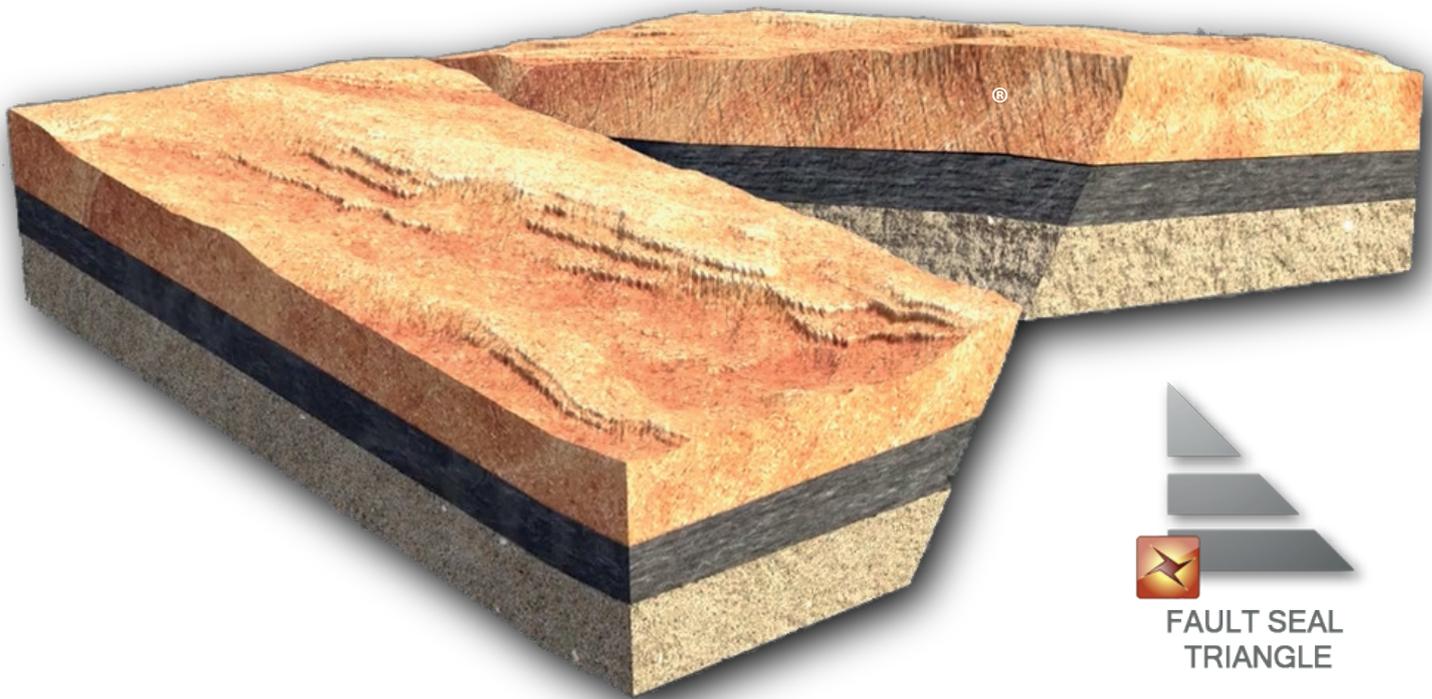


FAULT SEAL TRIANGLE

RAPID 1D FAULT SEAL ANALYSIS DIRECT WITHIN PETREL



PROGRAM OVERVIEW

Fault Seal Triangle allows you to conduct simple, fast and efficient fault seal analysis using any well within your Petrel(TM) project. Test the seal capacity of a bounding fault within a given throw range by assessing if a) there are effective juxtaposition seals present and b) whether viable hydrocarbon columns can be supported where the reservoir is not juxtaposed against an impermeable layer.

KEY FEATURES

Fault Seal Analysis

Use well curve data (e.g. Vshale) to calculate the sealing capacity of a fault as a function of throw by calculating Shale Gouge Ratio (the industry standard algorithm, originated by Badleys) and converting to maximum trappable hydrocarbon column heights.

Corrections for Fluid Densities and Burial History

Correct trappable column heights for variations in expected hydrocarbon densities and geohistory (e.g. post-faulting uplift or burial).

Unique Functionality

Fault Seal Triangle introduces for the first time a geometrically-correct assessment of fault seal in growth sequences.

Fast & Efficient

An intuitive design coupled with an optimised calculation engine means models can be set-up and run quickly

Easy To Use

Designed for all geoscientists who require a fast assessment of the sealing capacity of a fault without the requirement for building a 3D model.

FAULT SEAL TRIANGLE FOR PETREL®



Example juxtaposition seal at a fault. The uppermost sand body (light blue in footwall, left) is downthrown against a shale unit. This will seal. However, the juxtaposition of sand against sand units deeper along the fault relies on fault gouge to seal, tested by Fault Seal Triangle.

