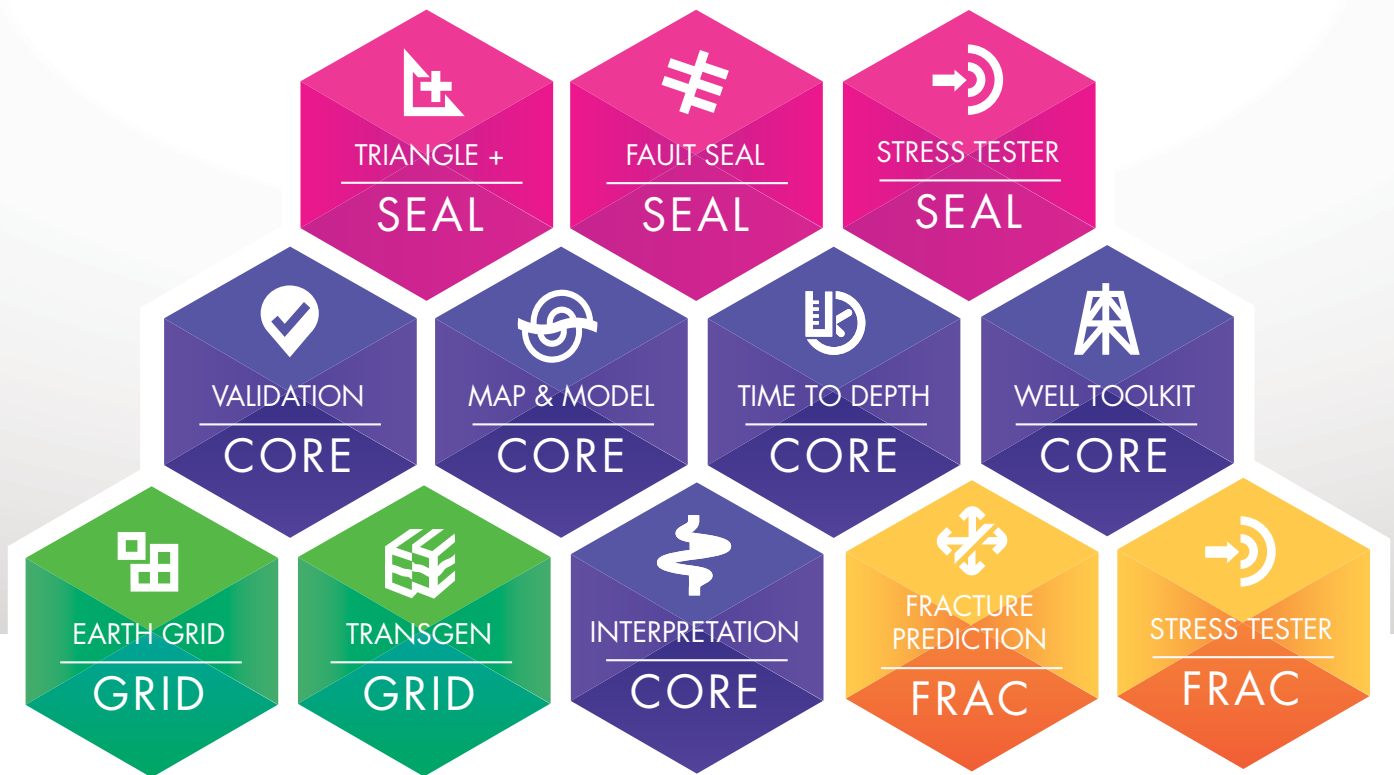


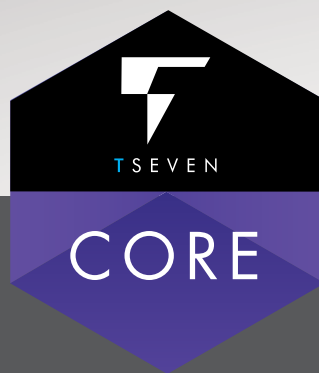


T S E V E N



T7, the successor to TrapTester. A new intuitive, interactive 3d workspace in which to accurately interpret, validate, model, build and analyse from air-tight framework to fault seal, stress and fracture prediction.

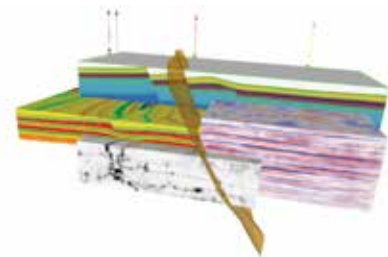
T7 offers the ability to create and translate your robust geological model into a truly representative cellular grid, enabling population and analysis of Earth Models using some of the most advanced grid-based tools in the market.



