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Rhino XC Reamer Enlarges Deepwater GOM Well in One Trip and 62 Hours

On-demand reamer enlarges 12¼-in section to 13½ in, eliminates extra trip, and provides pilot hole for coring run stabilization

CHALLENGE

Reduce the time for hole enlargement while drilling (HEWD) in a 12¼-in to 13½-in section and provide an extended rathole section for the coring BHA stabilization.

SOLUTION

Run the Rhino XC* on-demand hydraulically activated reamer for fast cutter block activation and deactivation.

RESULTS

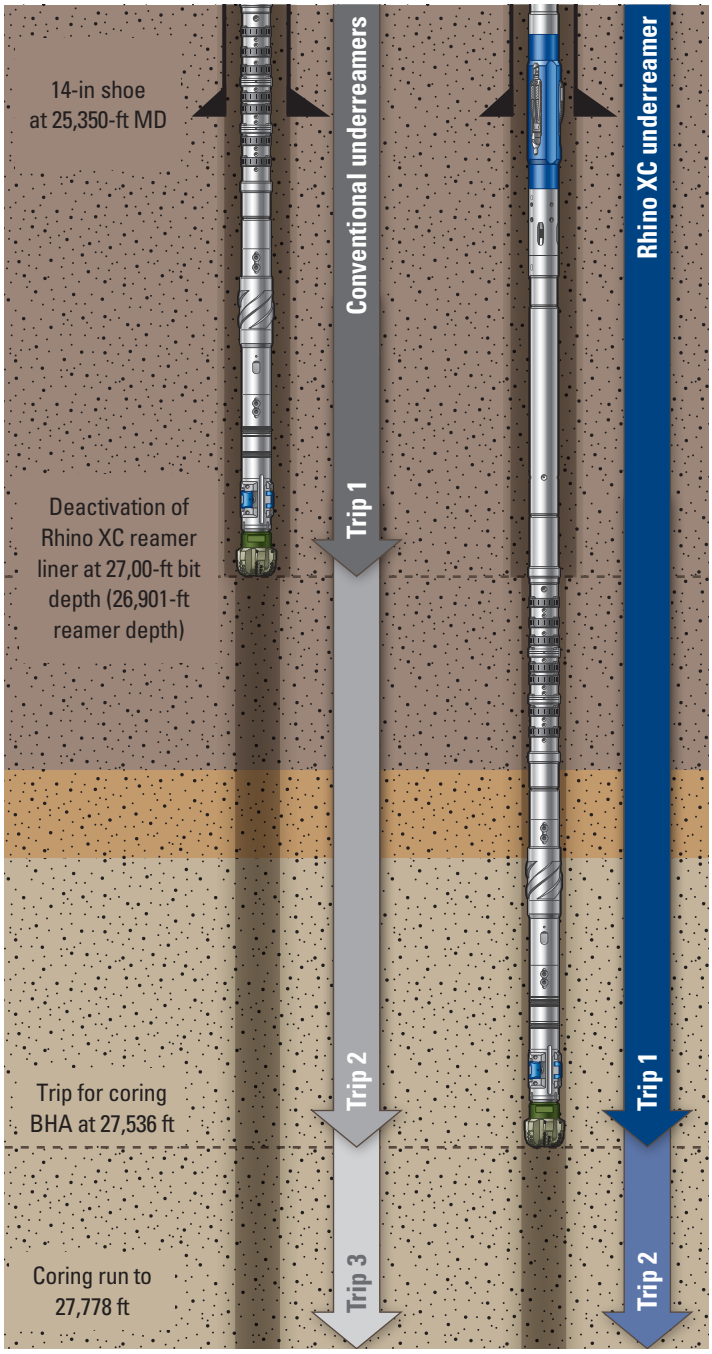
- Enlarged the 1,551-ft interval in 49 hours with a flow rate of up to 950 galUS/min.
- Provided an extended rathole of 538 ft for coring run stabilization.
- Eliminated the need for an additional trip during more than 62 hours of drilling.

HEWD in deepwater GOM

While drilling a well in deepwater Gulf of Mexico (GOM), an operator encountered pore pressure deviations, high mud weights, and the associated equivalent circulating density (ECD). The pore pressure issues required setting a 14-in casing string in the upper hole section and enlarging the next 12¼-in section—planned as a single-diameter drilling interval—to 13½ in to incorporate an 11⅞-in contingency liner if needed. Adding to the complexity of the interval, a 250-ft to 500-ft rathole was required at TD to stabilize a subsequent coring BHA run.

Flexible, on-demand underreaming

To avoid the time involved for extra trips to change out BHAs, the operator used the Rhino XC on-demand reamer. The Rhino XC reamer, which is designed for use in formations where HEWD is needed, enabled on-demand activation and deactivation of the underreamer multiple times as required while drilling. Because of its flexibility, the Rhino XC reamer can be placed anywhere on the BHA. The tool's parallel tongue and groove design ensured that cutter blocks were deployed to the borehole enlargement diameter during activation and retracted when the reamer was deactivated.



The Rhino XC reamer enlarged the 12¼-in section to 13¼ in without the need for a contingency liner, the cutter blocks were deactivated at 27,000 ft, and the 12¼-in borehole was drilled an additional 583 ft to provide an extended rathole for the coring BHA stabilization.

Elimination of extra trips

With the cutter blocks activated, the Rhino XC reamer enlarged the 12¼-in section to 13½ in for a total of 1,551 ft. After careful monitoring, the operator determined that the contingency liner was not required. The cutter block was then deactivated at the top of the coring section, and a 12¼-in borehole was drilled an additional 583 ft, providing the required stabilization for the subsequent coring run. The 2,188-ft interval was drilled in 62.5 hours, with no additional trips required.

Contact your local Schlumberger representative to learn more.

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