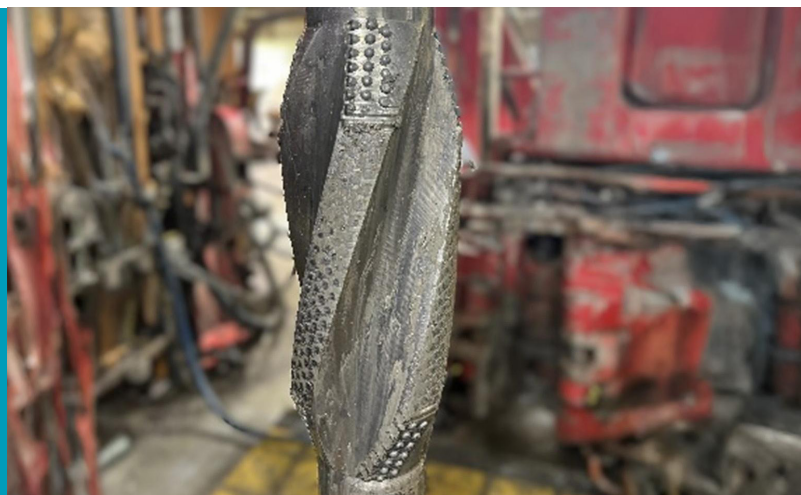


Expro Excellence

Optimizing drilling performance in Alaska, North slope

Coretrax | ADVANCE



Objectives and background

- A major land operator, drilling a 12-1/4" intermediate section of a well in the North slope region of Northern Alaska, required in Eastern Canada required a borehole conditioning solution to address the challenging abrasive sand formations and inter-bedded soft sand layers, which were causing significant bit damage and accelerated wear to stabilizers, sleeves, and BHA components
- Accurate placement of the reamers is essential for the extended reach horizontal well, where the primary goal of this section is to achieve the optimal geonavigation angle and build the tangent for both the Electric Submersible Pump (ESP) and the window. To meet these objectives, enhanced steer-ability and wellbore stability are required, ensuring the drilling process effectively achieves its targets

Expro Excellence

- The operator and directional drilling company opted for the Expro's AERO™ concentric reamer because of its superior directional response and the significant performance enhancements it offers when used with rotary steerable systems
- A ruggedized, carbide-reinforced 12-1/8" concentric reamer was strategically positioned above the Monel drill collar and the MWD+RSS tools to serve as a stabilization point for steering the well using the rotary build assembly

Value to the client

- In recent drilling operation, 8,321 feet of 12-1.4" intermediate section was successfully drilled to total depth (TD) in single run, achieving an average rate of penetration (ROP) of 133 ft/hr
- Post-job inspection revealed that Expro's AERO™ concentric reamer maintained its integrity throughout the operation, ensuring the wellbore remained full gauge. The was achieved even though the bit was reported to be 1/16" inches out of gauge due to broken teeth while drilling through challenging conditions
- Additionally, the inspection revealed that the two primary stabilization points located below the AERO™ reamer were found to be significantly under-gauge and exhibited substantial wear. Specifically, one of these points was approximately 3" under-gauge
- Despite these issues, the AERO™ concentric reamer's smooth torque response contributed to the absence of high axial or lateral vibrations, as well as minimized stick-slip. Stick-slip was observed 94% of the run time at Levels 0-1 (Normal State), with lateral vibrations occurring at 98% of the time across levels 0-3, and axial vibrations at 99.9% of the time at Level 0
- The optimal placement of the AERO™ reamer in the Bottom Hole Assembly (BHA) significantly enhanced drilling performance by ensuring suitable hole conditions and smooth operation

Enhanced production

