working on heavy terrain and dense vegetation);
- c., easy positioning (mapping with integrated GPS receiver without prior surveying);
- d., quick presentation (on-the-spot interpretation and visualisation).

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