

Rotary Steerable Scout®

THE PRACTICAL APPROACH TO ROTARY STEERABLE SYSTEMS



Challenges with Rotary Steerable Systems in North America Land

As operators push for improved borehole quality in the upper/intermediate sections of a well, rotary steerable systems become a necessity. Borehole quality is a critical element of the life cycle of a shale well, playing a part in the efficiency of drilling the well, and during production by reducing pump rod wear costs.

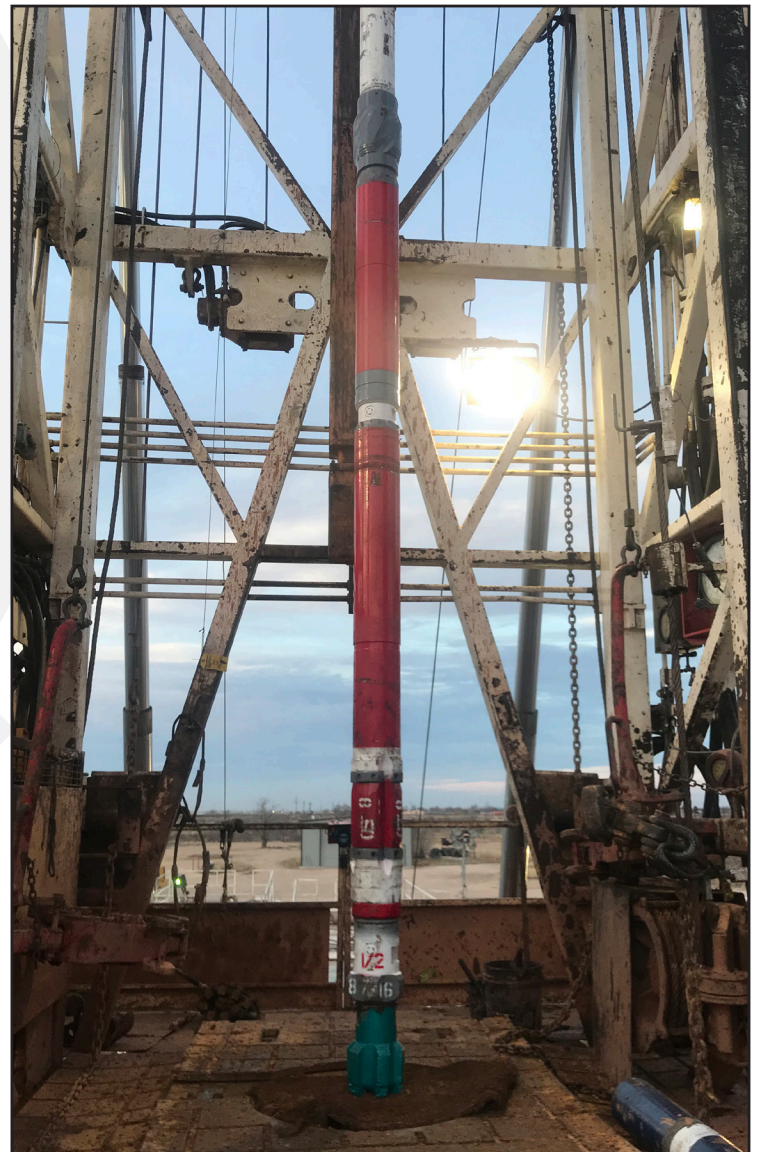
One of the biggest challenges with rotary steerable systems in North America is high-frequency torsional oscillation (HFTO). HFTO results in accelerated fatigue that can lead to premature failure of rotary steerable systems (mechanical and electrical). It is possible to reduce the magnitude of HFTO in the BHA, but only with the addition of a third-party torsional oscillation mitigation tool (positioned below the motor), driving additional costs to the use of already expensive rotary steerable systems.

Rotary steerable costs and reliability issues are also one of the major complaints from operators in North America Land. Most of the expenses stem from damage charges post-run and these costs are typically not accounted for by the operator pre-run — not to mention that Lost-in-Hole rates are exorbitant for rotary steerable systems.

Rotary Steerable Scout - The Practical Solution

The Rotary Steerable Scout from Scout Downhole is the answer to many of these operational difficulties. Engineered through a partnership between Scout Downhole and Sanvean Technologies, Rotary Steerable Scout was created with reliability, performance, and cost-effectiveness at the forefront. Rotary Steerable Scout is a push-the-bit system, with four mud actuated steering pads that are controlled utilizing pressure drop below the

tool to provide pad force. Designed with a slow-rotating steering housing that is decoupled from the internal drive mandrel, control system components are encased in the slow-rotating housing and are, therefore, protected from HFTO, eliminating the risk of control system electronic damage.



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With shale wells now being drilled from pads, the requirement is that a rotary steerable system must have the capability of drilling precise vertical, nudge, tangent and lateral sections of the well. Our system has been designed as a low-dogleg tool which is advantageous in these applications. The Rotary Steerable Scout is also embedded with compact drilling dynamic sensors in multiple locations in the tool, and the sensor information can be used for post-run drilling performance analysis and subsequent drilling roadmap development.

The Rotary Steerable Scout has been designed for the challenges associated with drilling in North America Land. It is engineered for reliability, constructed to be cost-effective and provides operators with new generation technology designed specifically for land-based applications. These features truly make Rotary Steerable Scout from Scout Downhole and Sanvean Technologies the practical choice for challenging shale formations in North America Land.

FEATURES

- Electronic control system is isolated from damaging high-frequency torsional oscillations
- Fully mud operated system with slow-rotating steering unit
- Simple and fast RPM downlink with confirmation at surface
- Closed-loop hold inclination and hold inclination & azimuth
- Can be operated with any drill bit, MWD or mud motor

- Engineered with latest-generation electronics and measurements
- Embedded with compact drilling dynamics sensors (optionally high-frequency sensors)

BENEFITS

- Precise directional control at a cost-effective operating, service, and lost-in-hole price
- Allows shale wells to be drilled faster with less torque and drag
- Simple design for improved strength, reliability, and speed — at the right price
- No need for costly third-party torsional oscillation isolation tools, thereby reducing the costs of operation
- Information captured from on-board embedded sensors can be used for performance improvement

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TECHNOLOGIES

