

Geolog 8

New Innovations for the Industry's Leading Petrophysical Analysis Solution

Geolog® 8 is the newest version of Paradigm's industry-standard solution for formation evaluation and petrophysical analysis. Released as part of the Paradigm 17 software suite, Geolog 8 offers innovative new petrophysics features, new and improved engineering features, and increased customization through connectivity with Matlab™.

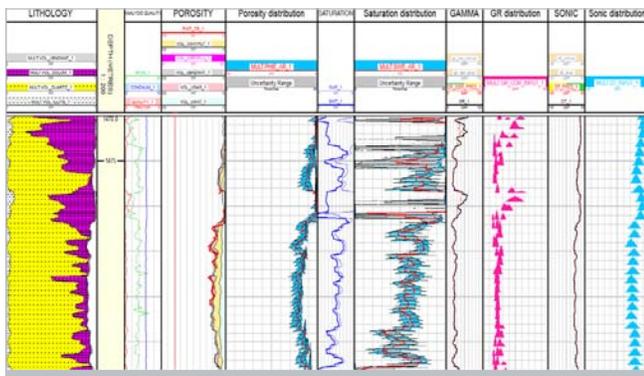
New petrophysics module

Geolog 8 includes **Monte Carlo uncertainty analysis** for the Geolog probabilistic petrophysical solution Multimin. This module enables users to assess overall uncertainty on a Multimin petrophysical analysis and identify the variables with the greatest impact. Included in the Multimin license, this technology improves usability and brings high-end innovation to the market.

A new processing method for **slowness frequency analysis of full waveform sonic logs** allows the user to derive a slowness frequency relation from input waveforms using the Matrix Pencil method. This method enables the output of slowness frequency maps at each depth, as well projection of the log to the slowness axis.

New **3D petrophysics analysis capabilities** have been added to help understand the interaction between formation and fluids in high angle and horizontal wells. Some of the new capabilities include:

- Offset Model view added to Well application
- Section track added to standard layouts
- Interactive editing of the geological model along the well path



▲ Monte Carlo uncertainty analysis in Geolog Multimin brings high-end innovation to the market.

- Transfer of high resolution horizontal well data back to the offset well
- Easy drag and drop interface to logs to model from the offset wells

In addition, all available Baker Hughes environmental corrections are now included in Geolog.

Improvements to the Geolog engineering portfolio

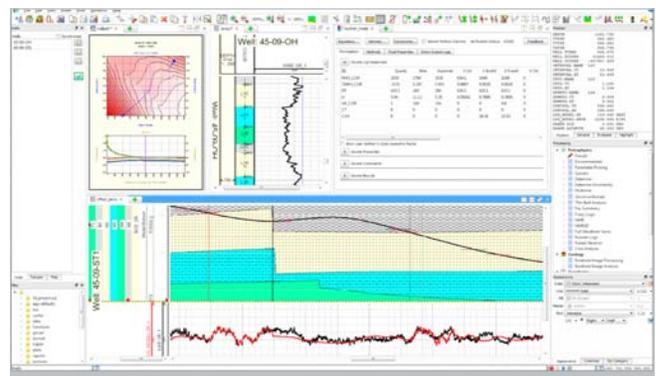
In this release, Geolog geomechanics have been extended to work in anisotropic conditions, in order to assess wellbore stability and fracturing potential in anisotropic formations. Geolog 8 also offers improved production logging and casing inspection functionality, along with new technologies for cement evaluation, pulsed neutron, and DTS/DAS handling.

Expanded customization and connectivity

Direct access to Matlab code using Geolog Loglan enables existing research work and custom calculations to be easily delivered to end users. Connectivity options have been expanded to include completion import from Peloton WellView, and an update of Geolog-Petrel connectivity to Petrel 2016.

More data loading formats

It's now possible to bring more types of data into Geolog for integrated interpretation, including CT data in SEG Y format (DICOM supported in 7.4), Petra.LIC and IHS.XML depth-registered raster image formats, and XTF format files (Atlas format, used in China).

