Case Study

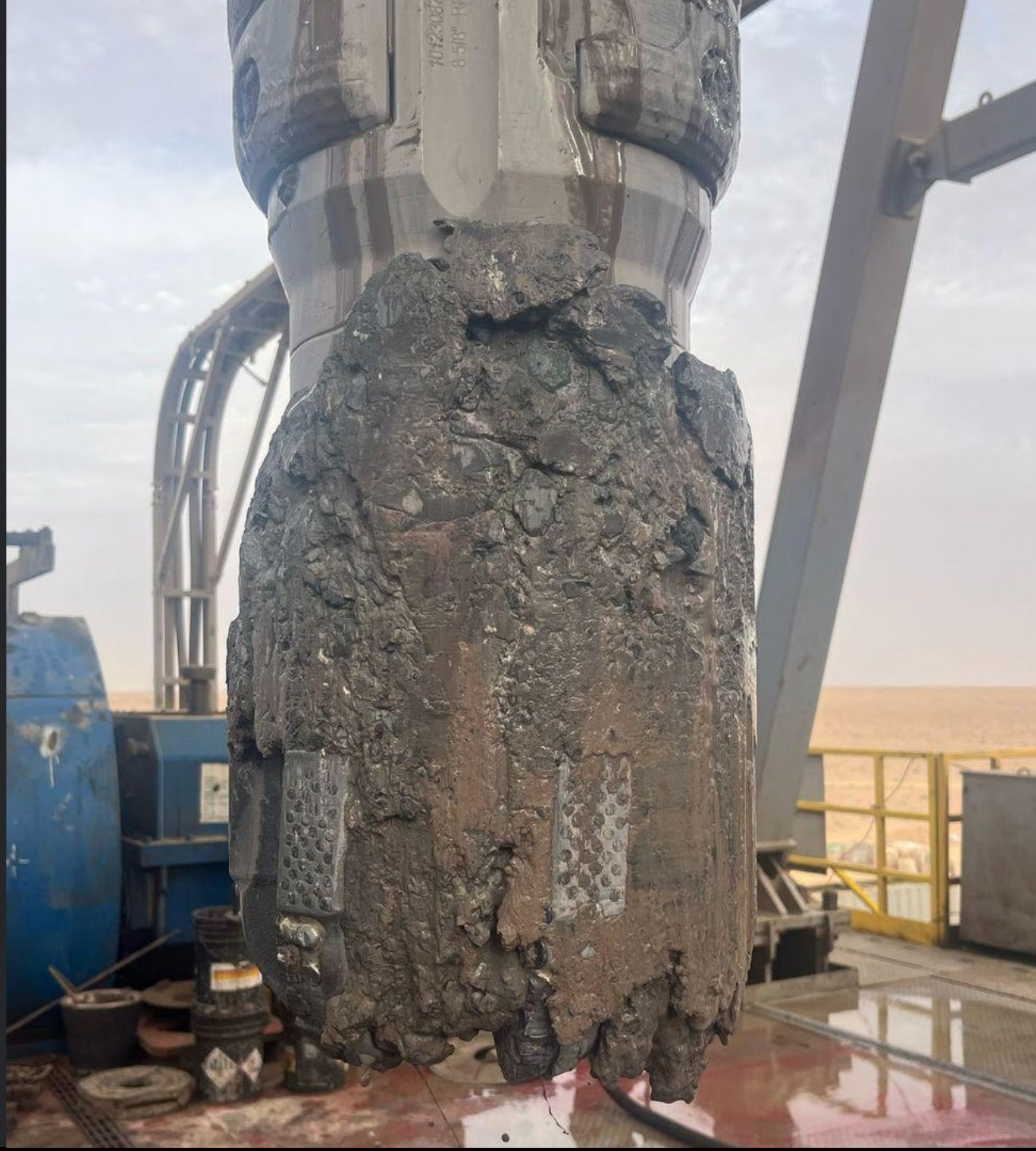
Drilling Beliefs & Analytics | DBA

Bit Balling Mitigated with Early DBA Alerts

DBA Rotary Bit Balling Belief provided early and consistent confirmation of bit balling events. By acting promptly on the alerts, the rig pumped anti-balling pills, restoring drilling performance from severely reduced ROP to over 100 ft/hr. This intervention avoided premature bit trips and reduced NPT exposure.

Cost avoided

$75,000



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Event Summary

Bit balling is a common drilling challenge in the Moghra formation, leading to poor ROP and premature bit wear. During drilling, DBA flagged clear bit balling signals at multiple depths. These alerts were confirmed by declining ROP and validated with immediate performance recovery when the rig pumped anti-balling pills.

Response

Rigsite and Real Time Operating Center (RTOC) teams acted on DBA alerts, deploying anti-balling pills in a timely manner. This restored ROP, prevented early trips, and maintained drilling continuity.

Outcome and Value Delivered

DBA alerts enabled the rig to avoid unplanned trips and Non-Productive Time (NPT), while restoring performance to optimal levels. The intervention delivered an estimated $75,000 in avoided costs, by preserving bit life and improving operational efficiency. The case demonstrates the reliability of DBA in detecting bit balling and guiding corrective action in real time.

Well Details

Timeframe:

August 2025

Location:

Egypt Land

Well Section:

17.5” Section

Measured Depth:

2,680 ft

Key Event Timeline

Day 1 – 22:00
Early Drilling

DBA Rotary Bit Balling Belief triggered multiple times, prompting notifications from the RTOC.

Day 2 – 05:00
Event Peak

ROP dropped to 9 ft/hr; DBA triggered with confidence up to 1.0.

Day 2 – 06:30
Corrective Action

Rig pumped 30 BBL anti-balling pills on 2 of the 3 alerts.

Day 2 – 08:00
Result

ROP recovered dramatically to 100+ ft/hr, validating DBA’s accuracy.

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