

Interactive Petrophysics 3.3

WHAT'S NEW? Interactive Petrophysics™ (IP) interpretation software provides you with a full range of tools for all your petrophysical interpretation needs.

Numerous improvements have been made to existing modules in IP version 3.3. These enhancements include

- real-time data-loading capabilities
- updates to parameter screens, log plots, crossplots, and histograms
- updates to porosity, water saturation, and rock physics modules.

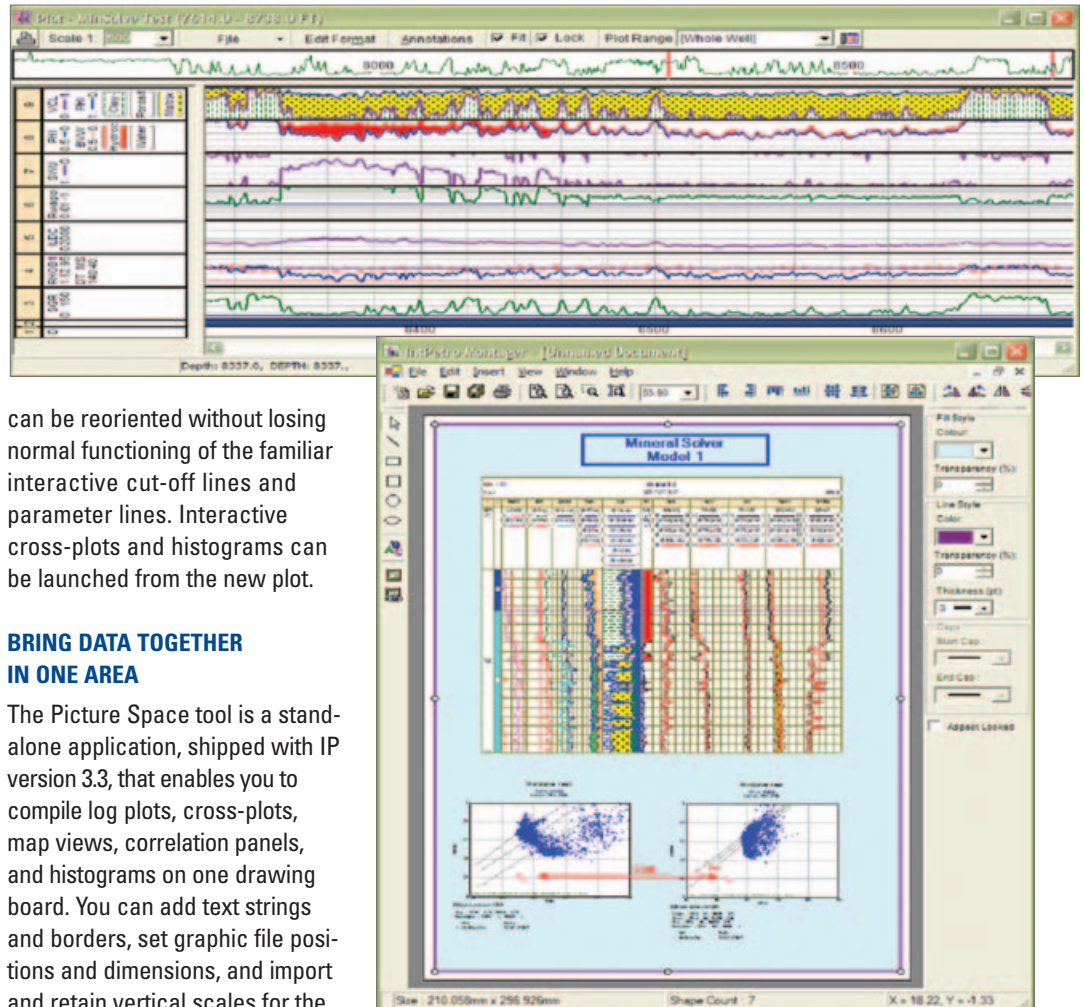
This versatile, easy-to-use software is ideal for the

- geologist or reservoir engineer wanting to quality-check log data and perform quick data interpretation
- experienced petrophysicist carrying out multizone, multiwell petrophysical field analysis.

The release of IP version 3.3 provides users with new tools and enhancements based on client workflows and requirements.

DISPLAY MORE OF YOUR WELL LOGS

The Horizontal Log Plot function displays log plots in landscape orientation, rather than in the conventional, vertical portrait orientation. Users with multiple PC monitors can see more of their well logs on-screen. Interactive log plots, launched by the IP interpretation modules,



can be reoriented without losing normal functioning of the familiar interactive cut-off lines and parameter lines. Interactive cross-plots and histograms can be launched from the new plot.

BRING DATA TOGETHER IN ONE AREA

The Picture Space tool is a stand-alone application, shipped with IP version 3.3, that enables you to compile log plots, cross-plots, map views, correlation panels, and histograms on one drawing board. You can add text strings and borders, set graphic file positions and dimensions, and import and retain vertical scales for the log plots. The tool enables greater flexibility in generating your final plots by allowing you to attach a title block and logo files to create quality printouts, posters, and presentation montages.

