

Test of On-Site Inspection Geophysical Techniques for deep Applications in a Mountainous Environment

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A Field Test of on-site inspection (OSI) geophysical techniques for deep applications was conducted by the Provisional Technical Secretariat in September 2022 in the Austrian Ybbstaler Alps, with the support of external experts. The scope of the Field Test was to assess the current OSI geophysical imaging capabilities for deep applications in an integrated manner in a mountainous environment with a number of deep geophysical observables of OSI interest. This was the first OSI field test in a mountainous environment and therefore a number of operational, logistical and technical challenges had to be addressed. The implemented OSI geophysical techniques – permitted by paragraphs 69(f) and 69(g) of Part II of the Protocol to the Comprehensive Nuclear-Test-Ban Treaty – included resonance seismometry, active seismic, magnetic and gravitational field mapping, as well as electrical conductivity surveys along three 2-D profiles over a cave system at 40-350 m depth. During the Field Test full OSI data workflow for geophysical techniques was tested using current functionalities within the Geospatial Information Management system for OSI (GIMO). This presentation describes the technical planning, execution as well as data processing and interpretation results of the Field Test, with future recommendations for similar, challenging mountainous environments.

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Promotional text

This presentation describes the technical planning, execution and results of the Field Test of OSI geophysical techniques for deep applications conducted in September 2022 in the Austrian Ybbstaler Alps.

Oral preference format

in-person

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