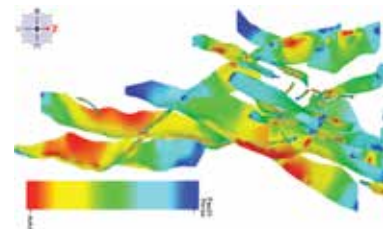
T7 CORE consists of a suite of modules to make the interpretation of seismic data, building and validation of robust framework models, and editing/incorporation of well data a simple workflow. The geometric freedom in both seismic interpretation and model building is uniquely intuitive. Every element in the 3d viewer is interactive, allowing you to build better models – faster.



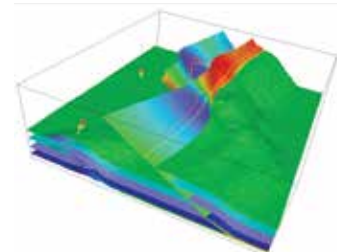
T7 offers the ability to interpret in a fully interactive 3d environment. Pick on sections, horizons, faults, slices or directly on cube faces as they scroll in real time revealing the three-dimensional nature of structure. Supporting multiple surveys and multiple co-rendered volumes, the seismic toolkit in T7 is among the most complete available for both 2D and 3D interpretation.



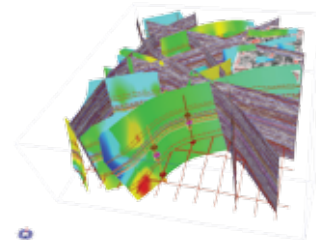
Anyone can quickly become an expert structural geologist with our simple fault analysis and fault statistic tools, allowing you to create robust, defensible models on which to build your geological model.



Effortlessly build and respect structure with T7, a tool developed with real geological structure in mind. T7 handles reverse geometries with ease, allowing for multiple Z horizons, complex fault and horizon geometries, giving you the ability to build an air-tight three-dimensionally consistent model as you interpret.



While all the validation and model building functionality works perfectly in TWT and depth, some advanced processing needs to be done in depth. T7 CORE contains the tools required to convert TWT models to depth.



T7 CORE presents comprehensive interpretation as well as the ability to edit well curves in an intuitive manner, from free hand to controlled stochastic curve creation. CORE contains the tools you need to edit or create any curve needed to complete the workflow.

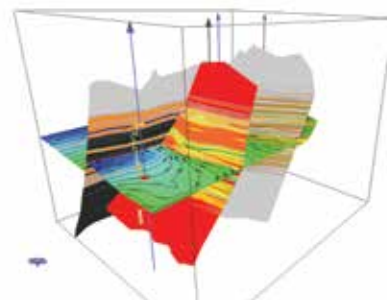
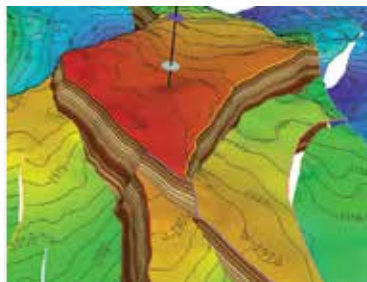




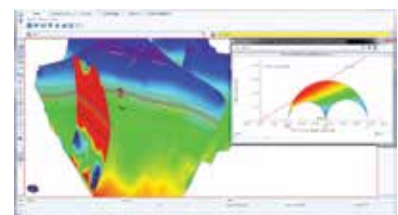
For many years Badleys has lead the industry in the field of fault seal analysis. Our Shale Gouge ratio method for assessing fault seal is the industry standard, and T7 is the benchmark for excellence in its application. From the simplicity of Triangle to the power of TrapAnalyst and the ability to assess up-dip and across fault leakage, as well as our advanced GRID capabilities, no matter which phase you are at in the E&P process there is no fault seal software as complete as T7.