Create quality montages and printouts with the picture space tool.

Developed by PGL
www.pglweb.com





ACCESS A WEALTH OF WELL INFORMATION

Load cultural data into multiwell IP projects using the Well Header Loader module. The module automatically maps the well name in the external file to the identical IP Well Name data field.

The interface loads data such as company, well spud date, well completion date, well completion status, field, location, unique well identifier (UWI), UTM northing/easting/UTM zone, and well bottom depths—either to multiple in-memory wells within an IP project or to newly created IP wells—at the click of a button.

IP users can now interactively set up, edit, and save well and external log file header parameters, which can be mapped to dynamic IP program attributes. Well and log attributes are saved to the IntPetro.config file.

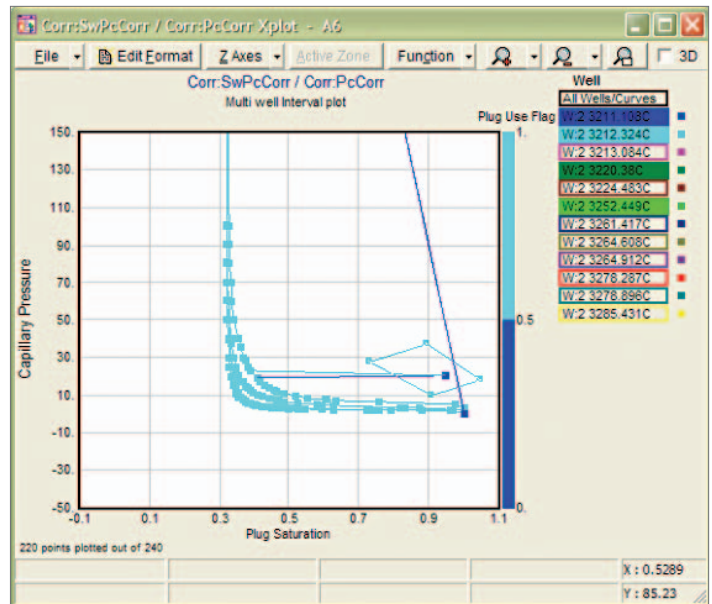
For example, when loading LAS, DLIS, or LIS formatted files, the mnemonics for log file header parameters—CNT, COUNTRY, CNTR—can be linked to existing IP parameters by mapping the external mnemonics to the internal IP attribute name.

A new Take Notes feature in the Well menu provides a convenient note pad—a simple text editor—that can be used to record workflow steps, comments about an interpretation, log curve issues, and user formulas. These items are then saved to a text file in a subfolder within the IP project.

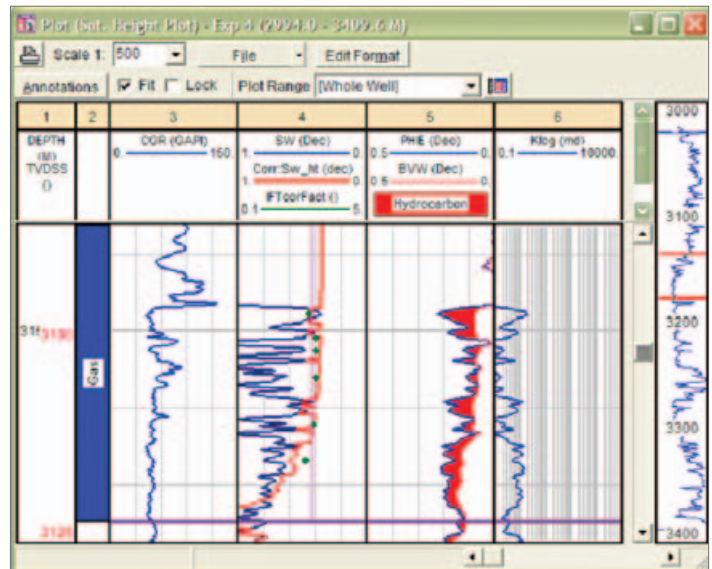
CALCULATE SATURATION HEIGHT FUNCTIONS

IP version 3.3 offers the only saturation height modeling package in current commercial petrophysical interpretation tools. It is a multiwell module that enables the calculation of saturation height functions from both capillary pressure data and log data. This modeling consists of four steps.

- Step 1 is a capillary pressure quality control and correction module.
- Step 2 allows creation of capillary pressure functions from the corrected, quality-controlled data. Multiple functions can be created and several different types of equations (including J functions) are available. Curve fitting allows the use of nonlinear equations, including Lambda functions, hyperboles, and exponentials.
- Step 3 allows creation of saturation height functions from log data. Several methods are available that include the following functions: Foil (BVW = $f(h)$), and RQI (rock quality indicator). Multiple functions can be created and discriminators used to select the data for input into the functions.
- Step 4 applies the functions created in steps 2 and 3 on a fieldwide base. Functions can be used to search for best-fit FWLs. Functions can be applied to multiple reservoirs with different FWLs. A calibration method is available to fit capillary pressure functions to log SWs where there is some doubt about reservoir interfacial tensions and contact angles.



Saturation height modeling multiwell crossplot.



Saturation height modeling results in well view.

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