

VIBRATION CONTROL BRINGS 20% IMPROVEMENT IN DRILLING EFFICIENCY.

Case Study

AVD September 2014

Challenge

In this typical Barnett shale well, Beacon E&P required multiple bit trips to drill the tangent section through the Hard Atoka Sandstone.



Solution

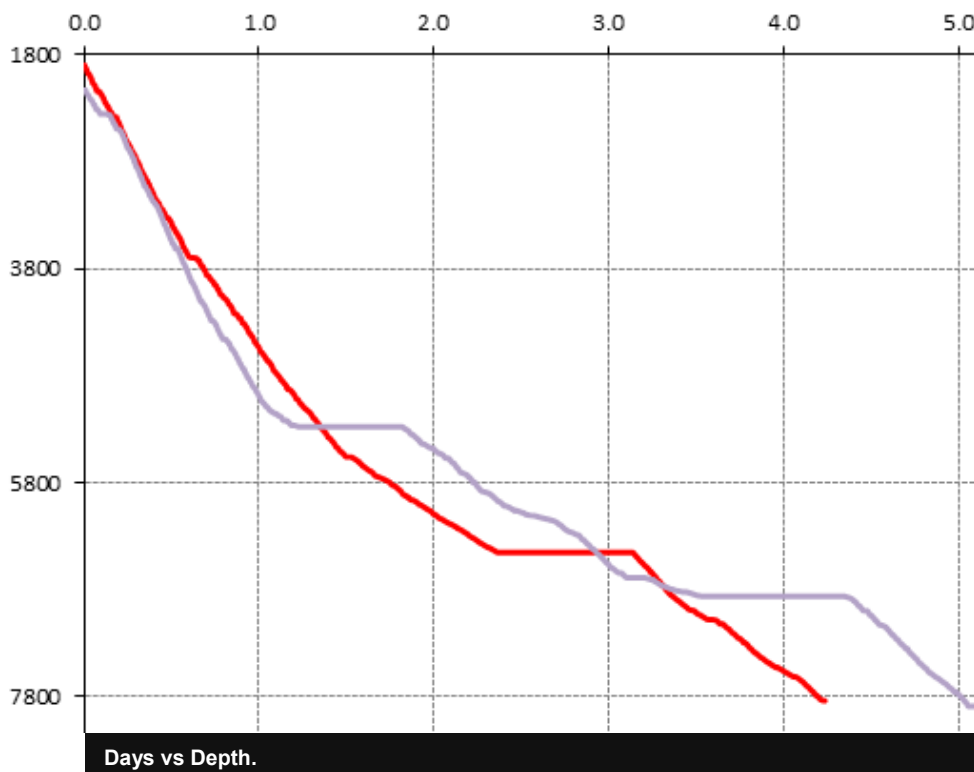
APS Technology recommendation was to run the AVD™ on one well and confirm that the improvements seen on the drilling results were linked to the reduction in drilling vibration by running the VMS™ (Vibration Monitoring Sensor) on an offset well.

“With the AVD in the hole, I can control the tool face during sliding with great ease as the BHA is very stable with less spikes on the differential pressure.”

- Directional Driller

Results

The well where the AVD was run was drilled with fewer bit trips and a higher ROP. The savings averaged one and half days to the operator compared to offset wells. The tangent was drilled in 4 days



Features

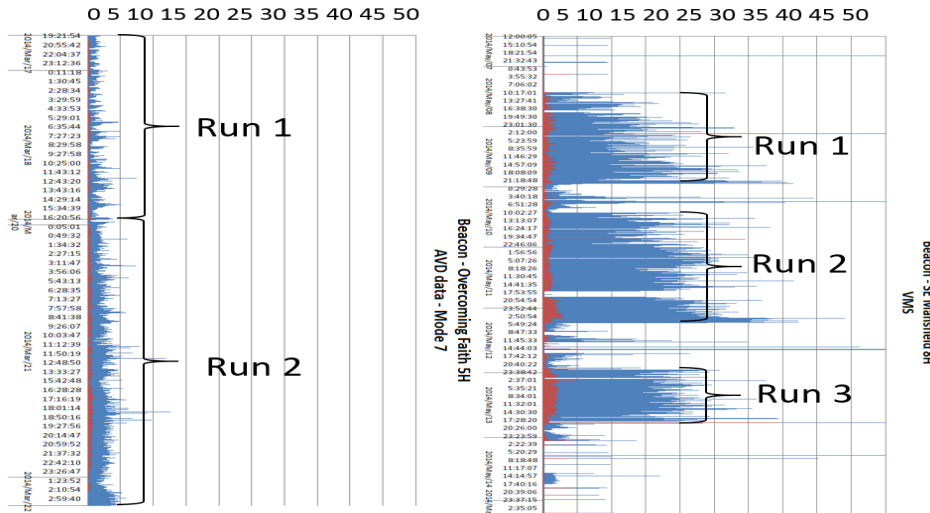
- Vibration reduction
- Stick Slip remedial
- Improved ROP
- Longer Bit Life
- Reduced NPT



Vibration Control

The improvement in the drilling was confirmed to be linked to the reduction in drilling vibrations .

Axial (red) and Lateral (Blue) Vibrations in g



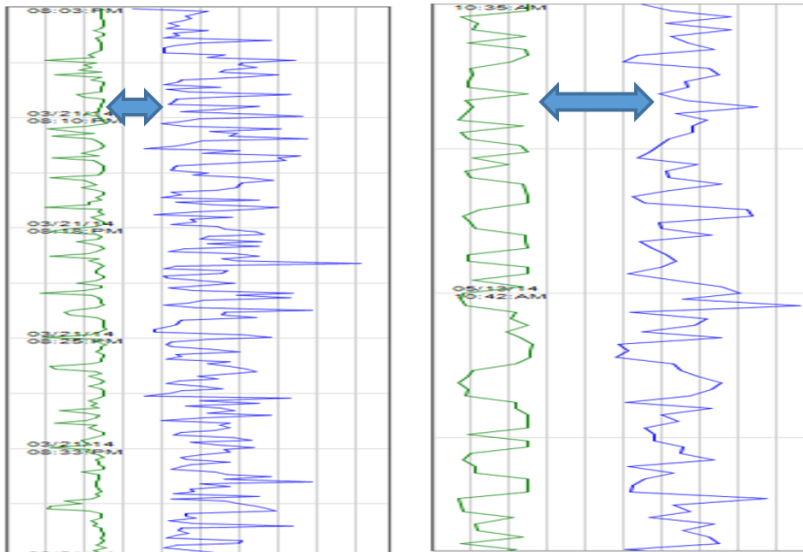
With AVD

Without AVD

The peak axial vibrations were reduced from 4g to less than 1g . The peak lateral vibrations were reduced from 20g to less than 3g .

Torsional Vibrations, Stick-Slip

The torsional events were very significantly reduced as shown by the reduction in the separation between the min and max BHA rotation speed in the Hard Atoka Sandstone section.



Contact Us

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