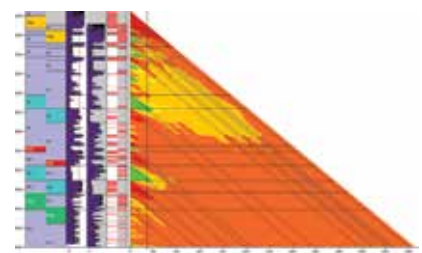
Quickly conduct thorough fault seal risks on framework models at geological precision - no other software can boast the depth of detail available in our fault seal toolkit. Create and integrate your own data transformation macros ready to evaluate and display in 3D using your own calibration data. TrapAnalyst is a unique tool capable of automatically assessing multiply faulted traps in stacked reservoirs to provide critical fault-plane spill points and HWCs. Create and integrate your own transformations to evaluate calibration data and to assess uncertainty/sensitivity.

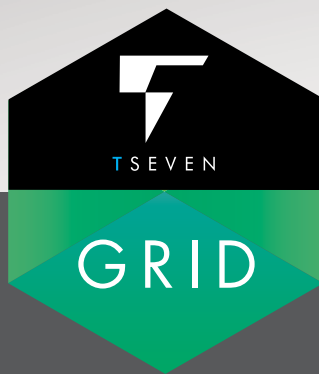


Faults don't just leak across the plane. If they have reactivated since charge then they may have transmitted fluid up-dip. This can be a positive migration mechanism, or conversely the failure of a trap. Badleys have lead the way since 2001 with in situ stress analysis tools and our software is tempered by years of calibration across the industry and academia. Simply input the stress parameters, select summary or interval-based pore-fluid pressure profiles and instantly create geomechanical plots. Then visualize the stress attributes on faults in the 3D volume to easily identify locations at risk.



We realize that not all fault seal studies will have access to a fully 3d model, or even be appropriate for that type of analysis. For these we provide Triangle, a simple juxtaposition tool that only requires a well curve as input. Used in conjunction with the CORE Well Toolkit module (provided as standard) this can become an extremely powerful tool in exploration, delivering instant updates to the nature of fault seal in an easy to understand format.

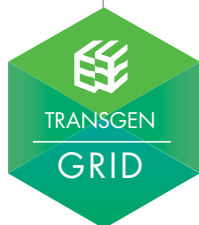
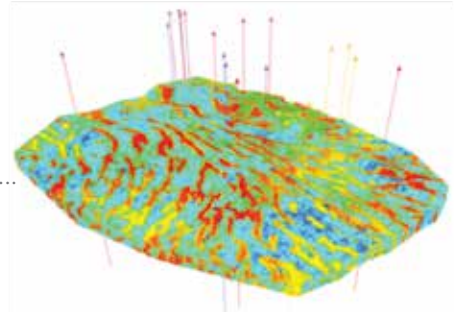
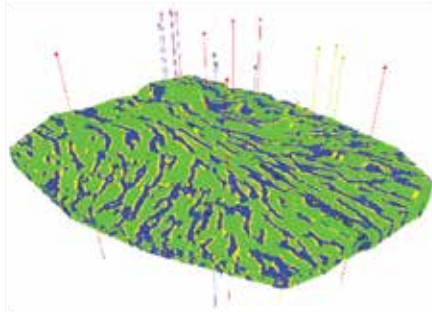
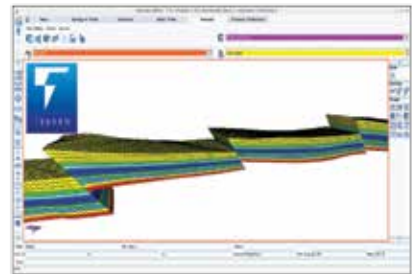




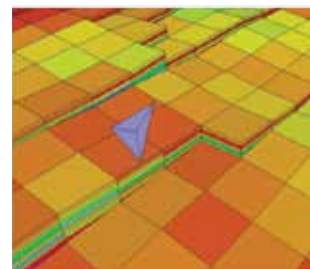
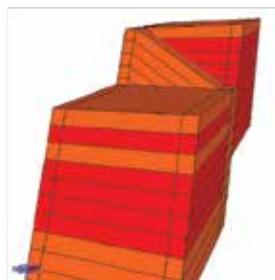
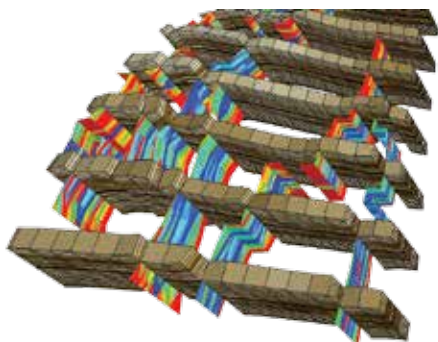
Creating realistic CPGs and populating them with meaningful properties has, traditionally, been an involved and time-consuming process. GRID is accelerated by multi-threading, offering you the ability to quickly honour the framework in the CPG. Our geostatistics toolkit is one of the most advanced in the market, and the tools in TransGen remain unparalleled for assessing fault-zone flow properties. Putting it together: the streamlined workflow enables rapid fault seal/transmissibility uncertainty analysis.



