

CHALLENGE

To sustain reduced connection times utilizing AlphaAutomation™ sequences

SOLUTION

Utilize data from non-automated sequences to establish new connection road maps and threshold settings for ingestion into the AlphaAutomation platform

RESULTS

An average of 50% reduction in connection time when utilizing AlphaAutomation saving \$250K over five wells



AlphaAutomation Improves Connection in the Delaware Basin

Delaware Basin Case Study

FINE TUNING AUTOMATION FOR SUCCESS

A major operator in the Delaware basin called on Precision Drilling to deploy AlphaAutomation on three of its rigs.

As part of Precision's Alpha™ technology deployment, we conducted a mandatory project readiness assessment analyzing offset well data. Our team then used the information to plan and execute upcoming wells to find potential savings in connection times using AlphaAutomation. The analysis included breaking down the time required for 13 process sequences.

Upon customer's approval of our analysis of potential efficiencies, our optimization and operation teams set up AlphaAutomation to execute 13 sequences automatically at the press of a button allowing for reduced and consistent connection times.

STEP CHANGE PERFORMANCE WITH AUTOMATION

AlphaAutomation time savings and consistency was immediately realized on the next five wells resulting in connection time savings of over 50%. A reduction average of 9.5 minutes pre-Alpha connection to 4.5 minutes post Alpha connection time (See Fig 1 on page 2).

Our drilling crews and engineers then followed a rigorous pattern of revised and optimized standard operating procedures to continually improve the parameters and thresholds within the system. These procedures included time taken to ream the drilled down stand, survey the wellbore, make connections and return to bottom at optimized speeds, all within a safe working envelope.

HIGH
PERFORMANCE
HIGH VALUE



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DRILLING

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CONNECTION TIME RESULTS

50%

Average connection
time savings

AUTOMATION CONSISTENCY

200

Connections within
three to four minutes

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RIG A PRE- AND POST-Alpha™ USAGE

Fig 1 on the two charts below shows the connection times of over 10 wells (X-axis) for two rigs. The Y-axis is average connection time in minutes. The yellow points represent section depths at which averages are calculated to correlate connection times. The yellow line separating the bar graph show pre and post alpha automated connections.

Fig 2 (at bottom) shows a distribution chart of connections by time for pre- and post-Alpha connections. The post-Alpha distribution shows remarkable consistency in connection times with over 200 connections averaging between three and four minutes

RIG A PRE- AND POST-ALPHA W2W

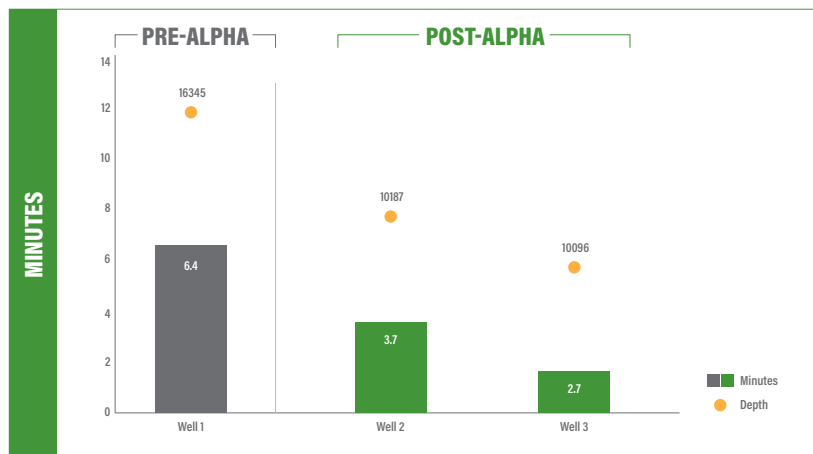


Figure 1

RIG B PRE- AND POST-ALPHA W2W

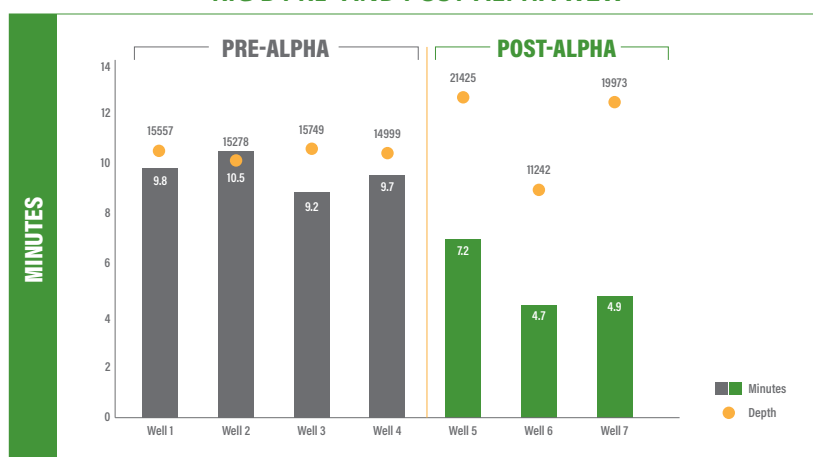


Figure 1

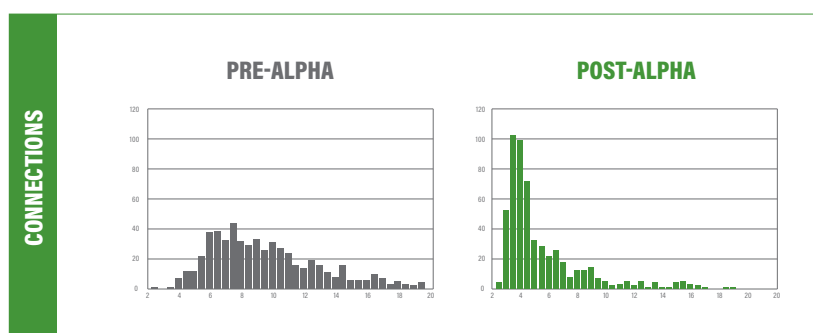


Figure 2