CASE STUDY

H&P'S BIT GUIDANCE SYSTEM® SAVES AN AVERAGE OF $70,000 PER WELL

HEAD-TO-HEAD COMPARISON PROVES SIGNIFICANT GAINS IN DRILLING PERFORMANCE

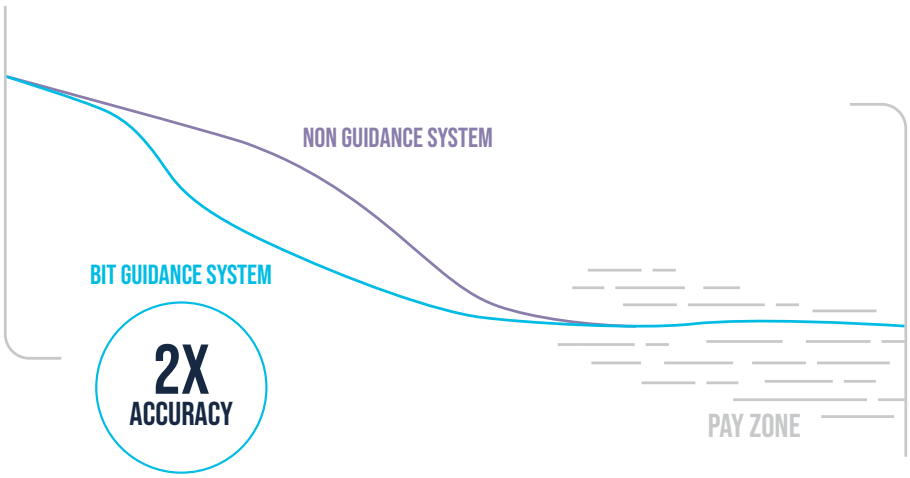
Overview

As drilling parameters become more complex and production timelines tighten, operators need to know that every tool and service they deploy is making a positive difference towards meeting their overall outcome. One such tool is H&P's unique Bit Guidance System®. The H&P Bit Guidance System for directional drilling is designed to overcome the challenges, obstacles and risk associated with drilling in today's high-cost and complex unconventional wells. It is a proprietary, algorithm-driven system that considers the total economic consequences of directional drilling decisions as the drilling is performed in realtime.

To prove the positive difference its addition can make to drilling operations, H&P performed a head-to-head comparison of eight wells in the Eagle Ford basin—four using the Bit Guidance System and four drilling without it.

Solution

The eight wells were drilled within one mile of one another at approximately the same time with nearly identical lithologies, well path geometries, drill bit, BHAs, and other associated rig equipment. The wells employing bit guidance also had somewhat more complex well geometries and longer lateral 5300 lateral feet vs 6600 lateral feet (1615 meters vs 2012 meters), making their task more challenging.



PROJECT OVERVIEW

Location
Eagle Ford
South Texas

Technology & Services Used
H&P's Bit Guidance System

Outcome
Increase Reservoir Contact
- Consistently Land Curves in Target Formation

Outcome That Outperform

Wells that used the Bit Guidance System saw drastically better results in drilling time, accuracy, and tortuosity.

30%

Lower effective directional drilling cost vs the lowest-priced traditional mud motor option due to reduced drilling time

ZERO

Non-productive time (NPT) due to MWD or mud motor failures, compared to 13% MWD or mudmotor-related NPT on the guidance-less wells.

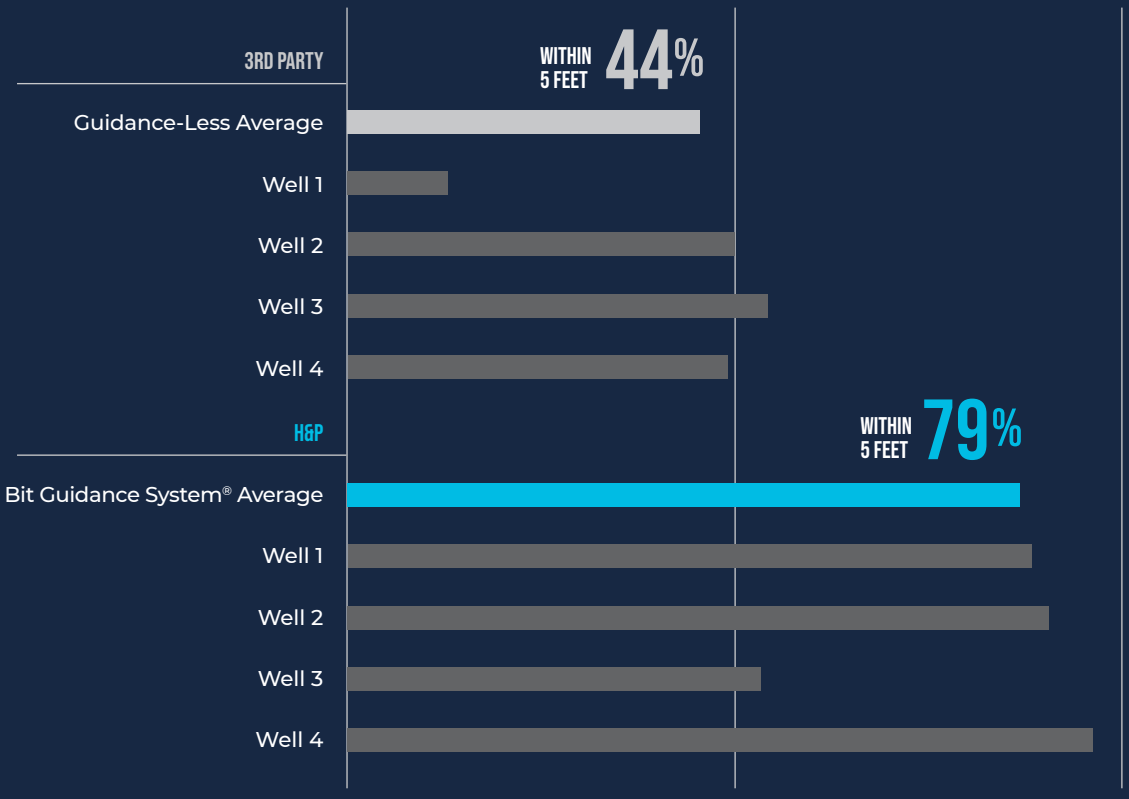
PER-WELL SAVINGS AVERAGES

28 HRS

$70K

Nearly twice the accuracy vs traditional mud motors, staying within 5 feet of the well plan 79% percent of the time compared to 44% for the guidance-less wells. This leads to increased hydrocarbon production potential.

ACCURACY WITHIN 5 FEET



OTHER BENEFITS

- Less tortuosity
- Less non-productive time
- Record performance

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