

StratEarth®

Well Log Correlation and Sectioning



Interpretation
and Modeling

Redefining Geological Interpretation

Geological interpretation requires increasing levels of integration with production, engineering and seismic information. Success is tied not only to interpretation and correlation, but also to how the information can be used to improve 3D reservoir characterization, well planning and geosteering, and development planning.

Paradigm™ StratEarth® delivers on all these demands: It leverages the flexibility of the Epos® infrastructure to rapidly access and combine well, seismic and other data from multiple repositories. Direct links to Geolog®, the industry's premier formation evaluation solution, make it possible to revisit original trace data and correct it where needed. StratEarth shares the stratigraphic column used by the Paradigm SKUA® modeling technology, and has access to a variety of other Paradigm

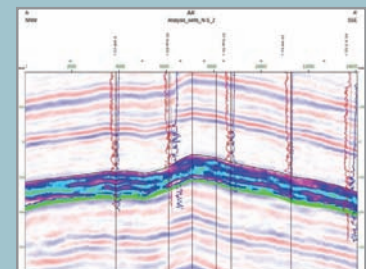
technologies that help constrain the geological model.

An Optimized Design

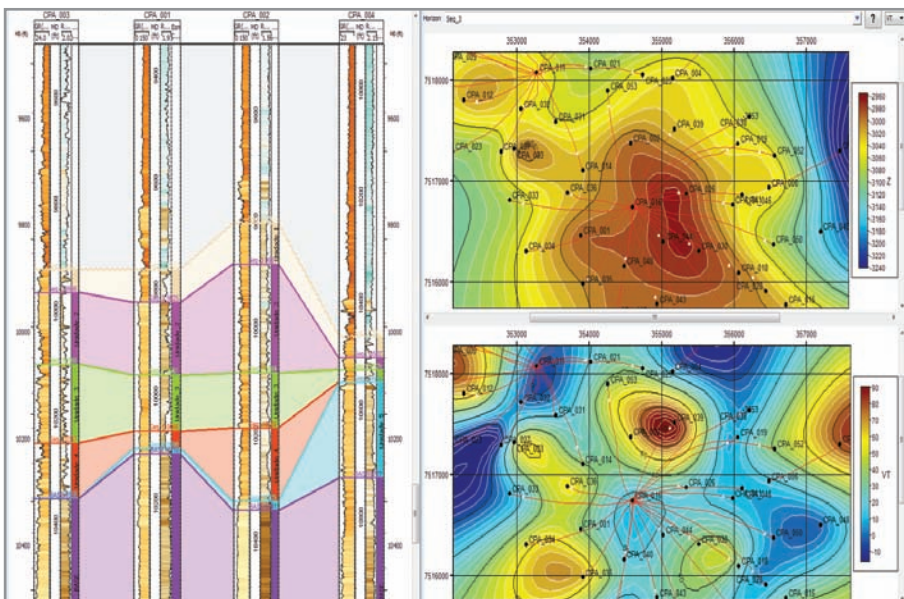
StratEarth offers a suite of comprehensive tools for correlating, interpreting, mapping, displaying and performing QC of seismic, geologic, production and reservoir modeling data in multiple 2D and 3D environments.

Users may perform multi-scenario interpretation of markers, lithology, seismic data and stratigraphy, automatically and rapidly correlate hundreds of wells and define their depositional environments. Automatic mapping is integrated into the correlation window. Elevation, thickness, and net-to-gross maps are created on-the-fly as markers are interpreted and edited, providing enhanced productivity and usability. Correlations can be made in 2D or 3D, by ghosting one or more curves, by drag-and-drop of multiple markers, or by automatic log correction.

"StratEarth has changed the way we address geological interpretation. Its tight integration to petrophysical, modeling, mapping and geostatistical solutions, and its access to production and seismic data, support more iterative and inclusive workflows. Well log correlation is now part of a larger integrated process rather than a step in a linear workflow. The automation of many repetitive tasks has also helped reduce our project turnaround time."



