

# PlugHD<sup>®</sup> Service

## A RAPID TEXTURAL AND MINERALOGICAL HETEROGENEITY SCREENING AND SORTING TOOL WITH BULK PE AND DENSITY QUANTIFICATION

### RAPID GEOLOGICAL ASSESSMENT

Ingrain's PlugHD<sup>®</sup> service, along with its LithoVision<sup>®</sup> interactive visualization software, is a powerful nondestructive and noninvasive technique using high-resolution dual-energy computed tomography (CT) imaging to quickly evaluate internal heterogeneities and textures of plugs and to sort by bulk density (RhoB) and mineralogy (PE).

The distributions of sedimentological and diagenetic features and laminations are captured in 3D and are simultaneously logged to track variability along the length of the plug.

### IMPROVE YOUR CORE ANALYSIS PROGRAM

Quantify sample heterogeneity and select representative samples and volumes for planning your digital or physical core analysis program. In a matter of days, improve confidence in representative sampling for planned physical and/or digital analyses. Benchmark and integrate PlugHD data with wireline PE and RhoB to reduce measurement uncertainty.

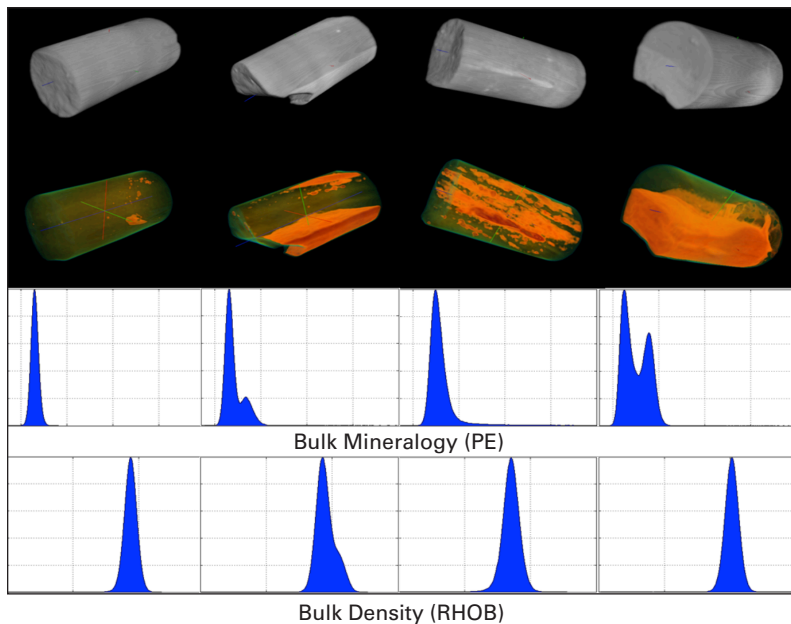
### BENEFITS

- » Obtain a permanent digital record of plugs
- » Efficiently sort plugs by bulk mineralogy and density
- » Obtain a heterogeneity evaluation for rapid assessment of mineralogical, textural, and internal plug features
- » Select representative sample volumes for subsequent digital and physical core analyses
- » Calibrate and integrate with wireline PE and RhoB
- » Offers a nondestructive and noninvasive technique

### FEATURES

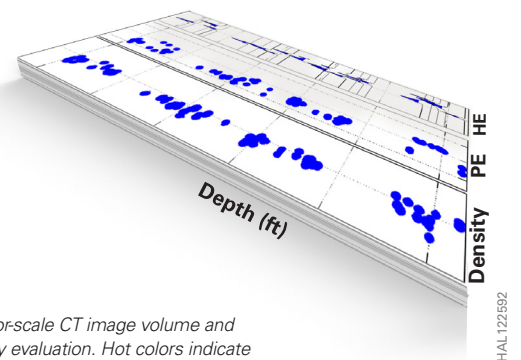
- » A mineralogical and textural heterogeneity evaluator
- » 3D high-resolution CT image volumes
- » Plots and tables of RhoB, PE, and effective atomic number for plugs
- » Interactive visualization LithoVision software

### Heterogeneity Evaluation\*



Grey and color-scale CT image volume and heterogeneity evaluation. Hot colors indicate relatively lower porosity or lamina with higher effective atomic number minerals. Cooler colors indicate relatively higher porosity and/or TOC and better production potential.

\*An increase in number, or width, of peaks indicates increasing heterogeneity.



For more information, visit us on the web at [www.halliburton.com/Ingrain](http://www.halliburton.com/Ingrain)

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