iCruise™ Intelligent Rotary Steerable System

SMART, FAST, AND RELIABLE SYSTEM TO REDUCE WELL TIME AND PLACE WELLS ACCURATELY

OVERVIEW

Controlling the direction and deviation of the wellbore while drilling is essential for achieving the planned well trajectory and hitting the target on time and on budget. In today's drilling environment, operators are looking for ways to drill longer laterals faster to lower costs per BOE. The iCruise™ intelligent rotary steerable system (RSS) is automation-enabled for precise steering and accurate well placement, helping operators to reduce well time through faster drilling, reliable performance, and predictable results.

HIGH MECHANICAL SPECIFICATIONS ENABLE FASTER DRILLING

Simple and rugged, the iCruise intelligent RSS is engineered with some of the highest mechanical specifications on the market, helping operators reduce well time and maximize the rate of penetration (ROP) in unconventionals, mature fields, and deepwater environments. The modular bottomhole assembly (BHA) can be configured to drill a long lateral section fast, or to drill a vertical, curve, and lateral in a single run.

MODERN ELECTRONICS ALLOW FOR ACCURATE STEERING AND IMPROVED RELIABILITY

The iCruise intelligent RSS is designed with the newest smart technology to enable accurate well placement and complex downhole calculations. The RSS can accurately steer the well up to 400 RPM while measuring the tool face 1,000 times per second. Sophisticated algorithms and proprietary digital control electronics for self-diagnostics and self-prognostics monitor the health of the equipment in real time, thus increasing reliability by minimizing repair time and errors, and allowing for fast tool turnarounds.

The RSS is matched with the GeoTech® (GTi) drill bit, engineered in Direction by Design® (DxD) software to predict the side-cutting efficiency (SCE) of the bit for improved steerability and drilling performance.

AUTOMATED DRILLING DELIVERS PREDICTABLE RESULTS

The iCruise intelligent RSS is integrated with automated drilling advisory commands based on physics-based models, a BHA digital twin, and machine learning from real-time data analytics:

» Steering advisory commands help plan and project the well path, optimize wellbore trajectory, and avoid hazards and collisions
» Vibration advisory commands advise on optimal RPM ranges to manage downhole vibration and allow for better directional control

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

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By automating the drilling process, Halliburton Sperry Drilling can help operators maximize asset value through reduced well time, fewer rigsite personnel, and lower costs per BOE, while delivering predictable, dependable, and consistent results.

FEATURES AND BENEFITS

» Unrivaled intelligence for accurate well placement:
  - Six high-speed processors
  - Three distinct survey packages
  - 1,000 measurements per second
» High mechanical specifications to reduce well time
  - 400 RPM
  - 65,000 lbf (28,913 daN) weight on bit (WOB)
  - 18,500 ft-lbf (2,508 daN.m) of torque
  - Doglegs of up to 18°/100 feet (30 meters)
» Simple, modular BHA design
» No batteries (self-powered by flow)
» Engineered GeoTech (GTi) drill bit
» Proprietary self-diagnosis and self-prognosis electronics
» Real-time vibration management and directional control
» Automation-enabled to reduce risks and nonproductive time (NPT) and to provide predictable results

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