MI SWACO
A Schlumberger Company

SWITCHBACK SCRAPER Tool and MAGNOGARD Magnet Save 28 h, USD 408,000 in Azerbaijan Well

BHA outfitted with casing cleaning tool and openhole magnet minimizes trips, reduces operational risks, and collects 21.2 kg [46.6 lbm] of large debris

CHALLENGE

- Drill and clean out critical casing sections to optimize installation of sand screens in a well offshore Azerbaijan.

SOLUTION

- Use the SWITCHBACK SCRAPER* versatile casing cleaning tool and MAGNOGARD* openhole magnet to eliminate a dedicated run and prepare the casing for the screen runs.

RESULTS

- Eliminated 28 h of rig time.
- Lessened overall costs by USD 408,000.
- Minimized casing wear.
- Curtailed equivalent circulating density (ECD) control and packoff risks.

Perform critical casing cleanout in fewer trips while reducing debris risks

Before running sand screens, an operator in Azerbaijan needed to drill through a float collar, cement, casing shoe, and 8½-in × 9¼-in openhole section to TD, while minimizing the risk of packoff around large-OD tools. Conventional rotational casing scrapers often require multiple trips and leave debris that jeopardizes subsequent operations.

Combine versatile casing cleaning tool and openhole magnet

Azer M-I Drilling Fluids L.L.C. and Schlumberger suggested incorporating the SWITCHBACK SCRAPER cleaning tool and the MAGNOGARD openhole magnet into the string.

The scraper blades of the SWITCHBACK SCRAPER cleaning tool are retracted to run in hole.

The SWITCHBACK SCRAPER tool has an integral fluted stabilizer to maximize bypass for optimal ECD control. The tool features retractable scraper blades that reduce the risk of packing off around the pads while running in hole and lessen casing wear, unlike a rotational scraper with fixed scraper blades. Once drilling is complete and TD is reached, the tool can be activated by dropping a ball, extending the blades to scrape the casing walls.

The MAGNOGARD magnet has a slick OD enabling rotation and reciprocation in the open hole with no fear of damaging the formation. Its powerful magnets and generous debris collection valleys make it ideal for capturing and retaining ferrous debris from the flow path.

Reduced trips and cleared section of magnetized pipe dope and metal swarf

The SWITCHBACK SCRAPER tool and MAGNOGARD magnets were used in the drillstring. Once drilling was complete, the ball-activated SWITCHBACK SCRAPER tool cleaned the well while pulling out of hole, minimizing casing wear and eliminating a dedicated cleanup run. The MAGNOGARD magnets captured and retained debris, collecting a total of 21.2 kg [46.6.lbm] of magnetized pipe dope and metal swarf. This BHA configuration combined multiple runs into one trip, saving 28 h and approximately USD 408,000. The operator successfully installed the sand screens as planned with no issues.