



CHALLENGES

First time install and use of ExxonMobil-Pason DAS software with **Alpha**Automation to improve drilling rates of penetration

SOLUTION

- Robust installation plan
- Drilling crew training and competency
- Optimized drilling parameter roadmaps
- Remote operations monitoring
- In-house Optimization Engineer

RESULTS

- Set drilling performance benchmark at 995 ft/day
 - 18% improvement in penetration rates
- AFE time savings of 4.1 days resulting in \$382k savings for operator

Alpha Sets Drilling Record for an Oil Major in the Delaware Basin

Delaware Basin Case Study

THE APP

The Precision Drilling Apps platform is capable of hosting any third party application on its EDGE server located at the rigsite. This case study is about the ExxonMobil-Pason DAS application that automates drilling a stand using complex automation control algorithms to optimize rate of penetration, reduce stick slip and maximize drilling energy through Alpha Automation's advanced auto driller.

SETTING UP AND ESTABLISHING NEW APP ECOSYSTEM WITHIN EDGE AT THE RIG SITE

An oil major in the Delaware basin, planned to use the ExxonMobil-Pason DAS application to improve drilling performance. This request came with its own set of challenges requiring Precision Drilling to install and setup its Alpha Automation and Apps platform within a short timeframe at the rigsite. Our teams comprising field electrical engineers, IT, Alpha subject matter experts, and operations collaborated with the 3rd party app company to successfully install and test the software with the automation system.

Prior to field deployment, the app was extensively and successfully tested at Precision Drilling's training rig for Alpha compatibility to ensure optimum service delivery.

TAKING DRILLING PRODUCTIVITY TO THE NEXT LEVEL

Our operators drilling pad had setup its well designs and drilling parameter roadmaps to drill the wells in a batch sequence. Several offsets wells had been drilled in the proximity of the current pad. Our competitors offset wells, drilled without applications and automation, saw drilling performance plateau at an average of 600 ft/day (see figure 1 on page 2). On the current drilling pad our competitor had drilled 2 wells without the use of applications and automation and pushed drilling performance footage to 820 ft/day.

Drilling on the same pad with Alpha Automation and Apps, Precision Drilling has improved drilling performance on an intermediate section and a complete well to 995 ft/day. The intermediate section on the batch drill and the subsequent complete well broke the record for the operator in the Delaware, prompting Alpha apps and Automation to be the essential technology for the operator (see fig 2 on page 2). This step change in drilling performance set a new benchmark for the pad and the field.

AFE RESULT

4.1

Days AFE Savings

RATE OF PENETRATION

+18%

Improvement over
offsets on same pad

FOOTAGE PER DAY

+15%

Improvement in footage
per day compared to
previous record

FIGURE 1

Fig 1 shows the footage per day on the y-axis and the 9 quickest well drilled in the field. The bars in the green box represented the 3 wells on the same pad (PAD A). The green bar shows the Precision Drilling footage per day as compared to competition wells on the same pad. This well utilized the ExxonMobil-Pason DAS app with AlphaAutomation.

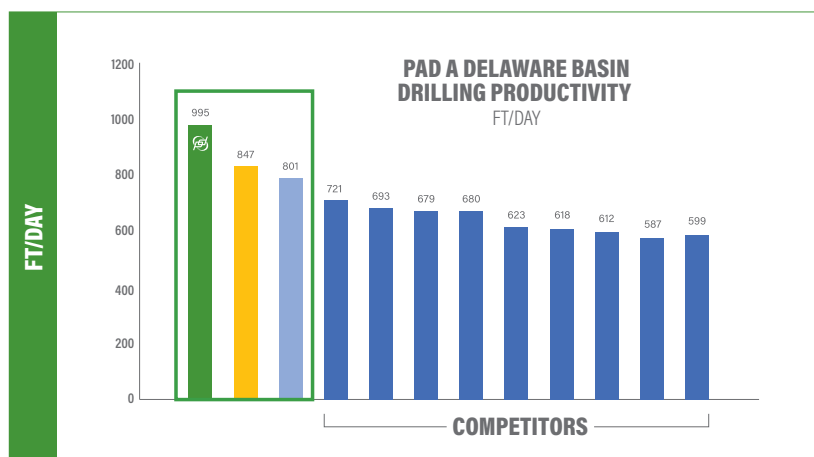


Figure 1

FIGURE 2

Fig 2 shows the time vs. depth chart for 3 complete wells and an intermediate batch drilled section. The competitor 1 & 2 wells were drilled on PAD A prior to Precision Drilling wells. The intermediate section (light green) set the record for penetration rates for the operator with an 18% increase in penetration rates. The next well (dark green) set a new operator record for the fastest well with 4.1 days AFE savings.

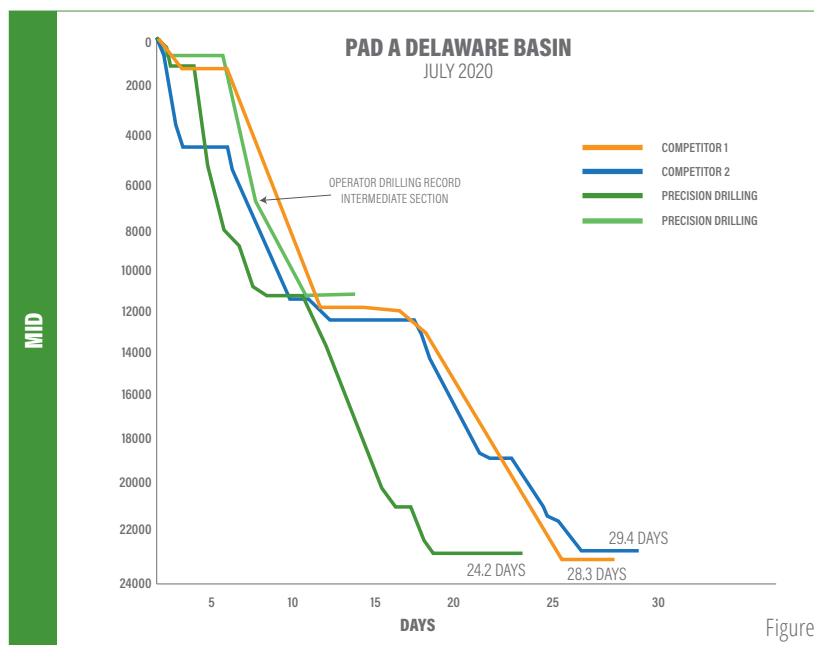


Figure 2



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