CASE STUDY

61% AVERAGE ROP IMPROVEMENT REDUCES OPERATOR'S TIME TO TARGET

H&P Saves Operator 11 Days and Lowers BHA Count by 9%

Challenge

An operator in the Delaware basin was proactively looking for ways to maximize efficiencies in its well program by decreasing the number of days spent on the well and by lowering bottomhole assembly (BHA) count. One well had been drilled on the pad, and the initial spud to total depth (TD) was 32.4 days and 22,330 feet.

Solution

After collaborating with the customer to understand the desired outcome, H&P recommended an integrated solution to address multiple outcome deliverables. By using FlexDrill® software in conjunction with H&P's Autodriller control system, the customer can enable set point automation to increase the efficiency of the rig and reduce the overall mechanism specific energy (MSE) and downhole dysfunctions like whirl and stick slip. The system automatically stages drilling set points after tagging bottom, further reducing risk and accelerating the well program. By design, this system is set up to deliver maximum efficiencies while reducing the learning curve to achieve repeatable results. The FlexDrill system also preserves BHA, reducing the flat time attributed to tripping in and out of the hole to change out bits and tools.

Outcomes

The configurable and consistent bit engagement enabled through H&P's FlexDrill software helped ensure optimal contact with the formation, resulting in a 61% average rate of penetration (ROP) improvement. Additionally, by reducing bit and BHA torsional and lateral vibration through the H&P Autodriller control system, fewer BHAs were required to drill the well.

Overall, H&P helped the operator reduce BHA change count by 9%, which meant one fewer BHA used in an area of especially hard drilling. They saw an 11-day improvement over the previous well, which equates to a 26% time savings.

Time Savings

- **26% time savings due to 11-day improvement over the previous well**

Increased ROP

- **61% average ROP improvement when FlexDrill was in use**

Reduced BHA Count

- **9% total BHA count reduction**
- **One fewer BHA used in an area of especially hard drilling**

PROJECT OVERVIEW

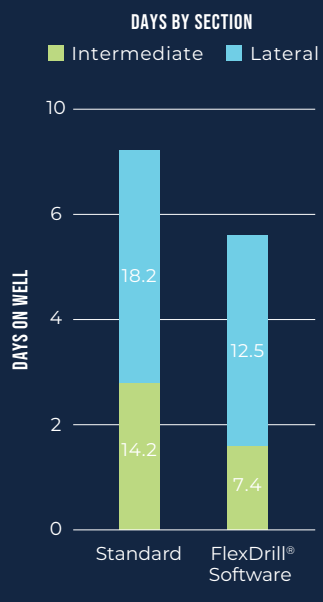
Location
Winkler County, Texas
Wolfcamp Formation

Outcomes
- Enhance Bit and BHA Integrity
  - Reduce Failures and Repair Costs
- Reduce Time to Target
  - Increase Rotating ROP
  - Reduce Flat Time

Technology & Services
- FlexDrill® Technology
- Autodriller Control System

Are you looking to achieve a similar outcome?

Contact us today.



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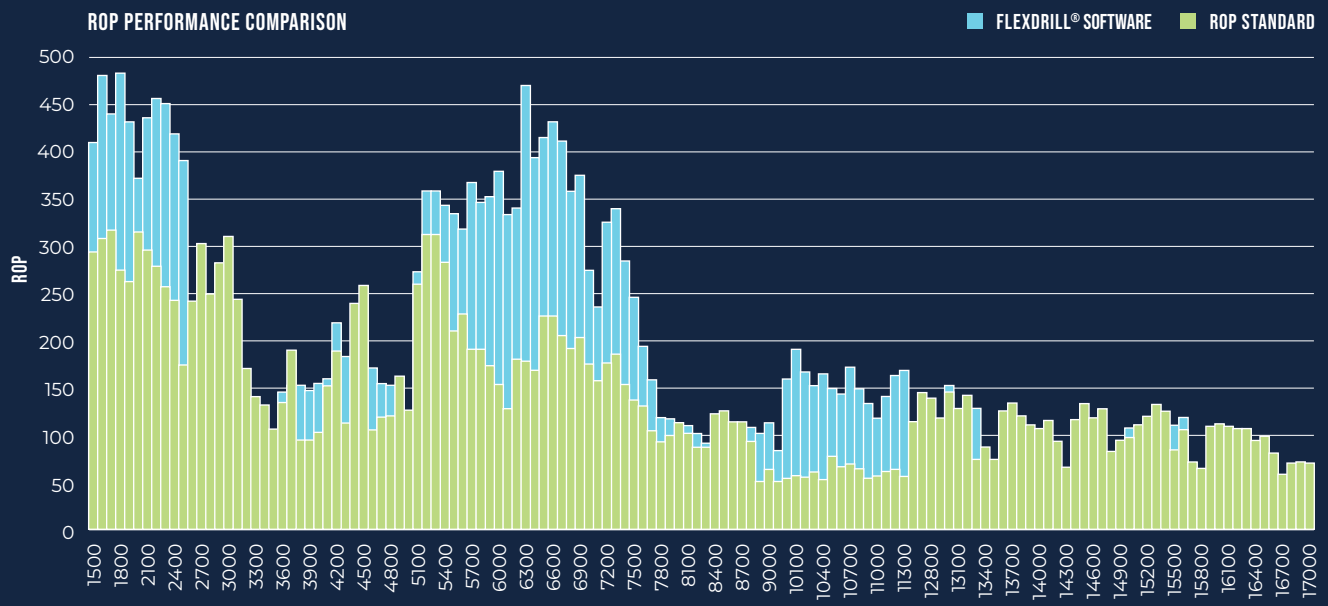
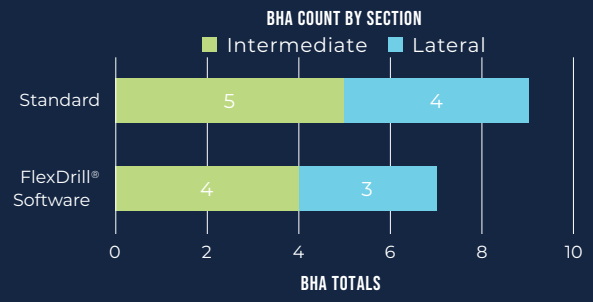
61% AVERAGE ROP IMPROVEMENT WITH H&P FLEXDRILL® TECHNOLOGY



REDUCED BHA COUNT

· 9% total BHA count reduction

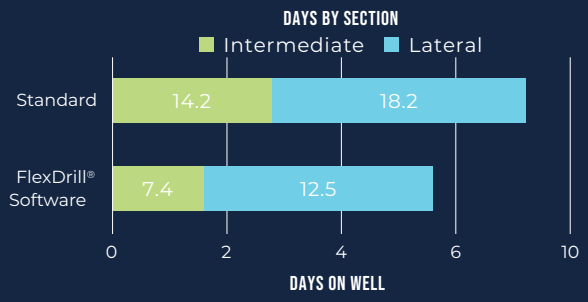
· One fewer BHA used in an area of especially hard drilling



The well drilled with FlexDrill software used one fewer BHA in both the intermediate and lateral sections due to enabling proper bit engagement and reduced downhole vibration.

TIME SAVINGS

· 26% of time savings due to 11-day improvement over the previous well



The well drilled with FlexDrill software saved 11 days over the course of the well, nearly cutting the intermediate time in half.

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