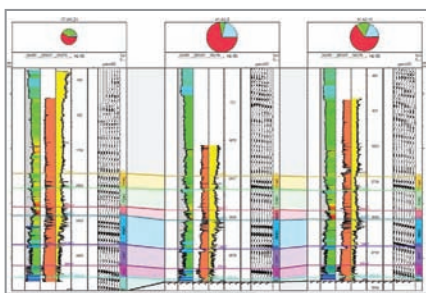
Co-visualization of wells, seismic data and a Stratimagic® volume



Marker correlation and associated elevation and thickness maps in the StratEarth well correlation system

Co-visualization Capabilities

StratEarth has advanced co-visualization capabilities, provided through its live connection between seismic, interpretation and petrophysical data. Data can be displayed in many tracks, including log, interval, seismic, well zone, blocked log from reservoir models, chrono-stratigraphic, image and schematic. The tracks can be used inside a cross-section or well section, or displayed in 3D. Sections can be displayed



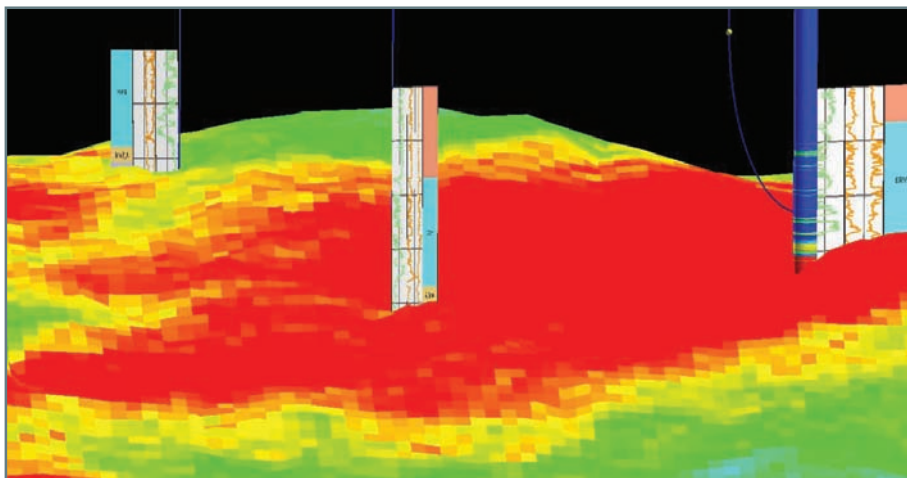
Log display together with seismic, production data and correlation

in measured depth, depth, true vertical thickness, and true stratigraphic thickness, and flattened on multiple markers.

Seismic data may be extracted on-the-fly at the section or in the vicinity of the well location. StratEarth includes the display of time-dependent engineering data such as production, perforation and completions for QC vis-a-vis geo-cellular reservoir models.

Advanced Data Analysis Utilities

A broad set of data analysis utilities is available for extended interpretation and net-to-gross-map creation, including cross-plots and histograms, property computations, data filtering, zone identification, scripting and litho-facies calculations. Multi-rank interpretation is enabled via a nested stratigraphic column. If a marker's position is uncertain, its presence can be established by placing it between two markers without an exact location.



3D correlation in StratEarth

Features

- Correlation via ghosting
- Cross-section creation and display
- Well log data display
- Automatic mapping
- Multi-scenario correlation interpretation
- Multi-rank stratigraphic interpretation
- Data analysis tools
- Integration of production data into log display and maps
- Full integration with SKUA, Geolog and SeisEarth

Interoperability

All Epos-based applications enable interoperability with third-party data stores, including:

- OpenWorks® 2003.12, R5000
- GeoFrame® 4.5
- OpenSpirit® 3

System specifications

- 64-bit, for x64 architecture processors
- Microsoft® Windows® 7
- Red Hat® Enterprise Linux® 5.3 and above, 6.0 and above

The Paradigm Advantage

- + Accelerates the interpretation and validation process using automatic correlation and map making.
- + Improves correlation through 2D and 3D seismic and geologic data co-visualization.
- + Validates coherency between interpretation and reservoir models through data integration.
- + Captures uncertainty via multi-scenario and interpretation of "fuzzy" well markers.