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Badley Geoscience Limited

INTERPRET • VALIDATE • ANALYSE

CORE

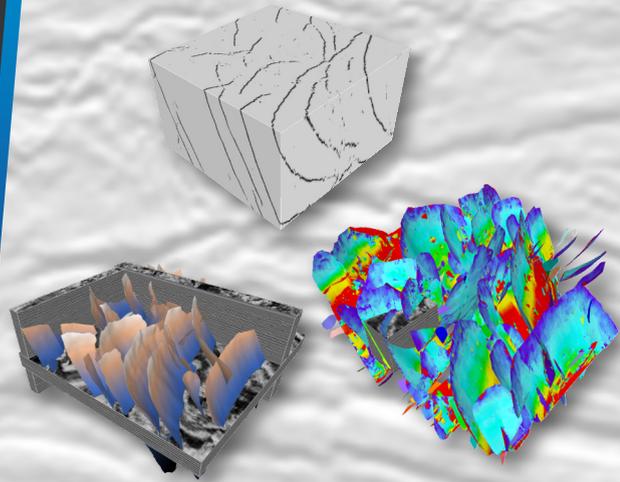
CORE is an integrated suite of modules designed to streamline seismic data interpretation, robust framework model building, and seamless incorporation of well data. Its unparalleled geometric freedom in both seismic interpretation and model construction, combined with an interactive 3D viewer, enables users to engage with every element intuitively.

The result? faster, more accurate and efficient model building.

AI Faults

AI Faults is a powerful tool that automates the identification of faults in seismic data using Badley's advanced machine learning algorithms. Geometrically and geologically robust fault surfaces are extracted in an additional operation, then QC'd automatically.

By leveraging AI technology, T7 significantly reduces the time and effort required for fault interpretation, allowing geoscientists to focus on analysis.



Seismic Interpretation

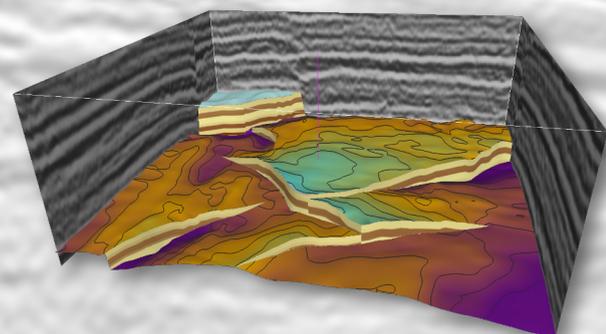
T7 CORE goes beyond industry-standard tools, offering a comprehensive, interactive environment for seismic interpretation and model building.

Users can interpret directly on sections, horizons, faults, slices, planar probes, or cube faces, revealing the true 3D nature of geological structures. Supporting multiple surveys and co-rendered volumes, T7 delivers one of the most complete toolkits for 2D and 3D interpretation.

Structural Modelling

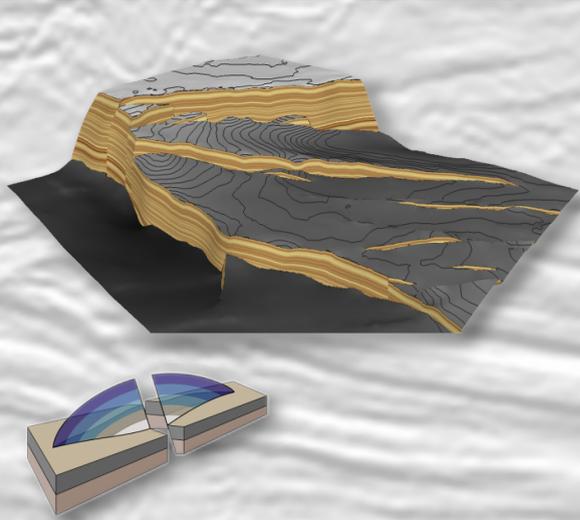
T7 is designed with true geological structure in mind, making it effortless to build accurate, 3D consistent models. It handles complex geometries with ease — including reverse faults, multiple Z horizons, and intricate fault-horizon relationships.

As you interpret, you can create and edit branchlines where fault surfaces intersect, and manually refine fault polygons in complex zones to ensure your model honours the geology in full detail.



SEAL

For decades, Badleys has set the benchmark in fault seal analysis, with our Shale Gouge Ratio algorithm widely adopted as the industry standard. SEAL builds on this legacy, offering a comprehensive suite of tools – from the simplicity of Triangle to the advanced capabilities of TrapAnalyst assessing up-dip and across-fault leakage. With the introduction of Fault Seal Uncertainty, SEAL is once again driving innovation and excellence within the industry.



Detailed Fault Seal Risking

SEAL enables rapid, in-depth fault seal risking at a geologically appropriate level of precision. No other software offers the same depth and detail in fault seal analysis.

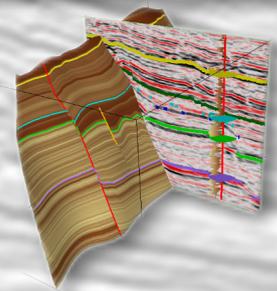
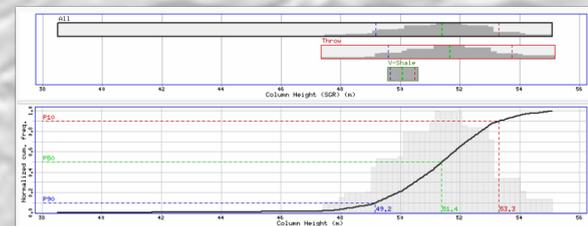
A typical workflow might start with a juxtaposition analysis using Allan diagrams to highlight sand-sand contacts, followed by calculation of attributes like Shale Gouge Ratio (SGR) to derive column heights in order to assess fault seal potential.

