

Meeting the New Challenges with better performances: Successful Execution of the ProMILL™ Job in combination with Tomax AST tool - Offshore Adriatic

Successful deployment of the 5500 ProMILL™ for Bridge Plug setting, section milling and underreaming in one trip, combined with Tomax Anti Stick-Slip Tool for vibrations mitigation.

More Cost effective, Single Trip Solution

Our Customer required a cost-effective and robust solution to set a Bridge plug, section mill the 7" casing while also underreaming the open hole to undefiled formation. The scope of work of the P&A was to achieve a casing window long enough to accommodate a 30 m underreaming section for the consequent rock-to-rock cement plug.

The first successful ProMILL™ job led to the decision to employ a tool to reduce the recorded axial vibrations, which would increase the RoP and optimize the wear of the cutters. Tomax's Anti Stick-Slip (AST) tool was chosen as the best technological solution.

The AST ensured stable loading of the TruEdge® cutters on the casing, allowing the inserts to mill with minimal waste of energy and low risk from vibrations, causing a continuous improvement of operational efficiency.

Job Execution

The Bridge plug was set and disconnected from the system following the dedicated procedure. During the section milling phase optimal parameters were established, enabling the successful milling of 39 m section at an average rate of **1,4 m/h**, performing an RoP double compared to the previous experience. Following ball drop activation of the High-Ratio Underreamer (HRU) the total rock-to rock interval reached 30 m as requested, all completed in a single trip.

CHALLENGE

- Set a Bridge Plug with the milling / underreaming assembly.
- Milling a 7" 26 ppf N80 casing.
- Achieving a 38,2 m milled window to accommodate a 30 m underreamed section in a single trip.
- Mitigate axial vibration to increase RoP and reduce cutters' wear.

SOLUTION

- Utilize the cost-effective ProMILL™ system to complete the P&A objectives in a single trip.
- Deploy TruEdge® inserted section mill knives to enhance durability, stabilization and swarf quality.
- Conduct comprehensive hydraulic analysis to determine optimal flow rates for efficient tool operation and improved swarf removal.
- Utilize Tomax AST for vibration reduction without waste energy in damping.

RESULTS

- Bridge plug set at planned depth
- Achieved 38,2 m section milled window in a single trip, exceeding initial targets
- Performed a 1,4 m/h RoP, double compared to the previous job
- Completed the job with zero NPT and no HSE related incidents.

