

Expro Excellence

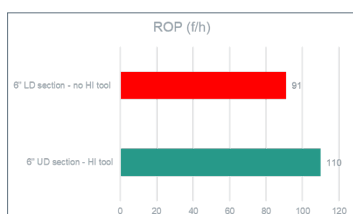
HI Tool delivers measurable drilling efficiency in side-by-side trial

Coretrax | ADVANCE



Objectives and background

- A major client was experiencing severe downhole vibrations—specifically stick-slip and lateral shocks—while drilling a 6" horizontal hole section in a challenging formation
- The drilling dysfunctions were leading to reduced ROP, inefficient drilling, and risk of BHA failures and non-productive time (NPT)
- These issues were observed in offset section drilled using the same rig, formation, BHA, bit type, and mud system—the only difference being the use of a conventional string stabilizer instead of Expro's HI Tool
- Due to poor drilling dynamics in the offset run, the customer sought a solution to improve ROP, reduce vibration, and minimize equipment stress
- The client, a long-standing partner, approached Expro based on our proven expertise in delivering reliable drilling dynamics solutions and minimizing vibration-related drilling issues
- Expro was selected over competitors due to our track record of innovation, field-proven technology



Expro Excellence

- Expro proposed deploying the HI Tool, a specialized drilling dynamics tool designed to mitigate downhole vibrations and enhance drilling performance
- The HI Tool was integrated into the BHA for the 6" section to address the encountered vibration challenges in previous runs
- Our team conducted pre-job analysis, real-time performance monitoring, and close coordination with the directional drilling company to ensure optimal tool placement and operating parameters
- In this application, HI tool was placed on top of RSS BHA replacing conventional string stabilizer to protect the M/LWD from string vibrations and allow the lower BHA to travel more true to its center which will mitigate random lateral movement, thus less lateral vibration transmitted through to the lower BHA. The resulting effect is that the cutting structure of the bit will also be better protected from dulling and will increase performance
- All other conditions—rig, bit, BHA configuration, formation, and mud properties—remained unchanged, ensuring a direct and measurable comparison of performance between the two runs
- Without this intervention, the client would likely have continued to experience severe drilling vibrations, reduced ROP, increased wear and tear on drilling components, and potentially higher overall drilling costs and delays

Value to the client

- The HI Tool's deployment in identical conditions to the offset section delivered clear, quantifiable benefits:
 - 41% reduction in stick-slip
 - 79% reduction in high-level lateral shocks
 - 21% increase in ROP
- Because the HI Tool was the only change from the offset configuration, the performance improvement can be directly attributed to its implementation
- This resulted in:
 - Faster section drilling
 - Lower vibration-related damage risk
 - Improved operational efficiency and equipment longevity
- The operation demonstrated Expro's capability to provide effective, high-performance solutions in dynamically challenging drilling environments
- This case highlights the value of Expro's technology in improving drilling efficiency and reducing operational risk—delivering tangible cost savings and improved well delivery timelines

Cost saving



Operational efficiency

