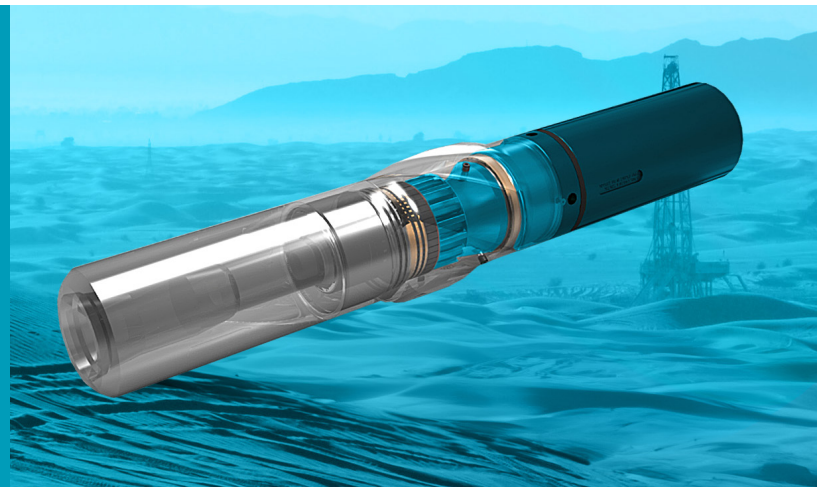


Expro Excellence

# HI TOOL® Harmonic Isolation Tool saves 40 hours of rig time by managing vibrations and stick-slip

Well Construction | Drilling Technologies



### Objectives and background

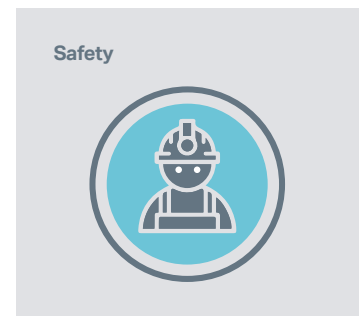
- A major operator in the Middle East sought a solution to reduce high vibration levels and prevent bottom hole assembly (BHA) failures while drilling 6" laterals on an offshore well, which often lead to non-productive time (NPT). To drill the 6" laterals, the operator used a long tapered drill pipe, which tends to "whip" in the lower sections and generate harmful shocks that disrupt the sensitive electronics in the BHA. When disrupted, these electronics can cause BHA failures and necessitate the costly and time-consuming need to trip out of hole to change tools

### Expro Excellence

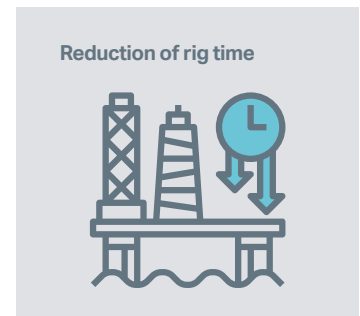
- Expro's 600 Series HI TOOL® Harmonic Isolation Tool is an on bottom drilling tool that provides optimum vibration and stick-slip mitigation, BHA protection, and improved drilling efficiencies. When positioned above the LWD tool, the HI TOOL® decouples the drill string from the directional tools in the lower BHA and redistributes the vibrational energy back into the wellbore and away from the BHA. By protecting the BHA from the vibrational energy, the sensitive electronics in the BHA are not disrupted and the drill bit stays directly engaged to the formation with increased efficiency, higher revolutions per minute (RPM), and more flexible control of weight on bit (WOB) resulting in increased rate of penetration (ROP).

### Value to the client

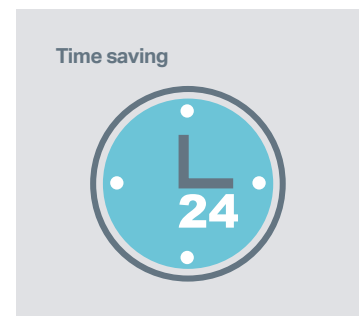
- Compared to the 6" upper drain section where a competitor tool was used, the operator utilized the HI TOOL® to successfully drill the lower drain section 8,375 ft in one BHA run with increased energy to the drill bit and improved drilling performance. These increased drilling efficiencies met the operator's initial goals to reduce NPT and total rig time by saving 40 hours of drilling time compared to the upper drain section. Overall, lateral vibrations were recorded below 2G most of the run and stick-slip registered at the lowest level of severity for over 97% of the section with no vibration issues on over 93% of the run
- Major operator sought solution to prevent BHA failures caused by high vibration levels and reduce NPT
- HI TOOL® mitigated harmful vibration levels and stick-slip in 6" lateral section
- Section drilled in one run with improved drilling performance resulting in 40 Hours of rig time savings



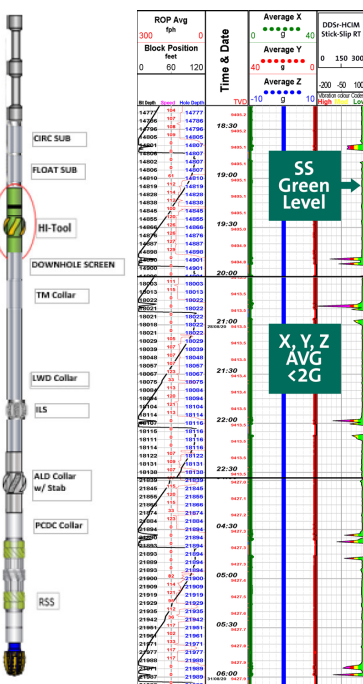
Safety



Reduction of rig time



Time saving



Snap #1  
14,777 ft  
to  
14,900 ft

Snap #2  
18,000 ft  
to  
18,140 ft

Snap #3  
21,840 ft  
to  
21,988 ft

