

Isotope Logging

Continuous isotopic ratio measurement service

APPLICATIONS

- Geochemical fluid characterization of conventional and unconventional reservoirs
- Fluid sampling planning, including real-time spot sample analysis optimization
- Well placement and geosteering assistance

BENEFITS

- Identifies small-scale features
- Provides early indication of reservoir connectivity and compartmentalization
- Enhances fluid typing, including flagging of fluid alteration processes

FEATURES

- Continuous isotopic ratio measurements log
- Surface logging-while-drilling data

The isotope logging service from Geoservices, a Schlumberger company, delivers real-time, continuous measurement logs of isotopic ratios, opening up early access to geochemical characterization of hydrocarbons in terms of source, generation, and processes.

Improve depth resolution and identify small-scale features

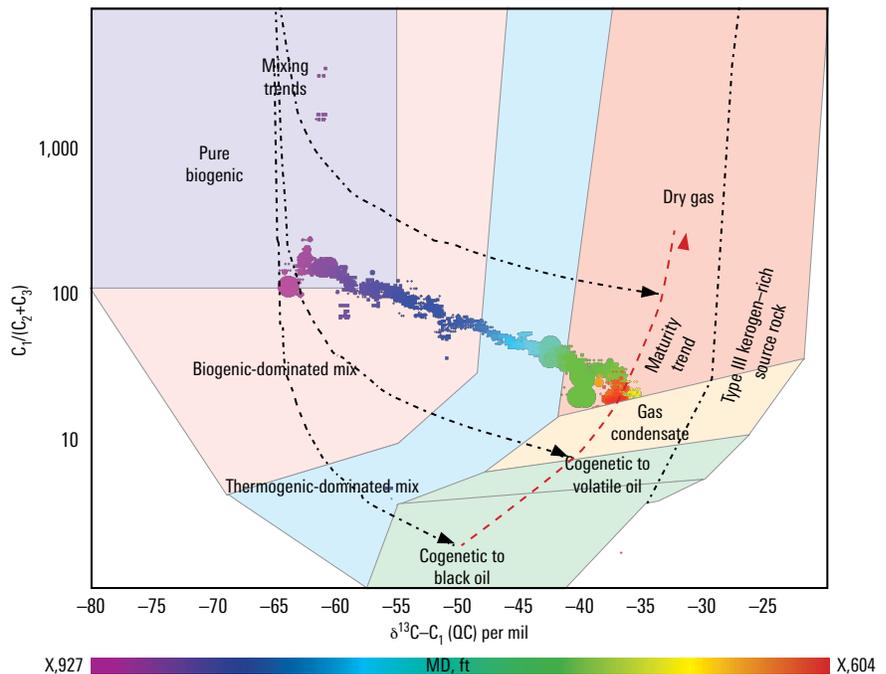
A continuous, quality-controlled measurement log of isotopic ratios provides dramatically improved depth resolution and enables identifying small-scale features that would otherwise be missed. Additionally, uncertainties and risks associated with collection, shipment, and analysis of spot samples are reduced or eliminated. Surface logging measurements are available while drilling, enabling early understanding of in-reservoir processes.

Identify in-reservoir processes

Isotopic compositions can be altered by biodegradation, water washing, and other in-reservoir processes. Isotope logging identifies the presence of such processes and, in some cases, their type and magnitude.