All too often a well constructed model is obliterated by the process of cellularization. A corner point grid model that honours the geology is known to be important in later workflows, the time saved in faster history matching far outweighs the time spent creating such a model. EarthGrid allows you to honour the framework created using an enhanced, automated, fast pillar grid process, then populate that model with properties using an advanced geostatistics toolkit.



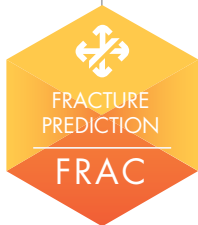
Once the cell model has been created it is over to TransGen to provide some of the most sophisticated analysis tools in the market. Add faults where they have not been specifically modelled. Add sub-cellular geometry, such as relay faults, to improve the accuracy of simulations. TransGen was the first software to calculate transmissibility multipliers and continues to lead the industry in excellence.



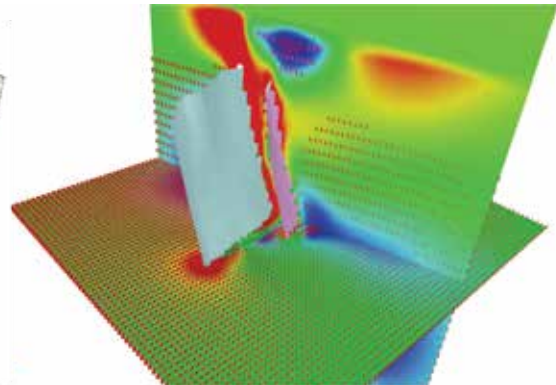
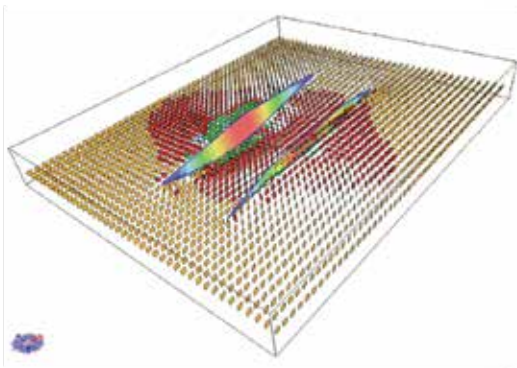




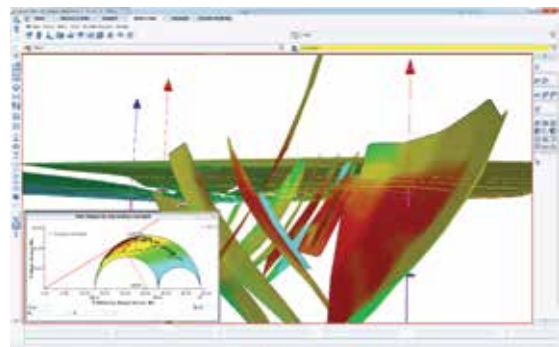
Whether you work in a fractured reservoir or not, it is very likely that fractures are present and significant in your reservoir. Understanding where they are located, in what orientation they exist, and the impact on fluid flow, that they may have, are all key aspects in fully understanding fluid flow in a field. T7 FRAC offers you the tools to investigate these systems with the confidence of years of industry and technical rigour applied using our toolkit.



T7 Fracture Prediction is the mechanical alternative to DFNs and much more. Models are run of mechanical response to the net effects of fault slip, underlying salt uplift/withdrawal and regional strain. These models predict the stress/strain perturbations around the set of seismically mapped faults. At each observation point in the reservoir a wide range of mechanical attributes are calculated - fracture mode, orientation and proxies for fracture density. The result is not only a fracture network with orientation information, but crucially provides the location of higher/lower fracture densities within the field.



In situ stress analysis for well design, mitigating fault reactivation risk or to predict fracture orientations that are most likely to transmit fluids is quick and uncomplicated with our StressTester module. Simply input the stress parameters and instantly create geomechanical plots as well as 3d visualization. Stress analysis can be conducted on framework faults, fracture networks or even cellular CPG faults to inform both the exploration and production phases of your workflow.



