

Techlog Wellbore Imaging

Enhanced quality control and visualization of wellbore imaging data

APPLICATIONS

- Capitalize on your borehole image data

BENEFITS

- Improves understanding of production potential
- Boosts productivity by enhancing sharing of image data and interpretations across all team members
- Enhances usability through wizard-based workflows

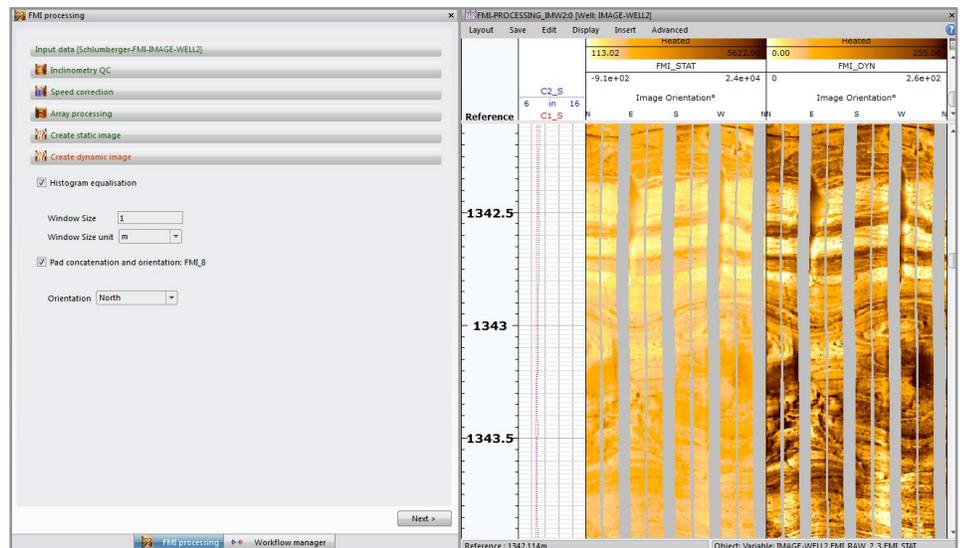
FEATURES

- Powerful processing and interpretation platform
- Wide range of tools from multiple service providers supported
- Improved fracture-characterization workflows
- Enhanced sand counting from borehole images

The range of potential applications for borehole image data in your organization is extremely diverse, including sedimentological interpretations that feed into reservoir models, multiwell fracture distributions for building fracture models, and stress orientations for planning frac jobs. The Wellbore Imaging module within the Techlog* wellbore software platform provides a powerful processing and interpretation platform for a wide range of tools from multiple service providers.

Given the importance of borehole image data, significant development has been dedicated to enhancing the quality-control, processing, interpretation, and visualization tools in the Techlog platform. For example, the Inclinometry Quality Control method provides the ability to quality control and repair orientation data.

Processing is now simple for nonspecialists—a wizard provides a guided workflow through all required steps of image processing, incorporating quality control, a simplified set of parameters, and automatic tool recognition. The workflow and final plots are saved automatically.



The image processing wizard in the Techlog platform automatically guides you through the workflow.

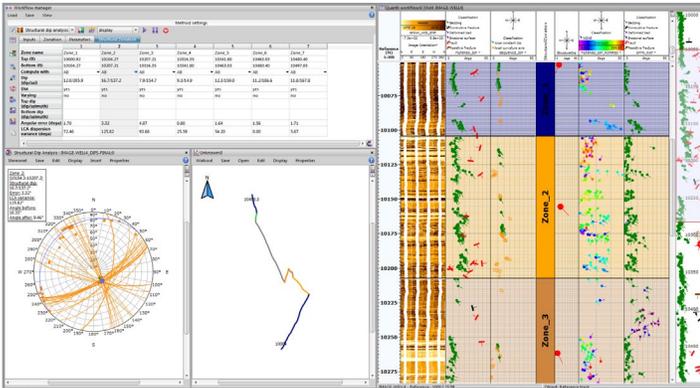
Improved interpretation

Visualization of dip picking on the 3D view enhances the geological interpretation of wellbore images, particularly in horizontal wells in which dip computation is very sensitive to how surfaces are fit to high-amplitude sine waves. Visualization in 3D also improves understanding of fracture distributions and the relationship of the well trajectory to the reservoir structure.

