

Case Study

Drilling Beliefs & Analytics | DBA

Optimized ROP with Autozero Bit Weight

DBA Bit Weight Autozero provided clear visibility into actual weight-on-bit, enabling the rig crew to correctly zero bit weight close to bottom. This adjustment improved ROP significantly across a consistent lithology interval, saving 8.2 hours of drilling time and reducing costs.

Cost Saved

\$26,000



Event Summary

While drilling through uniform sandstone and siltstone, the rig initially recorded reduced ROP despite steady parameters. DBA Bit Weight Autozero highlighted that weight was not fully transferred to the bit. By re-zeroing closer to bottom, the crew corrected the measurement and achieved better drilling efficiency.

Response

The crew acted on DBA guidance by adjusting zero point practice. This intervention improved drilling efficiency without the need for traditional drill-off tests, which are often skipped to save time.

Outcome and Value Delivered

The adjustment restored optimal WOB transfer, enabling improved ROP and saving 8.2 hours of drilling time. This efficiency gain equated to approximately \$26,000 in avoided cost, demonstrating how DBA Bit Weight Autozero improves operational accuracy and minimizes NPT.

Well Details

Timeframe:
August 2025

Location:
Egypt Land

Well Section:
8.5” Section

Measured Depth:
13,360 ft

Key Event Timeline

09:00
Initial Observation

DBA indicated discrepancy between applied bit weight and actual WOB.

10:00
Action Taken

Rig picked up off-bottom and properly zeroed bit weight 2–3 ft before bottom, eliminating drag effects from inclination.

12:30
Result

ROP increased from low rates to 15–55 ft/hr. Torque also increased, validating actual WOB transfer.