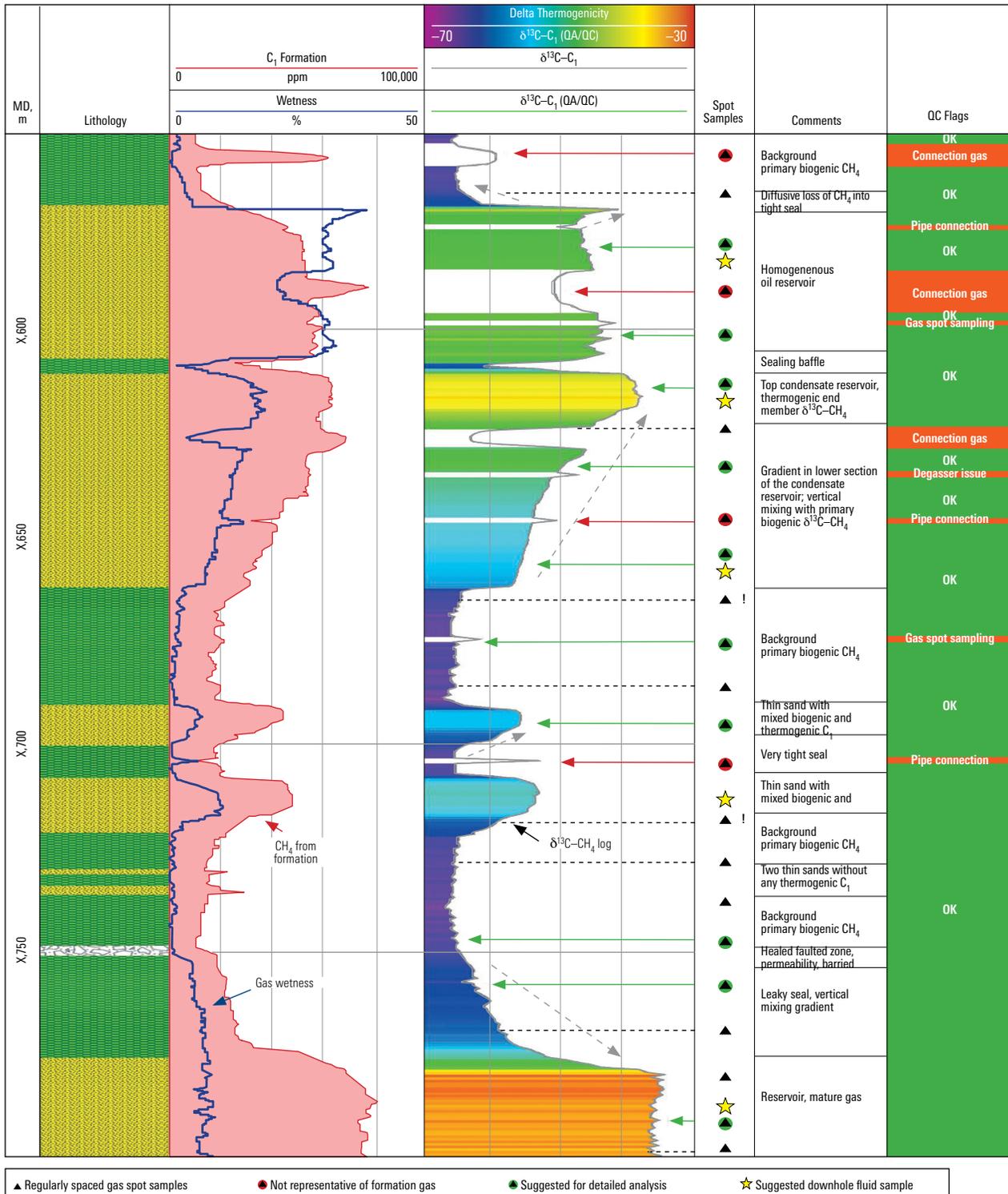
Optimize isotopic samples and analysis

Integrated with other formation evaluation data sources, real-time isotopic ratio logs enables immediate and accurate interpretation of geological and geochemical systems. When combined with quantitative fluid composition data available from the FLAIR* fluid logging and analysis in real time service, the isotope logging service enables early and reliable indication of mixing trends and maturity levels. This enhances the decision-making process, optimizes reservoir development, and provides important information on large-scale reservoir dynamics.



The isotope logging service continuously records isotopic ratios. This example shows how these ratios significantly improve the robustness of the hydrocarbon geochemical characterization.

Isotope Logging Service



The continuous isotope log places spot samples in context for geochemical interpretation. Identification of small features, removal of nonrepresentative samples, and prioritization of samples for rush analysis are part of a fast decision toolkit.

slb.com/isotope