BP Alaska Uses TrackMaster Select System Mechanical Whipstock to Perform First Low-Side Casing Exit

Modular whipstock sidetracking system completes an uncemented casing exit at 150° RHS and 74° inclination, Alaska

CHALLENGE
- Perform a casing exit in a nearly horizontal section of a 20-year-old well.
- Sidetrack through a 9 5/8-in section with no cement behind the casing.
- Create a high-quality window that enables still BHAs to pass through.
- Meet BP Alaska’s objectives with a cost-effective solution.

SOLUTION
Use the TrackMaster Select* modular whipstock sidetracking system’s mechanical whipstock to perform a low-side casing exit.

RESULTS
Performed a successful casing exit at 150° right of high side (RHS) and 74° inclination.

Sidetrack through uncemented casing in a near-horizontal well
BP Alaska needed to perform a casing exit in a horizontal section of an older well. Most cased hole sidetrack applications have no cement behind the casing, as was the case in this instance due to well age. This particular section of the well was uncemented. In addition, the surrounding formation contained hard formation stringers that could be encountered when drilling the rathole.

Use a mechanical whipstock to enable a low-side exit
With this knowledge, BP Alaska and Schlumberger decided to perform a low-side casing exit to reduce the possibility of tracking and lower the risk of cutting structure damage.

Because of the number of successes the TrackMaster Select system had in similar applications, BP Alaska chose to use it for this job. However, the planned exit was at 150° RHS and 74° inclination—outside the range of the most difficult exit performed with this whipstock at 98° RHS at 47° inclination.

Pre-job planning with BP enabled cutting of the old production tubing directly below setting depth to provide a bottom on which the mechanical anchor could be activated. The Runner* drillstring analysis program confirmed that adequate weight could be transferred to both successfully activate the anchor and shear the break bolt. Due to the high inclination of the well, a modified break bolt with a reduced shear rating was used.

Performed a successful low sidetrack in a high-angle section
BP Alaska successfully performed a low-side casing exit in the 9 5/8-in section with an orientation of 150° RHS at 74° inclination. This was the first low-side casing exit done using the TrackMaster Select system mechanical whipstock in a high-angle well.

Because of these results, low-side casing exits using the TrackMaster Select system mechanical whipstock is now the preferred sidetracking system for BP Alaska on all sidetracking operations identified with a high tracking risk. It is currently the only trusted mechanical sidetracking system able to perform low-side casing exits in highly deviated wells.

The TrackMaster Select System enabled a successful low-side casing exit in a high-angle well. Using the system is now a local best practice for BP Alaska for these exits in wells with high tracking risks.

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