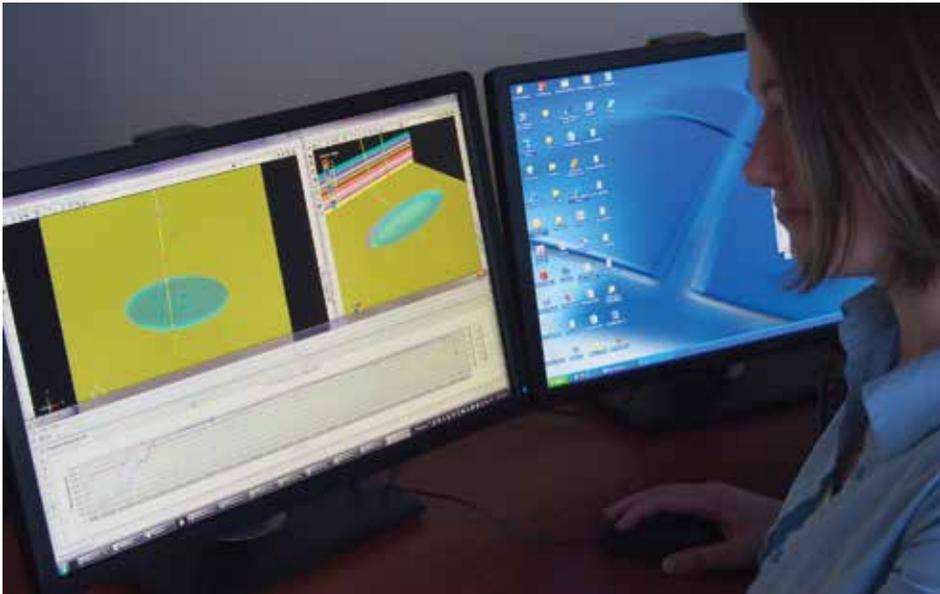


Effective Integrated Microseismic Solutions

Magnitude joint venture strengthens the Baker Hughes/CGG shale-science alliance



Baker Hughes and CGG have realigned the VSFusion joint venture to focus solely on microseismic, including monitoring, processing, visualization, interpretation, and permanent monitoring. The joint venture, now called Magnitude, strengthens the capabilities of Baker Hughes and CGG in unconventional resource plays and other emerging markets.

The two firms initially formed the VSFusion joint venture in 2003 to provide borehole seismic services. The explosive growth in unconventional resource plays, along with the mounting evidence that reservoir characterization is paramount to maximizing recovery from fractured zones, indicates a greater need to include microseismic

for an integrated approach to reservoir characterization. In addition to borehole microseismic monitoring, Magnitude will work closely with CGG and its surface microseismic team to provide complete reservoir monitoring solutions.

The former VSFusion vertical seismic-profiling services are now part of Baker Hughes Reservoir Development Services. The team will continue to provide its customers with superior borehole seismic-data processing results.

This realignment of the joint venture further strengthens the business partnership between Baker Hughes and CGG.

Applications:

- Onshore operations
- Unconventional/conventional reservoirs

Benefits:

- Interpret results to improve planning and forecast production
 - Integrate microseismic-derived parameters with existing data
 - Ensure fracture fluid and reservoir compatibility
 - Easy-to-correlate results over restimulated wells and between wells within same field
 - Results free of false events (noise identified as an event) through event characterization and strict QC of each detection
- Optimize field development
 - Moment tensor solutions for every microseismic event using industry-proven full waveform inversion processing
 - Minimal footprint with extensive aperture for multiple well monitoring
 - Minimum surface-noise contamination
 - Cost-effective application for long term field development

A Complete Solution for Your Microseismic Survey Needs

- Downhole microseismic
- Surface microseismic
- Permanent monitoring
 - Fluid storage
 - Caprock integrity
 - SAGD
 - Reservoir monitoring
- Induced Seismicity
 - Wastewater injection
 - Completion integrity
 - Environmental impact
 - Regulatory compliance
- Combined custom configurations

Joint borehole and surface monitoring

- Validates surface results against borehole, ensuring accurate event locations
- Combines higher resolution borehole data with surface data, providing greater spatial coverage

Joint borehole and permanent monitoring

- Validates permanent monitoring network results against borehole data
- Calibrates spatial detection and noise levels of permanent monitoring network

