Seismic Modeling Software

Predict seismic responses to stratigraphic changes

The LogM™ modeling package is an add-on to the Advanced Synthetic Package and includes industry-standard stratigraphic modeling and structural modeling. Stratigraphic models are easily generated from the cross-section view and include the formation correlations. Subtle changes can be input to the model and the corresponding seismic response quickly observed in SeisVision™.

In complex structural areas, the ultimate goal is to determine the geological structure from the observed seismic response.

LogM Modeling software provides the explorationist with the power and flexibility to model the structure and determine the expected seismic response in highly structured areas where steeply dipping reflectors and non-uniform velocity fields mask the true bed geometry.

Structural modeling can be accomplished with either normal incidence or ray tracing; F-K migration is also available as an add-on to LogM Modeling software. The forward models are integrated with the LMKR GeoGraphix® applications, enabling the creation of the models directly from a cross-section view. The results can be immediately viewed in SeisVision™ software for comparison with the trace data, providing a seamless workflow from geological data to model to geophysical data.

Benefits

Integration
Modeling is integrated with the geological and geophysical data in the project so that models can be created and evaluated with the data easily; no ASCII transfers or print copies are needed.

Flexibility
Surfaces can be removed by user control, specifying onlap, thinning or erosional truncation as log interpolation options. Input wells can be easily edited to model different scenarios, such as thinning sands or changes in fluid content.
Accuracy
This system provides tools that increase the confidence in the interpretation by viewing the predicted response from the geological model directly with the seismic data.

Ease of use
LogM™ modeling software is easy to use and offers seamless integration to the interpreter, encouraging iterations of modeling to converge on the best possible answer.

Key Features
• Complete control of geological interfaces, including stratigraphic relationships
• Fluid substitution capabilities
• Sophisticated capabilities for estimating logs if unavailable
• Many options for picking, extracting, and manipulating the model wavelet
• AVO / AVA models
• Normal incidence or ray traced structural modeling
• Tight integration with SeisVision, allowing rapid comparison between models and seismic data

Requirements
Hardware (MINIMUM)
• 2.4GHz 64-bit Intel class or better
• 4GB RAM
• 1,024 x 768 graphics resolution
• CD-ROM drive
• 19-inch monitor

Hardware (RECOMMENDED)
• Quad 2.4 GHz 64-bit Intel class or better
• 8 GB RAM or greater
• NVIDIA GeForce or Quadro - 2GB video RAM
• DVD-RW drive
• Dual 21+-inch monitors

Software
• Microsoft® .NET 4.0
• Microsoft DirectX 11

Operating System(s)
• Windows® 7 Professional x64
• Windows® 7 Enterprise x64
• Windows® 7 Ultimate x64