POOR HOLE CLEANING SLOWS MILLING OPERATIONS

In Algeria’s Bir Seba field, Groupement Bir Seba (GBRS) planned a workover operation to retrieve an existing 3-1/2-inch completion string from the BRS-15 well. To achieve this, the operator wanted to run in the hole with a milling bottomhole assembly (BHA) and mill over a production packer. This would allow GBRS to retrieve other completion assembly components and then run new 3-1/2-inch tubing.

Normally, GBRS used high-viscosity pills (10–15 bbl) formulated with xanthan gum polymer to lift out debris and provide hole cleaning. However, this polymer yielded poorly in the calcium bromide (CaBr₂) completion fluid and lacked the carrying capacity to return all debris to surface.

On previous wells, GBRS had mixed more xanthan gum than specified to improve hole cleaning. However, it often had to stop the operation, calculate the amount of debris remaining in the hole, and then pump another high-viscosity pill – all resulting in nonproductive time (NPT). Baroid was challenged to provide a more efficient sweep method.

BAROLIFT® SWEEPING AGENT OFFERS SUPERIOR SWARF CARRYING CAPACITY

Applying its Technical Process to evaluate options, the Baroid team proposed pumping a pill formulated with BAROLIFT® sweeping agent. BAROLIFT sweeps increase the carrying capacity of swarf-lifting pills.

For both vertical and horizontal wells, BAROLIFT® synthetic fiber is suitable for all fluid types and is an ideal product for milling operations.
capacity of fluids without significantly altering the rheological properties, and the synthetic fiber component is an ideal additive for use during milling operations.

Implementing BAROLIFT sweeps helped remove all the metal debris and reduce NPT. The ability to consistently clear cuttings from around the milling head helped accelerate the milling operation.

**SWEEPS COMPLETE WORKOVERS TWICE AS FAST AS IN OFFSET WELLS, SAVING USD 75,000**

Compared to previous milling operations, the BRS-15 workover was finished 1.5 days ahead of time, reducing costs by USD 75,000. The second and third wells were also completed successfully.

The total amount of metal debris recovered on surface matched with the calculated volumes.

Due to the savings in rig costs, GBRS approved BAROLIFT sweeps as a best practice for all upcoming milling jobs.

*Wells milled with BAROLIFT® sweeps were completed in approximately half the time.*