NOVOS and the Performance Center save operator about $700,000 in Alaska

Process automation platform and proactive support service reduce connection times across three rigs

Background

Drilling in Alaska presents several environmental and operational challenges, including permafrost, extreme temperatures, high permeability formations, and geological faults. A drilling contractor—and long-time customer of NOV's—deployed our NOVOS™ automation system on three land rigs for a major operator's drilling campaign on Alaska's North Slope. These rigs, drilling intermediate and production sections, were also enrolled in the Aftermarket Performance Center, our proactive support service.

Solution

NOVOS is our process automation platform that automates repetitive drilling activities, including coming off and going on bottom, friction tests, downlinking, and taking surveys. The result is greater consistency, with every driller— regardless of experience level—able to achieve the same improved performance repeatedly.

NOVOS sits on top of the rig's base-level control system and uses an imported well plan that details the desired drilling parameter ranges. This level of control and consistency naturally leads to improved drilling performance, regardless of the driller's experience levels.

Meanwhile, the Aftermarket Performance Center specializes in drilling and pipe-handling operations, providing remote support and performance recommendations through data analytics. This expertise helps operators and drilling contractors gain better insights, become more efficient, and achieve and sustain higher levels of operational efficiency.

Results

NOVOS and the Aftermarket Performance Center delivered consistent performance improvements across the three-rig fleet. By reducing the average weight-to-weight (W2W) connection times by 1.25 minutes, the operator saved about 83 hours—or 3.5 days—year-over-year. With the average spread rate of the rigs at approximately $200,000/day, the operator saved roughly $700,000 in its Alaskan drilling campaign.

Moreover, our Performance Center team in Houston provided instant support to the rig crews, resolving more than 100 requests across the three rigs, which allowed them to resume drilling more quickly. By analyzing the process phase of each slips-to-bottom (S2B) and bottoms-to-slip (B2S) sequence, our Performance Center engineers quickly pinpointed areas of improvement, optimizing performance.

Due to the success of this drilling campaign, the major operator has chosen to use NOVOS and the Aftermarket Performance Center on an upcoming project in Alaska.

Case study facts

Location: Alaska's North Slope

Rig or customer: Confidential

Time frame: January–October 2024

Results:

- Average W2W connection time was 1.25 minutes faster than in 2023
  - Saved about 3.5 days
- With more control and consistency, S2B and B2S sequence performance improved year-over-year
- Operator deploying both solutions in an upcoming project

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