

SmartDRILL® Automation Reduces Lateral Shock and Vibration by 61%, Improving BHA Reliability

Our DrillView® downhole data collection tool was utilized in a three-mile lateral to validate operator's standard operating procedures, evaluate SmartDRILL® automation's impact on lateral shock and vibration, and establish automation programming best practices.

Overview

A major operator sought to understand the relationship between process automation and shock and vibration. Specifically, does SmartDRILL® automation have an impact on BHA longevity with optimized automation programming.

Additionally, the operator asked Nabors to validate their slide to rotate and tag bottom procedures.

Nabors tested at the end of a three-mile lateral, five stands with SmartDRILL® automation **ON** and five stands with the automation **OFF**. This test was completed several times.

Key Findings

DrillView® tool revealed that when automation was enabled, there was less time off bottom and lower lateral vibration.

The downhole data indicated that the **lateral vibration was 61% higher when SmartDRILL® tool was off**.

Additionally, downhole data identified opportunities for optimization in automation programming for slide to rotate and tag bottom procedures to further reduce shock and vibration without compromising efficiency.

Impact

SmartDRILL® automation reduces connection times and improves BHA longevity by mitigating shock and vibration and automating best practices. Using our DrillView® downhole drilling dynamics tool, Nabors can validate optimal drilling procedures and ensure the ideal automation sequences are executed every run.

DrillView® Data

RMS lateral vibration reduced by **61%** at the BHA captured by the downhole dynamics tool.

SmartDRILL®

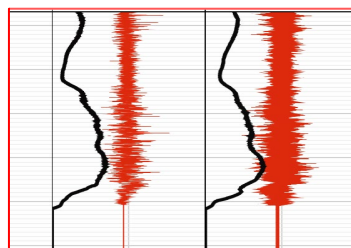
Recipe was optimized with key findings from the DrillView® tool. The changes to the recipe reduced vibration and improved performance.

Case Study Facts

Nabors Rig: Pace®-X48

Location: Eddy, New Mexico

SmartDRILL® OFF
Higher RMS Lateral Vibration



SmartDRILL® ON
Lower RMS Lateral Vibration

