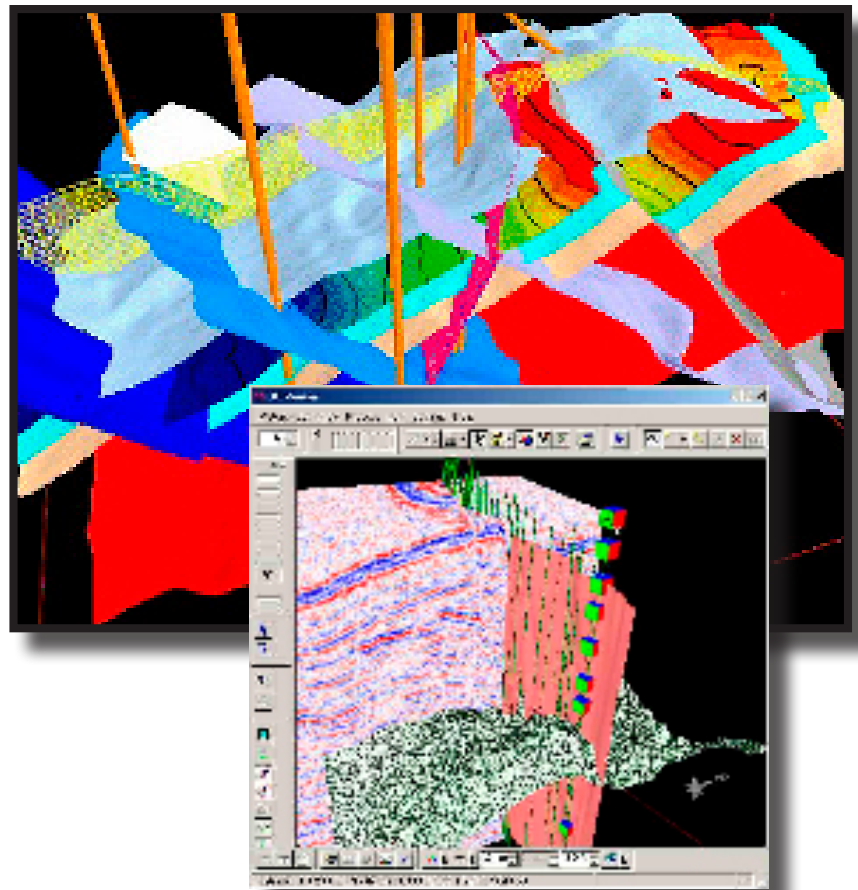


Structurally Complex Modeling for JasonSTS Projects

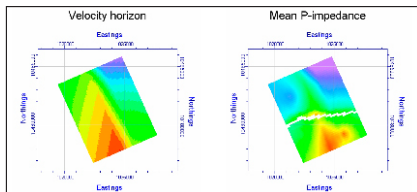
Unlimited fault handling capability

Truncation replaces the framework table approach to model building

Simple workflow for using velocities (or other secondary information) for low frequency models



EarthModel FT bridges the gap between geologic modeling for reservoir simulation and model building required to support geophysical workflows. EarthModel FT supports complex faulting and geology, horizontal wells, and also supports model building in the time domain and use of velocities as trends.



UPDATEABILITY™

In addition to complex modeling capabilities, EarthModel FT has a unique feature called UpdateAbility that allows models to be updated far more easily than in the past. With UpdateAbility, changes to parameters cause direct and indirect results to recalculate in response to the change. All descendants update when the parent item changes.

Need to add a new horizon to your model? Need to edit a fault and then reconstruct the entire model, re-sealing all faults and horizons? With EarthModel FT this is far simpler than in the past.

IMPROVED FAULT EDITING

UpdateAbility handles situations where updated information must be cascaded through the model to bring it up to date. In combination with EarthModel FT's editing capabilities, this is even more powerful. You do not have to go back to the seismic interpretation system to correct problems in the interpreted surfaces.

In this example, a fault was interpreted in a seismic workstation environment. Truncation of surfaces to faults was a problem. The original fault surface was recreated with fault sticks, and subsequent editing of the nodes along with UpdateAbility allowed easy iteration to a solution.

HORIZONTAL / HIGHLY DEVIATED WELLS

Deviated wells, including horizontal wells, are handled properly in the EarthModel FT approach. Wells are not "verticalised" in each layer. Each well data point is mapped to a cell in the geologic model so that the spatial relationship between the well tracks is correctly calculated.

WELL INTERPOLATION

EarthModel FT Geophysics uses a deterministic interpolation with distance and power parameters to populate the reservoir models from the well logs. There is also a Fast mode for easier parameter testing. (Additional EarthModel FT modules are required for full geostatistical modeling and upscaling. See the EarthModel FT Complete brochure for more information).

Secondary variables can be used in the interpolation process. There is no separate calibration, and no additional calculations needed. In the example at left, a velocity horizon is used as a secondary variable to guide the interpolation of acoustic impedance.

ASSISTANTS

Assistants in EarthModel FT link commonly used functionality, bring together viewers and parameters, and facilitate rapid movement between different items. They automatically create groups and folders for a more organized project.

COMPARISON WITH EARTHMODEL

EarthModel FT has the following advantages vs. the basic EarthModel product:

- EarthModel FT has much greater capability for creating structurally complex models
- EarthModel FT has better integration with Geomodelling SW (Petrel, Roxar, EDS) though RockScale.
- EarthModel FT has better functionality for using velocities as trends.
- Additional Flexibility for RockTrace low frequency model building through the use of different modeling parameters for the elastic properties (VP, VS, Density)
- Deviated wells, including horizontal wells are handled fully in the EarthModel FT approach. In the EarthModel approach, the deviated wells are verticalised within zones, which may occasionally cause difficulties if the model is used for more than the low-frequency trends in InverTrace^{Plus} and RockTrace.
- EarthModel FT is available both on Linux and Windows®