All attributes can be calculated, visualised, and analysed in 3D using company-specific data, providing powerful insights into prospect risk.

Fault Seal Uncertainty

The Fault Seal Uncertainty module is the newest innovation in T7, enhancing the industry-leading fault seal analysis workflow. It allows users to define ranges for key inputs – such as throw and V_{shale} – to generate distributions of fault seal attributes.

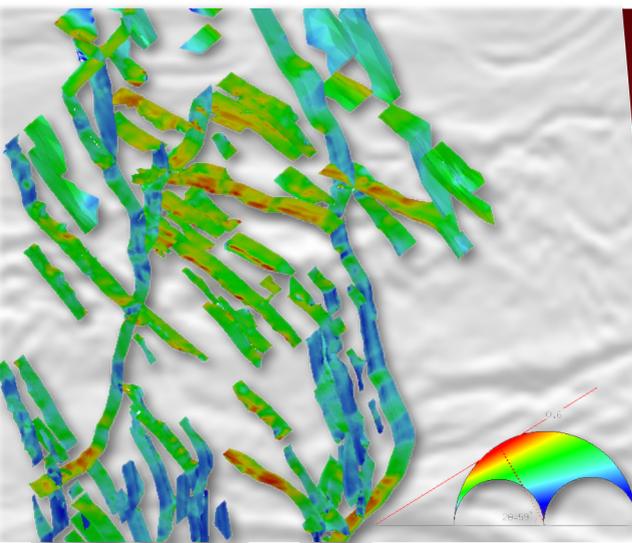
This makes it easy to identify the primary factors influencing fault seal performance, enabling more quantitative, data-driven prospect risking. Uniquely, the tool preserves full structural consistency across all input variations, setting a new industry standard for reliable, high-precision fault seal uncertainty analysis.



Geomechanical Insights with SEAL

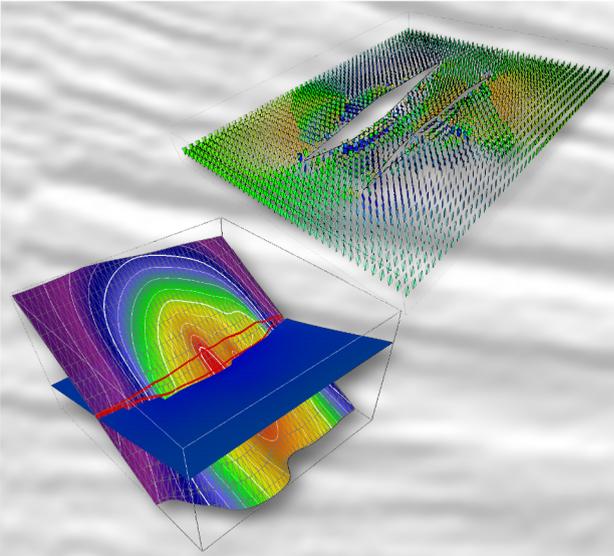
Faults can transmit fluids not only across their planes but also up-dip if reactivation occurs post-charge, potentially aiding migration or compromising a trap.

SEAL enables users to input stress parameters, apply summary or interval-based pore-fluid pressure profiles, and instantly generate geomechanical plots. Stress attributes can then be visualised on faults within the 3D volume, making it easy to identify areas at risk and better understand fault behaviour in your subsurface models.



FRAC

Sub-seismic fractures often play a critical role in fluid flow. T7 FRAC provides powerful tools to identify fracture locations, orientations, and their impact on reservoir performance. Backed by years of industry experience and technical validation, FRAC enables confident analysis and modelling of fracture systems – delivering the insight needed for more accurate fluid flow prediction and field development planning.



T7 Fracture Prediction

T7 Fracture Prediction delivers a mechanics-based approach to fracture modelling, predicting fracture networks, orientations, and density variations by simulating fault slip, salt movement, and regional strain.

With integrated 3D stress analysis for well design, fault risk, and fracture stability, it helps optimise subsurface plans and reduce geomechanical uncertainty—all in one powerful, intuitive tool.

GRID

T7 GRID transforms the traditionally complex task of creating and populating realistic static models (corner-point grids) into a fast, efficient process. Powered by multi-threading, GRID ensures your models accurately honour the framework structure. It features one of the industry's most advanced geostatistics toolkits, with TransGen offering unmatched capabilities for evaluating fault-zone flow properties. Together, these tools enable a streamlined workflow for rapid fault seal and transmissibility uncertainty analysis, delivering powerful insights with speed and precision.

Precision grids. Smarter models. Seamless control.

EarthGrid builds high-fidelity corner-point grids fast, honouring your geological framework while making property modelling and data updates effortless.

TransGen supercharges your models with advanced fault and flow tools, letting you add detail, refine simulations, and embed localised mini-models without ever rebuilding your grid. As the birthplace of the Manzocchi transmissibility multipliers, TransGen now uniquely assess faults in carbonates.

