

Geo-Pilot® Dirigo Rotary Steerable System

DRILL HIGH BUILD RATES CONSISTENTLY IN EXTENDED-REACH AND INTERBEDDED FORMATIONS

OVERVIEW

The Geo-Pilot® Dirigo rotary steerable system (RSS) builds on the proven capabilities of the Geo-Pilot point-the-bit RSS family by Halliburton Sperry Drilling, and is ideally suited for drilling larger hole sizes in deepwater and extended-reach environments that require higher build rates to reach target depth. When access to deepwater and extended-reach reservoirs is limited, operators can upgrade to the Geo-Pilot® Duro™ RSS. With its robust, rugged design, the Geo-Pilot Duro RSS is engineered for improved reliability. Its advanced point-the-bit design does not rely on the formation to geosteer, which is especially advantageous in soft formations where maintaining steering and toolface control is often challenging.

DRILL TO PRODUCE WITH HIGHER-DOGLEG CAPABILITY

The Geo-Pilot Dirigo RSS features high-dogleg capabilities of up to 15°/100 feet (30 meters) to help operators drill a quality borehole and place wells accurately, especially in soft or interbedded formations where high-build-rates are often difficult to achieve. The system delivers a more consistent build rate by reducing the sail angle required in these type of well trajectories while also reducing torque and drag. In addition, the RSS enables operators to kick off deeper and land in the reservoir sooner, maximizing reservoir exposure.

The RSS is engineered with a three-dimensional cruise control function that enables the tool to automatically maintain the desired well trajectory and correct for any walk tendencies or abrupt formation changes. Real-time ABI™ at-bit inclination and optional ABG™ at-bit azimuthal gamma sensor measurements, provide early warning of trajectory and formation changes, leading to effective geosteering and accurate wellbore placement. The Geo-Pilot Dirigo RSS helps operators maximize asset value by being able to drill a smoother wellbore faster, and achieve higher rates of penetration (ROP), while reducing well time.

For more information, contact us at sperry@halliburton.com or visit us on the web at www.halliburton.com

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INCREASE DRILLING PERFORMANCE BY INTEGRATING A WIRED-MOTOR ASSEMBLY

The Geo-Pilot Dirigo RSS can deliver increased horsepower and revolutions per minute (RPM) directly to the bit when matched with a GeoForce® motor power section between the RSS and the logging-while-drilling (LWD) systems. The upgraded Geo-Pilot GXT system minimizes casing wear by decoupling the bit speed from the drill string speed, giving operators the ability to achieve higher penetration rates (ROP).

FEATURES

- » Built with ABI™ at-bit inclination and ABG™ at-bit azimuthal gamma sensor measurements for accurate wellbore placement.
- » Three-dimensional "cruise control" software allows the tool to automatically maintain the desired well trajectory and correct for any walk tendencies or abrupt formation changes.
- » The system is controlled from the surface by negative pulse commands sent via the Geo-Span® downlink service.

BENEFITS

Drill to Produce

- » Achieve accurate well placement with build rates up to 10°/100 feet (30 meters) in larger hole sizes and up to 15°/100 feet (30 meters) in smaller hole sizes
- » Maximize reservoir exposure by kicking-off deeper and landing in the reservoir sooner
- » Reduce sail angle required in extended-reach drilling, while also reducing torque and drag

Reduce Well Time

- » Drill the vertical, curve, and lateral in one-run by eliminating sliding intervals or extra trips for downhole motors