# THE BADLEYS DIFFERENCE

## STABLE, INTUITIVE SOFTWARE

T7 has been in continuous development by the same software team for over 25 years. The result is exceptionally stable software on both Windows and Linux platforms. Such an intimate knowledge of the system design and architecture enables rapid development to meet the needs of our users. We are constantly striving to enhance the user experience by listening to our users and creating the environment they need to gain the technological and economic edge.

## EXPERTISE

Badleys has led the industry in the field of fault seal analysis for more than twenty years. Our Shale Gouge Ratio method for assessing fault seals is the industry standard. Our software is the benchmark for excellence and against which other software is judged. With a long and respected publication record we offer unrivalled insight into structural issues as part of our support and consultancy services. Within our group our experts, considered at the top of their disciplines, are at your disposal.

## INNOVATION

From the beginning Badleys has led the way in the software application of structural techniques. T7 and its precursors, TrapTester and FAPS, boast a long list of innovations, for example: first commercial fault seal and 3D fault seal software, first to calculate transmissibility multipliers, first to incorporate geomechanical tools, first to automate the seal analysis of multiply faulted framework traps. We continue to bring innovation to the market and though often copied our application is always a step ahead.

## FAST, EFFECTIVE SUPPORT

Our users enjoy a level of support unrivalled in the industry; personal, fast and above all, effective. Whether it is help with technical or geological inquiries, our team of structural geology experts is on hand to help you find the right solution.

**TAKE A FREE TRIAL TODAY** and realise how T7 can improve your workflow and results.



# DIRECT LINKS

## LINKS TO THIRD PARTY SOFTWARE

T7 is tightly integrated with third party applications via dedicated links. Use these links for importing seismic, attribute volumes, culture, shapes, well and interpretation data as well as cellular CPG models and their properties. Our links are crucial to integrated workflows so when a third party introduces an upgrade, our response and support for our customers is always immediate.



# TRAINING



## GETTING STARTED WITH T7 1 DAY

This is a new course with a dominantly practical content. It is aimed at new users who require a quick start in using T7.



## INTRODUCTION TO T7 3 DAYS

Concepts covered include interpreting faults and horizons in 3D seismic, derivation of a geologically robust three dimensional faulted framework model, structural quality control, geometric seal analysis, integration of well data, the SGR method, fault seal calibration and geomechanical risk factors.



## PRACTICAL FAULT ANALYSIS 3 DAYS

Practical Fault Analysis covers all aspects of fault interpretation, from picking strategies through correlation and linkage to structural quality control.



## FAULT SEAL ANALYSIS THEORY 2 DAYS

Theory-based course on methods and techniques for evaluating sealing faults.



## GEOMODELLING IN T7 3 DAYS

How to use T7 to create, populate and analyse faults in Geomodels (also known as Geo-Cellular grids or CPGs).



## FRACTURE PREDICTION IN T7 3 DAYS

How to use Elastic Dislocation (ED) methods for predicting fractures in T7, deriving forward models of fracture patterns and densities for inclusion in reservoir simulations.

# CONSULTANCY

## FAULT ANALYSIS

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### SEISMIC INTERPRETATION

2D & 3D interpretation of structurally complex regions.

### INTERPRETATION QC AND FAULT ANALYSIS

Use of displacement analysis techniques to determine mapping accuracy to indicate problematic areas of horizon and fault interpretation.

### TRAP ANALYSIS

Mapping fault-bound traps, assessing leakage/seal risk, prediction of contact depths, column heights and physical properties of the fault zone.

### SMALL FAULT AND FRACTURE PREDICTION

Statistical characteristics and density interpolation, use of geomechanical models to predict spatial distributions and failure modes.

## GEODYNAMICS

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### BASIC DYNAMICS

Explanation of cause and effect of large-scale processes driving subsidence, uplift and heat-flow in extensional basins and continental margins.

### PALINSPASTIC RESTORATION

Sequential, isostatically balanced maps and cross sections reversing the basin's evolution.

### PALAEOBATHYMETRY

Mapping of basin floor topography and location of depocentres through time.

### DEPOSITIONAL AND EROSIONAL ANALYSIS

Modelling/evaluation of syn-rift structural evolution, effects of sediment loading, compaction, identification of sediment source areas.

### THERMAL HISTORY EVALUATION

Estimation of temperature history from forward and reverse modelling and calibration with observed temperature indicators.

### GRAVITY MODELLING

Explanation of observed gravity field by reference to synthetic gravity from forward modelled structures.