EarthStar™ Ultra-Deep Resistivity Service

MAXIMIZE ASSET VALUE THROUGH GEOSTOPPING, GEOSTEERING, AND GEOMAPPING

OVERVIEW

The EarthStar™ ultra-deep resistivity service is proven to illuminate and map reservoir and fluid boundaries up to 225 feet (68m) from the wellbore. It also offers the industry's only 3D inversion capability, providing unparalleled visualization of the true reservoir structure. In deepwater and mature fields, this technology helps operators to maximize asset value and plan for future field developments by mapping hydrocarbon-bearing zones, allowing for real-time steering decisions, and eliminating costly pilot holes and sidetracks.

The EarthStar service extends the sensitive range up to 10 times farther from the wellbore than was previously possible. It combines very-deep-reading resistivity measurements with azimuthal sensitivity and advanced inversion processing to provide estimates of the position, resistivity, and orientation of formation layers around the wellbore, along with the position of reservoir fluids within them. This information allows for improved evaluation of reserves and more efficient field development.

APPLICATIONS TO HELP MAXIMIZE ASSET VALUE

Geostopping – Reduce well time and cost per barrel of oil equivalent (BOE) by eliminating costly pilot holes and avoiding drilling hazards. Detect target zones early and land the production lateral in a single drilling run. Drill precisely and confidently to casing points immediately above critical reservoir boundaries, such as over-pressured zones, in order to minimize well-control risks.

Geosteering – Drill to produce by positioning the well optimally in the sweet spot to maximize production, avoid unwanted reservoir exits, and minimize nonproductive intervals. Make well-placement decisions early while drilling, and steer confidently within large and complex wellbore structures.

Geomapping – Enhance reservoir understanding by mapping surrounding formation boundaries in three dimensions and estimating the volume of hydrocarbons in place. Identify bypassed pay zones to gain more reserves and facilitate future well planning. In mature fields, improve understanding of fluid movements due to production or water injection.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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INDUSTRY-LEADING ENGINEERED DRILLING SOLUTION

- The industry's greatest depth of detection, proven at up to 225 feet (68m), combined with advanced 3D inversion and visualization techniques delivers a comprehensive and realistic visualization of the reservoir.
- High-quality, ultra-deep azimuthal resistivity and geosignal images enable improved geosteering decision-making in three dimensions.
- Low system noise allows for clear delineation of geological features such as faults and low-contrast or transitional boundaries.
- Formation measurements from the EarthStar service are integrated into the proprietary RoxC® real-time geosteering software, which features fast calculation speeds and a real-time visualization of the reservoir structure. Sperry Drilling geosteering experts use RoxC software to help optimize well placement, reduce wellbore tortuosity, maximize reservoir contact, and plan for future field development.