

READ GROUP Resourceful Imaging

PerForM[™]

Pair with:

- \Rightarrow BigDipper
- \Rightarrow Data Processing
- \Rightarrow Salt Delineation
- ⇒ Full Waveform Microseismic

Increase your understanding of reservoir performance with PerForM[™], a patented and commercial permanent seismic system capable of carrying 100's of sensors in to a well using production or injection tubing. Using a system that decouples the 3C sensors from the tubing and on to the casing, PerForM[™] can be used for passive seismic monitoring and time lapse VSP surveying. Generate large time lapse volumes and monitor fluid front movement for maximized reservoir drainage and high resolution imaging. Drill less wells by increasing field productivity and strategic well placement during the field development phase.



Permanent reservoir monitoring requires maximum coverage of seismic sensors in a well. PerForMTM can be configured to run 100's of 3C sensors in both subsea and platform based completions. The subsea configuration can be configured to work on any amount of conductors to pass through the well head. This is thanks to our new patented telemetry that allows us to use just a single conductor pass-through. The data is carried to surface via a fiber optical line in the riser or via ROV umbilical to the acquisition system.

By increasing the amount of levels in the well that are available for permanent reservoir monitoring, the opportunity to observe the reservoir from a front row seat but with a very long field of view becomes a reality. Continuous monitoring or short interval time lapse reveals the migration path of fluid fronts from injection or reservoir depletion. Passively listening to the Earth from within the well itself, allows us to map out natural and induced micro seismicity in real-time. Pair with our BigDipper[™] marine source and our time lapse 3DVSP imaging to show the true changes in the reservoir with time. Amplitude and velocity changes with time are recorded, taking advantage of excellent repeatability by unchanged downhole conditions and source characteristics. The system is easily upgraded for HybridVSP[™] through integration if fiber and DAS technology

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