

D-Tech Improves Drilling Reliability Through Engineering Sustainability and Improvement Program



The Challenge

- A customer drilling in the Oklahoma Merge Play was looking for more consistent reliability in their rotary steerable applications due to previous tool problems caused by high levels of shock and vibration.
- Previous RSS companies had been utilized to drill the lateral, but repeatedly suffered issues due to the challenges associated with the environment.
- Rotary steerable reliability was the primary reason for the previous TOOH in the lateral.

The Solution

- The D-Tech Rotary Steerable team analyzed the drilling environment and past failures, quickly identified the failure mode, and implemented design changes.
- Within two weeks of the changes, the new components were manufactured and incorporated into the RSS assembly.
- D-Tech arranged for expedited shipping direct to location, just in time for the customer to pick the tool up after another BHA trip.
- D-Tech implemented the new design across their entire fleet within two weeks of these findings.

The Benefit

- The new design enhancements resulted in a 48% improvement in mean distance between failures (MDBF), allowing the operator to successfully drill to TD in this high shock and vibration environment.
- Upon disassembly, the D-Tech tool was found to be in exceptional condition even after being exposed to similar vibration levels as the previous failed tools.
- The operator was pleased with D-Tech's responsiveness and willingness to develop design improvements to match the challenging drilling environment.
- D-Tech's ongoing engineering sustainability and improvement program continues to provide customers with reliability and performance improvements.