Xaminer® Magnetic Resonance (XMR™) Service

HIGH-RESOLUTION, HIGH-EFFICIENCY, NEW NMR TECHNOLOGY

OVERVIEW

The Halliburton Xaminer® MR (XMR™) service is a true new-generation magnetic resonance technology, engineered to provide excellent bed resolution and evaluate your reservoir's full range of pore sizes from micro to macro. The XMR sensor provides full MR solutions for basic-to-advanced formation evaluation requirements.

Vertical resolution in thin beds, carbonates, and organic shales is greatly improved over previous magnetic resonance (MR) sensors with a short antenna aperture. Industry-leading pore-size characterization for micropores is achieved from a very fast interecho spacing.

Simultaneous Multi-Acquisition Logging

Best-in-class magnetic resonance answer products are derived from 2D and 3D solutions, which integrate seamlessly into multisensor answer products, including ShaleXpert™, TurbiditeXpert™, CarbonateXpert™, and TightGasXpert™ services.

Direct reservoir-quality assessment is provided from fractionalizing the total MR fluid-filled porosity into components of microporosity, capillary-bound fluids, and moveable fluid volume. A continuous permeability estimate is available from multiple methods (Coates, logarithmic mean, and Swanson).
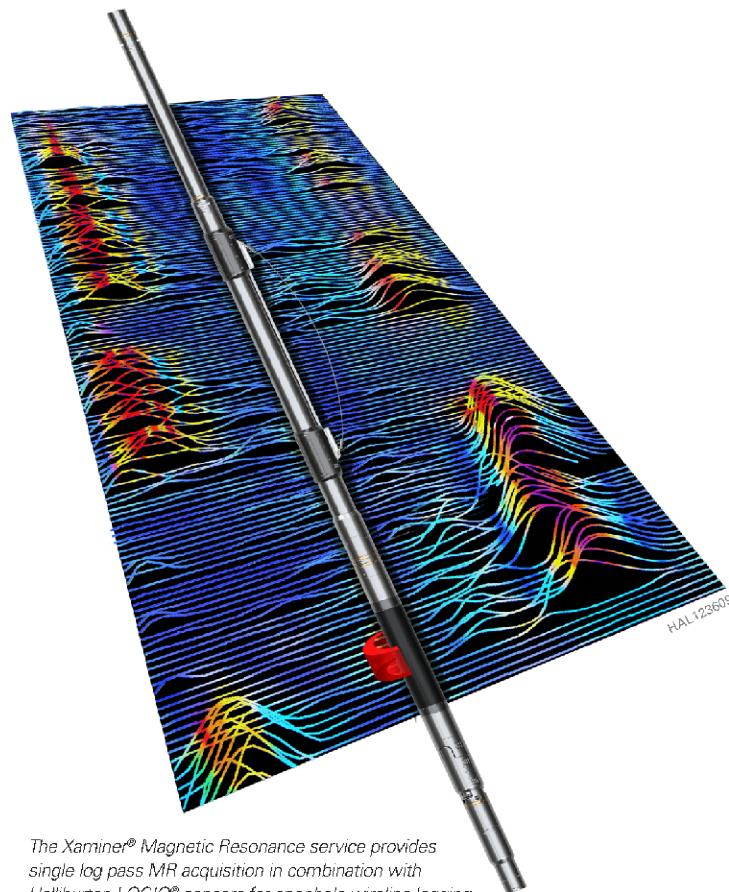
Single Log Pass

The XMR service is fully combinable with the Halliburton LOGIQ® openhole logging suite of sensors to reduce rig time for openhole wireline logging and maximize drilling rig efficiency. The XMR service is deployed as a decentralized sensor with a bowspring to address a wide range of hole sizes from 5.875 in. (149 mm) to 17.5 in. (444 mm).

The Xaminer® Magnetic Resonance service provides single log pass MR acquisition in combination with Halliburton LOGIQ® sensors for openhole wireline logging.

BENEFITS

The Xaminer® MR (XMR™) service provides:

» 2D and 3D fluid characterization solution products for reservoir evaluation of gas, condensate, heavy-to-light oils, and water with Diffusion, T1, and T2

» Carbonate pore-size classification with T1 and T2 acquisition and analysis

» Organic/unconventional reservoir evaluation with T1T2 2D map analysis and interpretation

» Integration solution products from multisensor analysis

» Reservoir-quality assessment from moveable and bound-fluid evaluation and permeability

FEATURES

» Fully combinable with all Halliburton LOGIQ® openhole sensors

» Single log-pass capability for all applications

» Excellent thin-bed and pore-size resolution

» A wide range of hole-size capabilities

» All drilling muds ≥ 0.02 Ω-m

HALLIBURTON | Wireline & Perforating