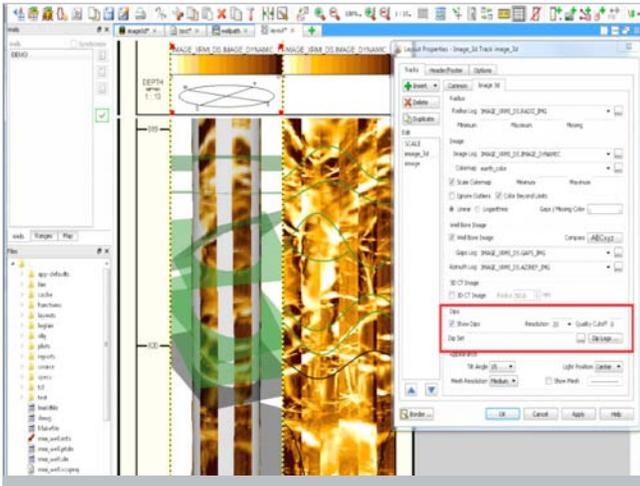


▲ 3D Petrophysics enhance understanding of the interaction of formation and fluids in high-angle wells.

Geolog 8

Enhanced user interface and display

Geolog 8 offers new options for displaying data, to help streamline interpretations and document results. A new multi-well formation test viewer enables the user to visualize and interpret formation pressure profiles across multiple wells. Interactive visualization of the dip planes that have been picked on image logs in both Image3D view and Image3D track, improves the accuracy of geological interpretations.



▲ View planes in Image3D track.

Interoperability

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

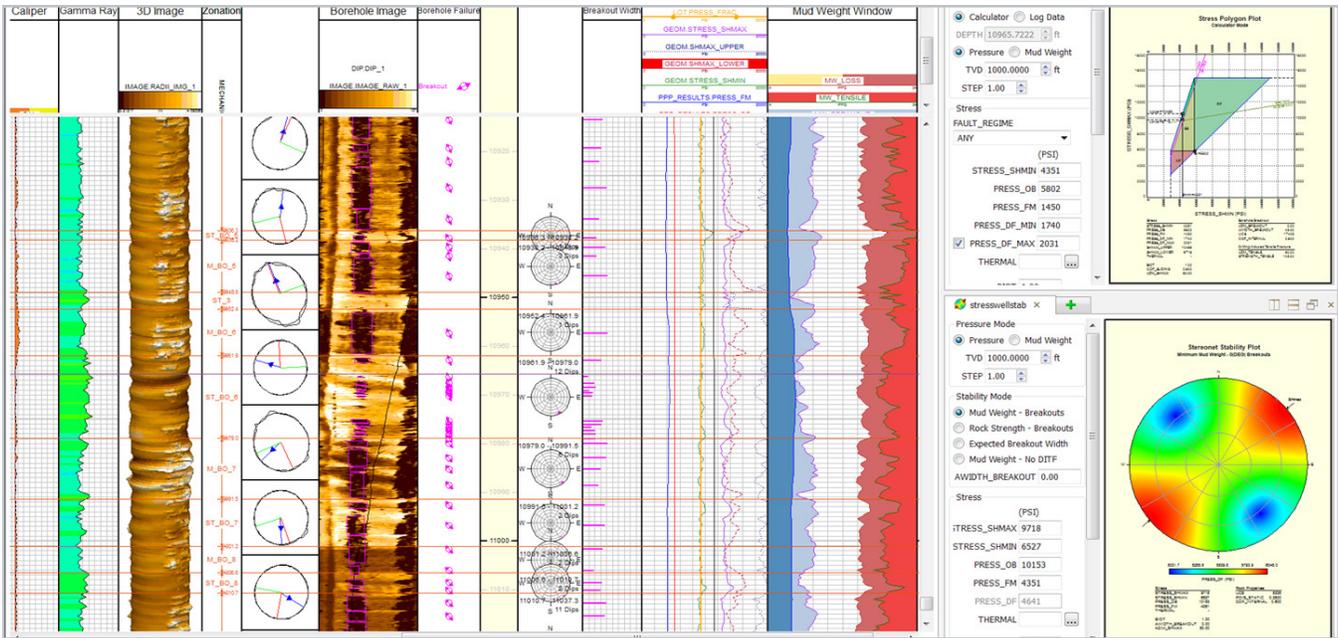
- OpenWorks® R5000
- GeoFrame® 2012

System specifications

- 64-bit Red Hat® Enterprise Linux® 6.5 and subsequent minor releases, and 7.0 and subsequent minor releases
- Microsoft® Windows® 7, 8.1, 10 (64-bit)

The Paradigm Advantage

- Clear technological superiority combined with a modern, user-friendly interface helps Geolog users maintain their competitive edge.
- Extended third-party connectivity allows users to access advanced Paradigm technologies while maintaining value from existing investments in other software platforms.
- Fully integrated workflows enhance multi-disciplinary asset teams' productivity and efficiency.
- A full-function geomechanics module minimizes drilling costs while ensuring safety.



▲ Geolog 8 Geomechanics: Development of a mechanical earth model for well planning and pre-drill geomechanical analyses

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