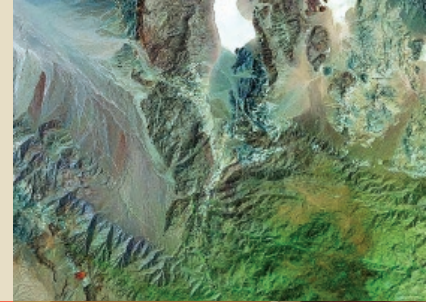


FracproPT™ software

The most widely used fracture modeling software in the petroleum industry



FEATURES

- Real-time onsite monitoring and evaluation.
- Fully integrated analysis tools for diagnostic injections.
- Reservoir properties directly import from log files.
- Built-in libraries of fluid and proppants.
- Easy interface for improved first time use.



FracproPT improves performance from your wells by giving you the knowledge necessary to achieve successful stimulations. Regardless of formation type, permeability or location, using FracproPT can lead to better results.

A powerful tool for fracture optimization

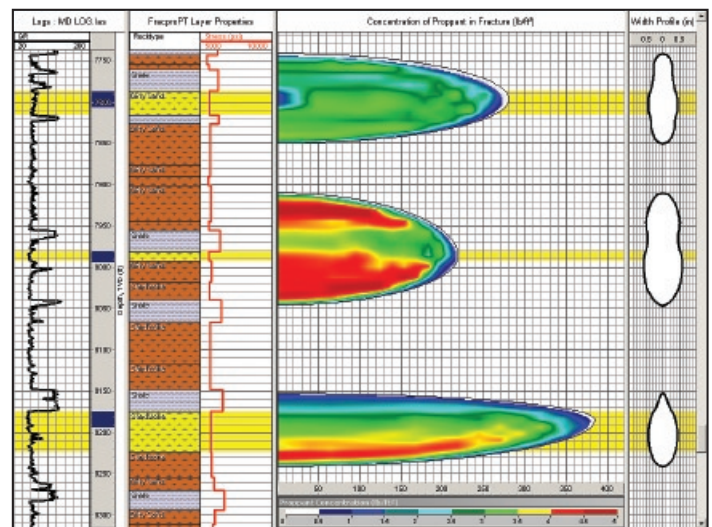
FracproPT can effectively model any type of pressure stimulation job, including limited entry wells, multiple perforated intervals and horizontal well fracturing.

Propped fracs – FracproPT allows understanding of proppant placement, conductivity improvements and fracture dimensions. FracproPT even incorporates the effects of proppant damage due to crushing, embedment, stress-cycling, non-Darcy and multi-phase flow.

Foam fracs – Energized systems can be simulated in FracproPT. It calculates foam quality at the surface and downhole along with gas and liquid volumes required.

Acid fracs – FracproPT can model acid injections, using acid reaction rates, thermal modeling and a fluid library containing common acids to determine etched fracture length and width.

Frac packs – Choose from three different leakoff models and back-stress to effectively match tip screenout behavior.



Display logs, layer information and geometry with the integrated fracture picture.

Matrix acid – StimPT is a stand-alone program for matrix acid injection below fracture pressure. With a look and feel similar to FracproPT, it is an effective tool to evaluate worm holing and skin reduction.

Training – We offer open or private FracproPT and StimPT courses for basic and advanced training. We also offer general hydraulic fracturing courses.

Support – Email and extended phone support are standard, provided by more than a dozen staff engineers and technicians. FracproPT features annual major upgrade releases. Service packs can be downloaded over the web, and users are automatically notified when they are available.

Constant improvement

As direct measurements of fracture growth in various rock formations become available, we incorporate them into FracproPT as improved default models and calibrated model settings for the specific formations. As a result, users improve their capability to predict fracture growth, leading to better job design and execution.

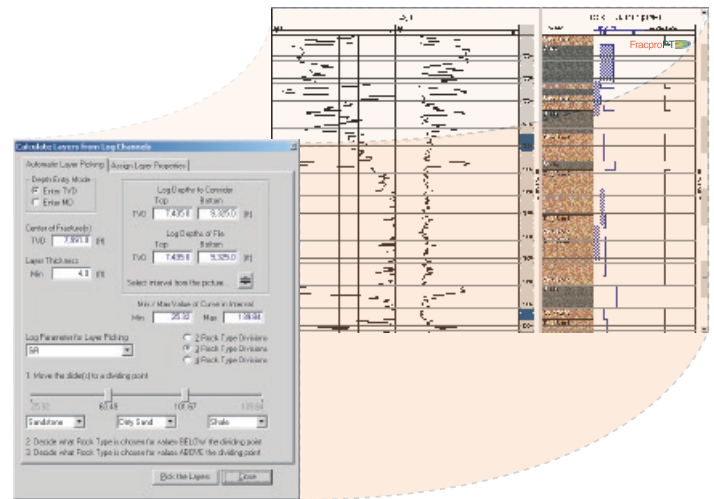
How can FracproPT help?

Whether you're evaluating past stimulation jobs or planning future ones, FracproPT provides information necessary to successfully achieve your production goals.

Stimulation modeling helps you determine fracture geometry, proppant conductivity, proppant damage, required perforation area and proper job size, and, ultimately, the production increase and ROI.

Problems of early fracture screenout, high surface pump pressures, poor proppant distribution and inadequate height coverage are minimized.

FracproPT contains four fully integrated modules used for frac design, frac analysis, economic optimization and reservoir performance. It includes utilities for real-time data capture, importing and exporting data and generating output reports. Automated minifrac, step-rate analysis, entry friction, net pressure and production history matching routines are built into the main program. Formation permeability and reservoir pressure analysis using Horner, pseudo-linear, pseudo-radial and the Mayerhofer method are incorporated, allowing investigation of DFIT long-term injection/falloff tests.



Layer picking tool converts LAS files into reservoir lithology and properties.

Selection of effective treatment schedules, pump rates, proper fluids and proppants is simplified with the built-in libraries. You can effectively model fracture growth in any formation: carbonate, sandstone and even coal.

FracproPT links its results to IMEX®, VIP® and Eclipse® by creating a file with local grid refinement of the fracture containing user-selectable properties. Simulations of multiple fractures, horizontal well fractures and multiple zones can be produced. These files can be directly imported into these sophisticated reservoir simulators for complete analysis.

FracproPT provides unique insights into your fracturing treatments and how they perform in the reservoir, in real-time and over time.

With unmatched capability, versatility and flexibility, it's no wonder that FracproPT is the industry standard hydraulic fracture simulation software.

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