The first order control on the ability of the fault to create a seal at any given unit is the juxtaposition of an impermeable layer against it.

However if the reservoir on one side of the fault is juxtaposed against reservoir or thief zone on the other side, it is necessary to know something about the fault-gouge in order to determine whether it will seal or leak – and to what degree.

FAULT SEAL TRIANGLE works by describing the generation of fault-gouge along a fault using Vshale from well logs in a rapid and intuitive way.

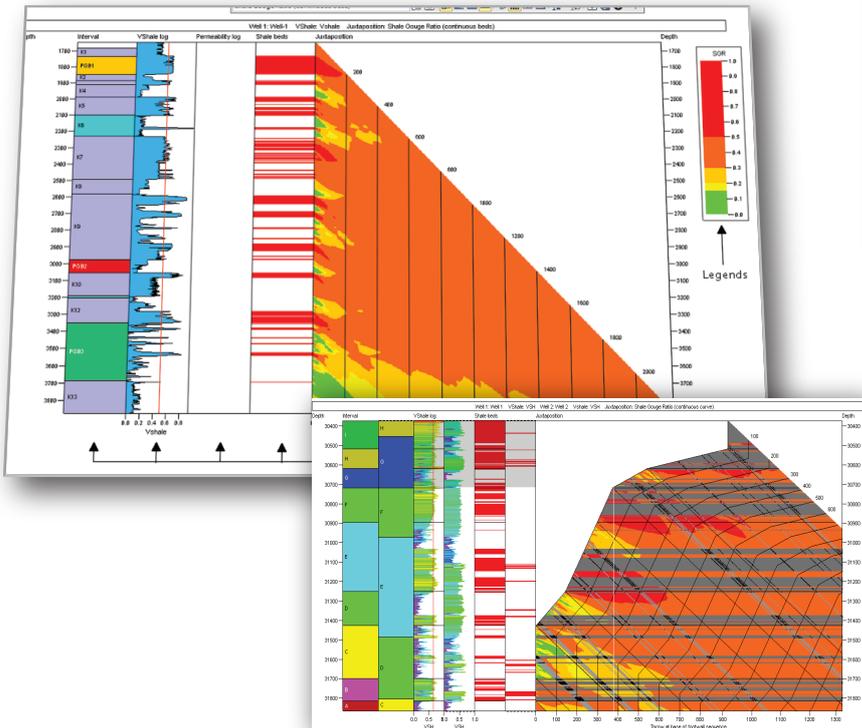
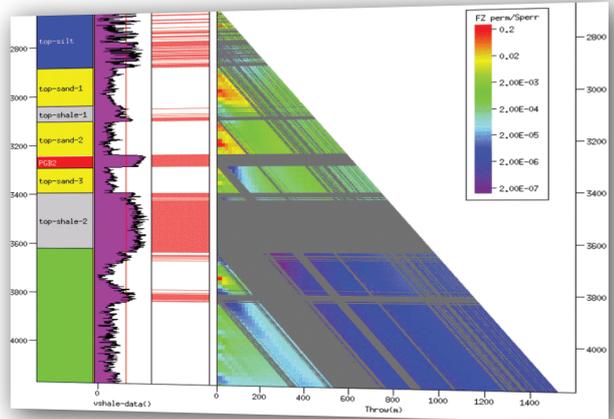
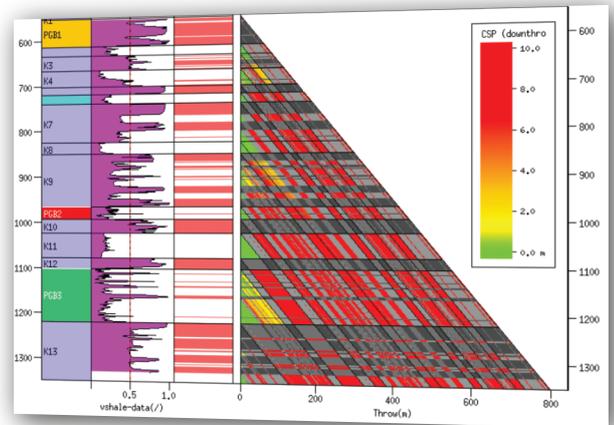
DATA INPUTS

- ◆ VShale Curve
- ◆ Well Tops - Thats all!!

GROWTH SEQUENCES

For the first time in the industry, Badleys presents a correct representation of juxtapositions across growth faults.

This unique functionality is **ONLY** available in **FAULT SEAL TRIANGLE** for Petrel®



OUTPUTS

FAULT SEAL TRIANGLE predicts and produces output for the following:

- ◆ Shale-Gauge Ratio (SGR)
- ◆ Hydrocarbon Column Height
- ◆ Threshold Capillary Pressure
- ◆ Fault-Zone Permeability
- ◆ Probabilistic Shale-Smear Modelling
- ◆ Clay-Smear Potential
- ◆ Transmissibility-Multipliers
- ◆ VShale