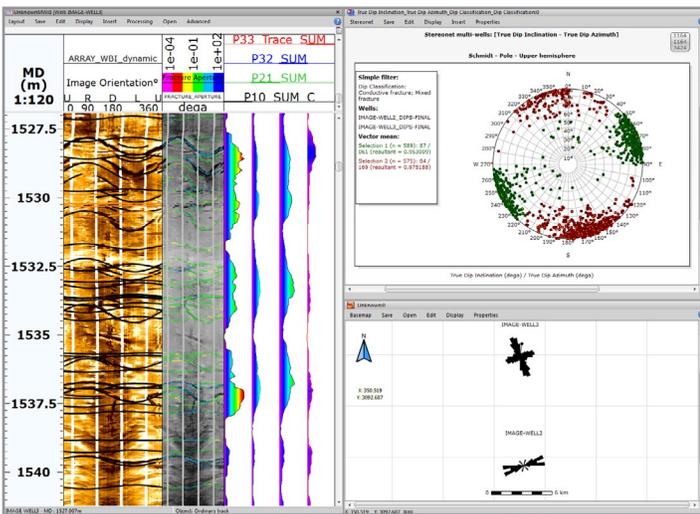
Interpretation of the picked dip data is enhanced with a new, highly interactive method for determining structural dip. Structural dip zones are quickly defined in a plot—the structural dip is computed from the local constant dip of low energy bedding and from multiple curvature axes. Structural dip removal is automatically updated.



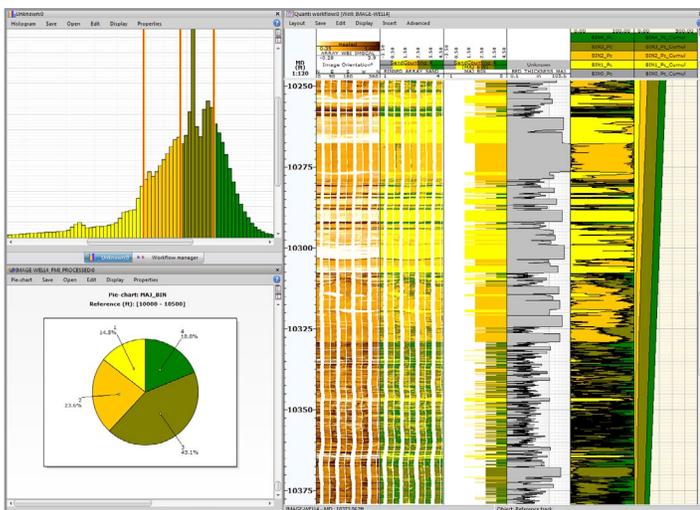
Techlog Wellbore Imaging



Interactive structural dip determination and removal.



Fracture characterisation tools in the Techlog platform.



Sand counting for better understanding of thin-bedded reservoirs.

Field-level fracture characterization

Fracture characterization workflows are improved with fracture aperture computations, automatic recognition of fracture orientation sets, and improved fracture statistics—fracture length, area, and porosity computations are added to the existing fracture density computations. These powerful tools give you the unique ability to perform fracture characterization at the field level.

Understand your production potential

Sand counting from borehole images can use a thresholding method to apportion any type of data into bins and calculate cumulative values for each bin, thus improving your understanding of net-to-gross and the production potential of your reservoir.

The new method for picking zones is particularly suited to manually interpreting detailed facies from borehole images, core, or conventional logs. This also allows facies schemes to be easily shared among team members or applied to new wells in a field.

Enhanced sharing

Along with other visualization and processing enhancements, these developments enhance the sharing of image data and interpretations across all team members, complementing the existing multiwell processing and data integration provided by the Techlog platform.



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