Delaware Basin
USA - ONSHORE
CASE STUDY

AlphaAutomation™

CHALLENGES

To reduce connection times and consistently hold reduced times utilizing **Alpha**Automation sequences

SOLUTION

Detailed study of non-automated connections, resulting in new connection roadmaps and threshold settings for ingestion into the AlphaAutomation

RESULTS

An average 50% reduction in connection time comparing AlphaAutomation vs. non-automated leading to a savings of $250K over five wells

AlphaAutomation™ Improves Connection Time 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 a part of the Alpha technology deployment, the precision teams conducted a mandatory project readiness assessment as required by Precision Drilling. This assessment prompted our teams to collect and review offset well data received from the customer. The data was used to plan and execute the upcoming wells focusing on areas of connection time. The analysis studied wells drilled without the use of Alpha automation to derive potential value savings from AlphaAutomation.

The analysis included breaking down time for the 13 process sequences required to make a connection. Precision Drilling presented these analysis and areas of potential efficiencies to the customer. On approval, our optimization and operations teams setup the Alpha Automation system to execute these 13 sequences automatically at the press of a button allowing for reduced and consistent connection times.

STEP CHANGE PERFORMANCE WITH AUTOMATION

Alpha Automation time savings and consistency was immediately realized on the next 5 wells resulting in connection time savings of over 50% – reduction average of 9.5 minutes pre-Alpha connection time to 4.5 minutes post Alpha connection time (See Fig 1 on page 2).

Our drilling crews and engineers in town followed a rigorous pattern of revised and optimized standard operating procedures to continually improve the parameters and thresholds within the automation 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.

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CONNECTION TIME RESULTS

50%

Average connection time savings

AUTOMATION CONSISTENCY

200

Connections within three to four minutes

RIG A PRE- AND POST-Alpha™ USAGE

Fig 1 in the two charts below, show the connection times over 10 wells (x axis) for 2 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 seperating 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 time with over 200 connections averaging between 3 to 4 minutes

RIG A PRE- AND POST-ALPHA W2W

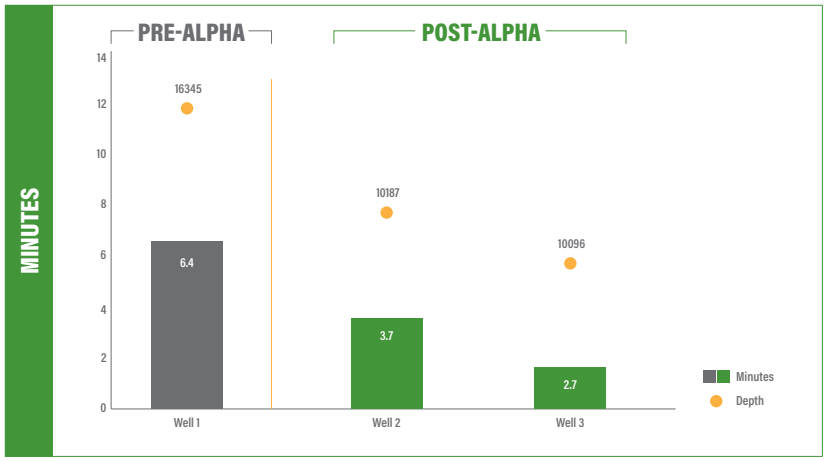

Figure 1

RIG B PRE- AND POST-ALPHA W2W

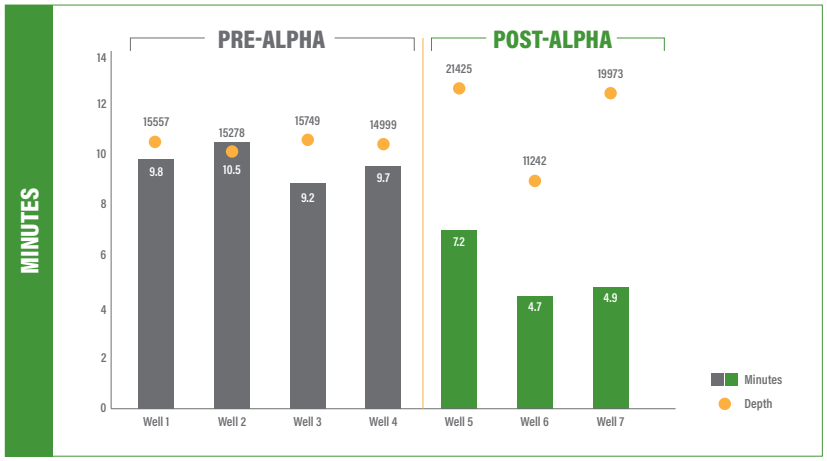

Figure 1

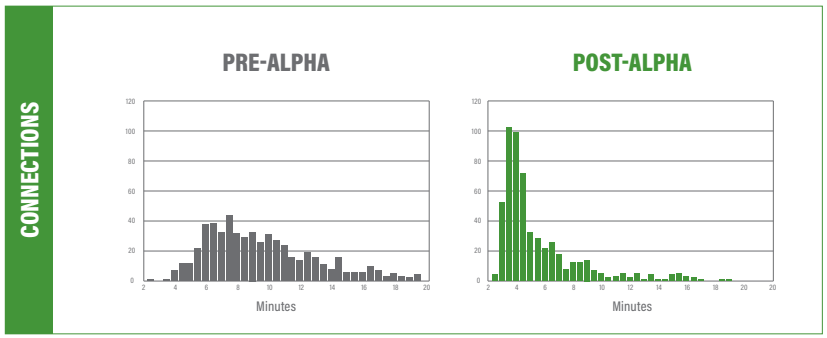

Figure 2

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