ID: Type: **Poster**

Studying of Upper Cross-Section of UNE Area at Semipalatinsk Test Site According to Seismic Data (for OSI Purposes)

The presentation deals with the results of data processing from seismic observations conducted along eight parallel profiles of 6 km long and with a 500 m spacing between them on the site of an underground nuclear explosion boreholes. First arrivals curves indicated a low-velocity near-surface layer up to 1000-1500 m/s. With going deeper, velocity changes in the range of 4000-5500 m/s. A relative velocity reducing throughout this rock mass in the vicinity of explosion boreholes has been traced. Methods of a seismic-tomography and the direct beam modeling, giving considerable distinctions in two-dimensional high-velocity models, have been used. Tomography results depend on the starting model and that requires a priori data at selecting most optimal results. In beam modeling the distinguished seismic borders correlate with geological data. Results of processing by various techniques are compared with the purpose to estimate reliability of way of seismic model building. The obtained results can be used in OSI for deeper understanding of UNE phenomenology and further development of active seismic techniques in the context of OSI.

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