QuickCut[™] Casing-Exit System and AccuView[®] Software Save 11 Hours of Rig Time—a Reduction of 75% from Previous Jobs

Objectives

- Exit 5 1/2-in. casing in a single trip and reduce mill time to less than 12 hours. Three previous casing exits in the well using equipment from other vendors averaged more than one trip, and the average mill time for each casing exit was 14 hours.
- Use a retrievable, hydraulic-set system to avoid the additional time and costs associated with mechanically setting the whipstock anchor using a bridge plug and to allow for future access to the main bore.

Our Approach

- To perform the casing exit, Weatherford recommended the QuickCut casing-exit system along with the hydraulic MultiCatch[™] whipstock anchor and AccuView casing-exit-optimization software. Weatherford also provided a subject-matter expert (SME) to monitor the operation remotely from Houston, Texas, in real time.
- Rig personnel ran the whipstock anchor to the kickoff depth of 2,603 ft (793 m) and oriented the anchor. However, the anchor would not set at the flow rate calculated during the pre-planning phase. Using AccuView software, the Houston-based SME was able to access real-time data and determine a solution while the supervisors on location maintained rigfloor operations. Once the SME identified a solution, the anchor set without further issues.
- As the QuickCut system milled the window and rathole, AccuView software displayed all operational parameters in real time to both the onsite supervisors and the SME in Houston. Parameters could be adjusted on the fly to minimize the load applied to the milling assembly, which helped to maintain a better-than-average rate of penetration of 6 ft/hr (1.83 m/hr) throughout the process.
- The QuickCut system milled the window and rathole in a single trip and in just more than 3 hours, which was a record for the field and 9 hours faster than the customer had required.

Value to Customer

- The issue encountered when setting the whipstock anchor would typically have required tripping out of the hole or would have resulted in significant downtime associated with phone calls between the job site and the Houston-based SME to discuss the problem. Because AccuView software displayed operational data in real time and the Weatherford SME identified an efficient solution, the customer incurred no nonproductive time.
- The operation had zero recorded safety incidents.
- The QuickCut system reduced mill time by 75% (11 hours) compared to previous casing exits in the well.



AccuView software contributed significantly to the efficiency of the casing-exit operation by enabling real-time data display and enhancing communication between on-site rig personnel and the off-site Weatherford SME.

LOCATION Southwestern U.S.

FIELD San Juan Basin

FORMATION Sand, shale

WELL TYPE Onshore, development, gas

HOLE SIZE AND ANGLE 4.75 in., 10°

CASING SIZE 5-1/2 in., 17 lb/ft (25.2 kg/m)

DEPTH OF KICKOFF POINT 2,603 ft (793 m)

LENGTH OF MILL RUN 13.3 ft (4.05 m)

MILLING FLUID Water based

MILLING RATE OF PENETRATION 6 ft/hr (1.83 m/hr)

PRODUCTS/SERVICES

- QuickCut casing-exit system
- MultiCatch anchor
- AccuView casing-exit-optimization software



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