AFO Service Enables Cross-Discipline Collaboration in Operator’s RTOC

REAL-TIME MONITORING OF DRILLING OPERATIONS HELPS OPERATOR AVOID ISSUES AND SAVE MONEY

OFFSHORE, U.K.

CHALLENGE

Implement an integrated approach that would allow cross-discipline collaboration on data interpretation and on fluids components in the operator’s RTOC.

SOLUTION

Applied Fluids Optimization (AFO) service was implemented for real-time monitoring of drilling operations and for incident interventions to help avoid complications.

RESULTS

AFO service identified two green and eight yellow interventions to further avoid issues, thus saving the operator approximately USD 19,000.

AFO engineers used these tools and techniques during the pilot program to initiate 10 “interventions” on the well, which was the operator’s term for communications from the RTOC to the rig. Interventions were classified into three color-coded levels:

» A green intervention was the lowest-level intervention, indicating an “information only” communication
» A yellow intervention was an intermediate-level intervention, indicating a “warning” communication
» A red intervention was a top-level intervention, indicating an “immediate action needed” communication

Of the 10 interventions, eight were yellow and two were green. These interventions enabled real-time decisions to be made and allowed operations to run more smoothly than if the AFO engineers had not been involved. On one of the yellow interventions, the predicted cuttings load was higher than the recommended safe level due to an elevated...
The two yellow and eight green interventions generated by the AFO monitoring service saved the operator approximately USD 19,000.

rate of penetration (ROP). The outcome of the intervention was an optimization of the flow rate to accommodate the ROP.

Another intervention involved the observance of erratic and increasing equivalent circulating density (ECD), torque, and drag while back-reaming out of the hole. The outcome of this intervention was that the back-reaming operations were suspended and the rig was circulated bottoms-up. There was a 75 percent increase in cuttings on the bottoms-up circulation. If this intervention had not been made, there most likely would have been a pack-off.

ECONOMIC VALUE CREATED

Based on the operator’s RTOC metric, each green intervention resulted in the equivalent of USD 1,500 saved, and each yellow intervention resulted in the equivalent of USD 2,000 saved. The two yellow and eight green interventions generated by the AFO monitoring service saved the operator approximately USD 19,000.