

Expro Excellence

HI Tool deployed above RSS cuts stick-slip by 37% and boosts ROP by 41% in 6in lateral section

Coretrax | ADVANCE



Objectives and background

- Key client in the middle east encountered severe stick-slip vibrations and limited ROP while drilling 6" lateral reservoir sections in previous offset wells drilled without Expro's technology
- Vibrations in offset wells negatively impacted drilling efficiency, caused increased RSS/MWD/LWD tool failures, and restricted operating parameters, limiting performance
- The challenge was to improve drilling performance and protect sensitive tools in high-vibration environments, especially in long lateral sections where dynamic dysfunctions are common
- The customer, a valued client, approached Expro based on our successful track record in vibration mitigation and our ability to offer bespoke, tool-specific solutions
- Expro was selected over competitors due to our technical understanding of downhole dynamics, real-time support, and the unique mechanical design of the HI Tool, proven in similar environments

Expro Excellence

- Expro proposed deploying the HI Tool above the RSS and below the MWD/LWD suite in the 6" lateral section, with the goal of isolating the MWD/LWD and improving drilling stability
- The HI Tool's flexible geared connection was specifically designed to:
 - Decouple the drill bit and string harmonics, reducing axial and lateral vibration energy.
 - Absorb and dissipate shock energy safely into the formation, protecting downhole electronics and rotary equipment
- The HI Tool also enabled efficient bit contact with the formation, lowering MSE and reducing the tendency for bit stick-slip
- Challenges included maintaining directional control in a long lateral section while applying higher WOB and RPM
- Without Expro's intervention, the client risked continued inefficiency, reduced tool life, and potentially multiple runs to complete the section

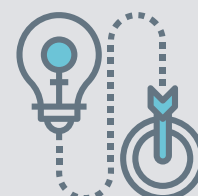
Value to the client

- The 5,561 ft lateral reservoir section was drilled in a single BHA run (shoe to shoe) with the HI Tool — no unscheduled trips required
- Stick-slip vibrations were reduced by 37% compared to offset wells drilled with conventional tools.
- The section drilled with the HI Tool achieved a 41% improvement in average ROP
- With improved vibration control, the client was able to safely apply higher WOB and RPM, thanks to the wider, more stable operating envelope created by the HI Tool
- The client saw a measurable improvement in tool reliability, drilling efficiency, and well delivery time, validating the added value of Expro's solution

Operational efficiency



Innovative solution



Time saving

