

Case Study

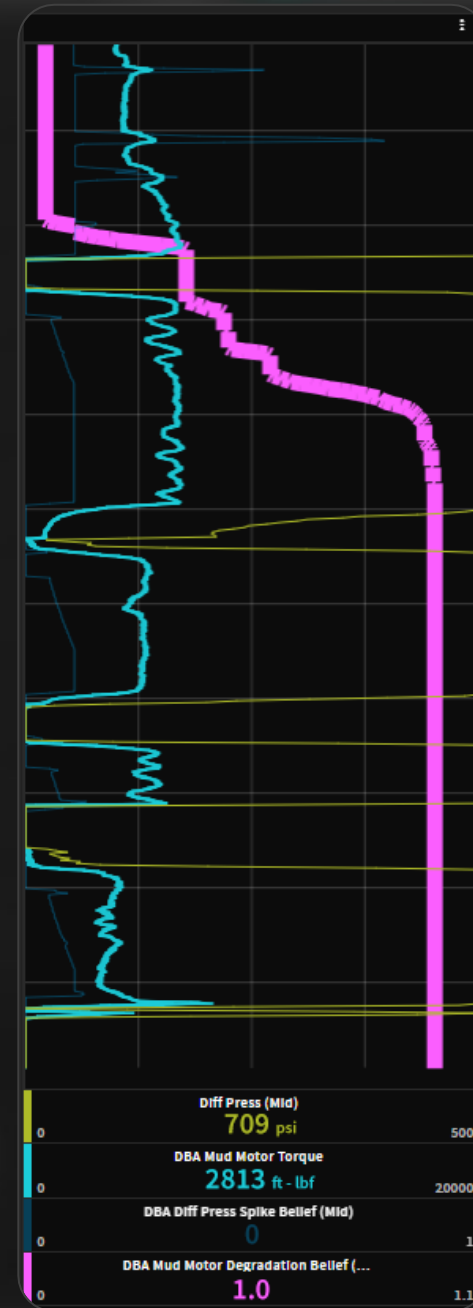
Drilling Beliefs & Analytics | DBA

Mud Motor Degradation Predicted Before Failure

DBA Mud Motor Degradation Belief provided early and accurate warnings of impending mud motor failure. The system flagged degradation before circulation was lost and string pressure anomalies were observed, demonstrating its ability to detect downhole failures ahead of rig site realization.

Cost avoided

\$120,000



Event Summary

The rig was drilling ahead with steady parameters when DBA identified early signs of mud motor degradation. Despite continuous signals, no action was taken until circulation was lost. The trip sheet confirmed TOOH to change out the motor/RSS after failure.

Response

The rig tripped out only after the motor had already degraded to failure, missing the opportunity for proactive intervention.

Outcome and Value Delivered

DBA accurately predicted motor degradation before the rig recognized it. Had the rig adjusted drilling parameters, they could have minimized NPT. This case demonstrates the predictive value of DBA, highlighting its potential to detect failures earlier.

Well Details

Timeframe:

April 2025

Location:

Delaware Basin – US Land

Well Section:

6.75” Lateral

Measured Depth:

16,388 ft

Key Event Timeline

08:00
First DBA Alert

DBA Mud Motor Degradation Belief began trending upward; torque response shifted.

08:50
Rising Belief Value

Belief value rose to 0.50, signaling growing risk.

10:00
Lost Circulation

Belief peaked at 1.0, circulation could not be established; drillstring pressured up.

10:20
Trip Out Initiated

Rig decided to trip out after motor failure became evident.

