

VectorZIEL Rotary Steerable System

VectorZIEL successfully completes first 8” deployment in US application

Technology

NOV's VectorZIEL™ rotary steerable system (RSS) features inclination, azimuth, and gamma ray capabilities within five feet of the bit along with an integrated pulser. VectorZIEL is available to independent directional drillers and operators world-wide.

Challenge

Deploy the 8” VectorZIEL 800 on its first drilling application to complete a 12-1/4” intermediate section with tangent in two runs for an application in Oklahoma, USA. This challenging application required that the motor-assisted rotary steerable system be capable of drilling out the shoe from surface at 1,500 feet and holding vertical for more than 9,000 feet before kicking off from vertical to drill a 1,400-foot tangent to complete the section.

Results

The VectorZIEL 800 successfully completed the section in two runs on its very first deployment in the US. The tool successfully held vertical to less than 0.1 degree through the initial 9,000+ feet with minimal required downlinking as the tool drilled autonomously to the target while providing real-time updates from the integrated near-bit sensors. The same tool was then rerun to complete the remaining vertical footage and tangent section where it landed within a few feet of the target line with minimal DLS to TD. Once at surface, the tool was inspected and appeared to have minimal wear after two runs through aggressive drilling parameters and many challenging formations.

