

Geophysical Technology for Exploration

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Changes in the exploration business require a new perspective on technology development and implementation. Due to significant advances in sensor technologies in electromagnetic and potential field technologies as well as in seismic technologies, there is a real opportunity to exploit new high resolution exploration methods based on richer physical principles that go beyond just conventional seismic technology. For example newly developed electromagnetic technologies allow for Hydrocarbon charge testing remotely.

Combining several of these 'non-seismic' technologies together with seismic measurements allows for reducing sub-surface risk more than any of the individual measurements would be able to do. These new technologies will change conventional exploration methods, which are largely based on seismic technologies. However, they also call for new R&D, in particular, in rock physics required to underpin quantitative interpretation. It is very likely that this will change our current view on the global hydrocarbon exploration potential and the available options to evaluate this. In this talk we will present examples of how several of these new technologies may be used in modern exploration.