DecisionSpace®

Seismic Analysis Software

Overview

The DecisionSpace® Seismic Analysis component is designed to provide the seismic interpreter with advanced geophysical workflows that leverage Landmark’s DecisionSpace platform benefits of subsurface visualization and dynamic project updating while extending unique geophysical approaches for quantifying and qualifying subsurface challenges. As seismic acquisition increases in cost and orientation complexity, DecisionSpace Seismic Analysis component helps ensure during interpretive project phases that asset teams can extract the maximum value from their seismic data. Included among the highgraded workflows that make up the DecisionSpace Seismic Analysis toolkit are: advanced well-tie, prestack seismic visualization and quality control, and seismic horizon autopicking. Whether leveraged for stratigraphic or structural geologic challenges, DecisionSpace Seismic Analysis component ultimately provides the interpreter with a better understanding of reservoir makeup, fluid presence, and optimal well planning.

DecisionSpace Seismic Analysis software is a component of the DecisionSpace Geoscience Suite, a unified visualization, interpretation, and modeling workspace where asset teams can collaborate more effectively to evaluate and develop assets. It delivers a true multi-user environment with unprecedented integration across cross-domain workflows and data types—all on the award-winning, information management foundation of Landmark OpenWorks® database.

Benefits

Validates Geologic Assumptions with Seismic Data

The application provides insight in understanding which seismic reflectors match specific geologic events within the well data. This allows for precise trap definition so that more accurate decisions can be made for well placement, reserve estimation, and even facilities setting.

Quantifies Best Prospects and Reservoir Potential

Analysis and visualization capabilities allow the interpreter to understand the seismic response to fluid and lithology changes that may be seen in the subsurface. This can be essential in determining the actual reservoir makeup and help defend justification of the best potential reservoirs for prospect ranking, acreage capture, and well placement.
Interpretation Confidence

Through visual access and quality control of prestack data, the interpreter can better ascertain the quality characteristics of their seismic data ultimately increasing their interpretation confidence.

FEATURES

Prestack Data Quality Control

DecisionSpace Seismic Analysis software provides direct access to processed volumes, which can then be quickly viewed or plotted in a number of orientations (1D, 2D, 3D, Map Views) to understand the data quality and conditioning requirements of the prestack gathers.
Model and Analyze Seismic Amplitudes
Powerful workflows that allow the interpreter to model or correlate log and well data with prestack to understand or validate geologic assumptions with seismic signatures.

Reservoir Characterization Cross Plotting
Workflow and analysis specifically designed for bypassed pay or fracture description. It consists of patented technologies that leverage unique autopicking and cross plotting of seismic attributes for classification and correlation with stacked seismic data to better understand fluid or fracture orientation makeup at targeted events.

Well-tie Workflow
The well-tie workflow provides comprehensive tools for synthetic seismic generation in time/depth, depth/depth, prestack and stacked, including the ability to generate or edit required logs, manipulate checkshot points, analyze drift and induced artifacts, cross-correlate, perform wavelet extraction and correctly account for deviated wells.
ezTracker™ Horizon Batch Autotracking Feature

The ezTracker™ feature provides the interpreter with a productivity tool for automated horizon picking. The software auto-tracks on original seed points or snaps the input horizon to the nearest value that meets the snapping criteria.

Methods for Tracking Include:
- Amplitude (peak-to-peak, cross correlation, waveform)
- Value (constant value, high to low value, low to high value)
- Phase angle
- Slider bar controls tracking aggressiveness if data is noisy, highly faulted, or of poor quality

System and Software

SOFTWARE REQUIREMENTS
OpenWorks® 5000.8.3.0
DecisionSpace® Base module

OPERATING SYSTEMS
Red Hat® Enterprise Linux®
Workstations 5.8, 64 bit
Windows® 7, 64 bit

“We’ve evaluated other technologies in the market and now believe that DecisionSpace is the way forward for us.”

TECHNOLOGY MANAGER, NATIONAL OIL CO.

Landmark offers solutions to help you deliver on your business strategies. For questions or to contact your Landmark representative, visit us at landmarksoftware.com.