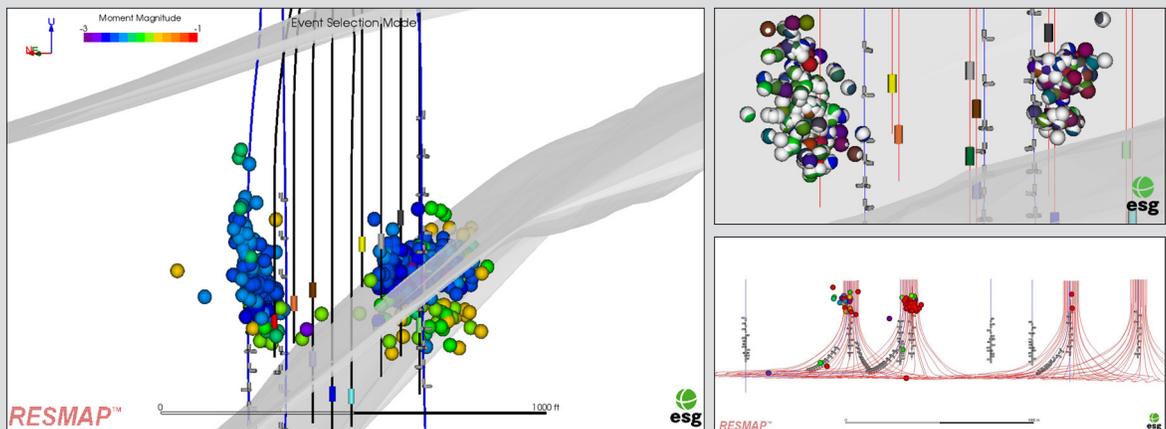


Microseismic Reservoir Monitoring: In-Situ Solutions

Optimize Thermal and EOR Operations

- Map steam movement
- Monitor caprock and well casing integrity
- Observe for vertical breakout
- Enhance reservoir understanding

Microseismic events associated with steam injections can be mapped to identify where in the reservoir the steam is going, and the manner in which it is moving



Microseismic Reservoir Monitoring Services

Optimizing and understanding reservoir behaviour

ESG designs, manufactures and installs passive microseismic field recording instrumentation and provides real-time monitoring, processing and analysis services.

ESG's real-time microseismic reservoir monitoring systems are turnkey solutions that deliver continuous, real-time feedback on the reservoir's response to stimulation and production activities.

Details of ESG's reservoir services include:

- Complete turnkey solution from design and installation of a customized acquisition system, to advanced geophysical analysis during thermal and EOR recovery activities.
- Acquisition of microseismic data using ESG's proprietary acquisition instrumentation.
- Advanced geophysical processing of microseismic data to characterize the reservoir and understand treatment effectiveness.
- Real-time, daily, weekly or monthly reporting of seismicity.

Advantages of microseismic reservoir monitoring:

Steam movement identification: Microseismicity can provide detailed knowledge of steam movement, so you can see where the steam is going and how it moves through the reservoir.

Caprock and well casing integrity: Microseismic monitoring can provide valuable information on the integrity of caprock surrounding a reservoir and casings within wells during high-pressure and temperature steam injections to reduce the risk of breakout or spills.

Improved decision making: Use microseismic information to make informed decisions to optimize operations.

Enhanced understanding of reservoir behaviour: Get the clearest picture of what is happening downhole in the shortest amount of time.

Stimulated Reservoir Volume: ESG provides estimates of the volume of the simulated area to determine the treatment effectiveness.

To learn more about ESG's monitoring solutions, visit www.esgsolutions.com or contact:

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