

# LithoFact™ Rock Analysis Service with XRF Analysis

## ELEMENTAL ANALYSIS FOR IMPROVED RESERVOIR MODELING

### OVERVIEW

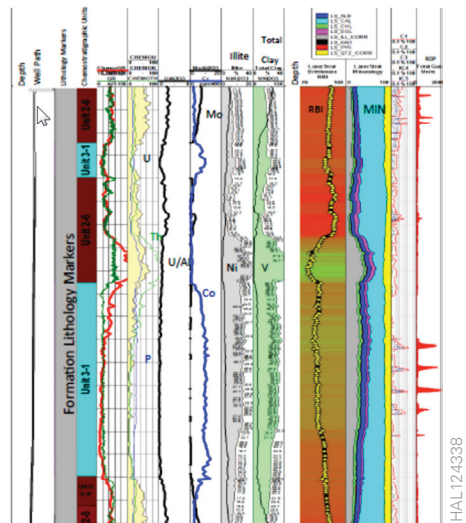
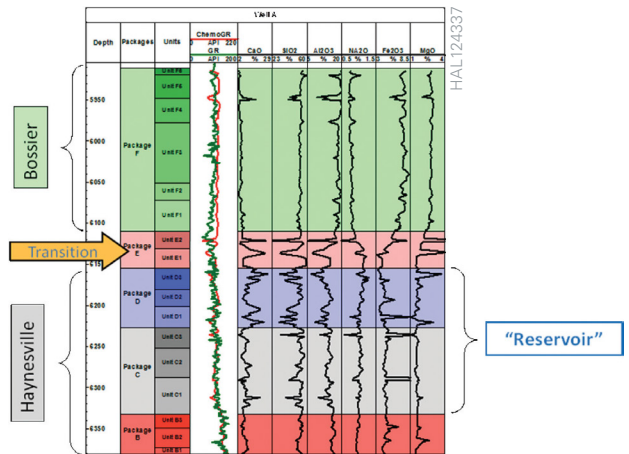
LithoFact™ rock analysis service provides elemental analysis through Bruker S2 PUMA X-ray fluorescence (XRF) analysis, allowing for characterization of reservoir stratigraphy and geomechanics. The XRF service from Halliburton Sperry Drilling measures the emission of characteristic secondary or fluorescent X-rays from a sample excited after being bombarded with high-energy X-rays. It provides operators with accurate data that can be used to build and validate depositional, chemostratigraphy, and mechanical models.

Through XRF analysis, LithoFact service delivers clients through elemental analysis that can be reported in customizable logs. The Halliburton XRF service measures the emission of characteristic secondary or fluorescent X-rays from a sample excited after being bombarded with high-energy X-rays. The frequency of fluorescence identifies the sample's elemental composition. With this service, elements from sodium to uranium can be identified in minutes.

### BENEFITS

- » Major/trace elements and elemental ratios increase the understanding of mineralogy when applied with XRD, lithology, depositional facies, diagenetic facies, reservoir quality, and stratigraphy
- » A calculated gamma ray (GR) from K, Th, and U concentrations, which can be converted into API equivalent units, directly compared to measurement-while-drilling/logging-while-drilling (M/LWD) or wireline (WL) gamma ray, and used for lag and sampling checks (quality control)
- » Spectral gamma ray: K, Th, and U are provided for clay typing and hot sand identification
- » Redox metals (such as V, Ni, and Mo): Total organic carbon (TOC) indicators and well placement validation in unconventional plays
- » Relative Brittleness Index (RBI) – A mineralogy-derived brittleness
- » Mud additives fingerprint to understand mud contamination

For more information, contact us at [sperry@halliburton.com](mailto:sperry@halliburton.com) or visit us on the web at [www.halliburton.com](http://www.halliburton.com)



Obtain quick mineral and textural data for geomechanical and stratigraphic studies through customizable logs

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H013136 02/20 © 2020 Halliburton. All Rights Reserved.