



Texas: FORM-A-BLOK stops losses, clears way for trouble free casing installation

“Using a high-performance FORM-A-BLOK* squeeze allowed us to drill to casing point through a severe loss zone, then run and cement casing with no further losses”

M-I SWACO On-site Drilling Fluids Engineer

Well Information

Location Grimes County, TX

Spud..... November 2010

Interval drilled..... 6 ¼-in. hole for a total of 4,147 ft (1,264 m)
 from 6,400 to 10,547 ft TVD (1951-3215 m)

Mud Type/Density..... Gel/Lignite @ 9.7 lb/gal (1.2 SG)

The Situation

The program called for an oil mud displacement. While drilling to casing depth, the crew conditioned the drilling fluid, which was being weighted up to displacement mud weight. At that point, the well encountered total loss of returns. Attempts to cure the losses with conventional lost circulation material (LCM) were unsuccessful and a total of approximately 800 bbl of mud was lost.

The Solution

ALPINE SPECIALTY CHEMICALS from M-I SWACO recommended the operator employ its FORM-A-BLOK product. FORM-A-BLOK is a high de-fluidizing and high solids slurry that is a quick-acting and cost-effective solution for combating moderate-to-severe lost circulation. This process can cure losses instantly and is not time or temperature dependent.

The Results

By employing the FORM-A-BLOK pill, the operator was able to drill the 6-1/4 in. hole to the interval depth of 10,612 ft MD and 10,547 ft TVD. The operation was completed with zero losses. Moreover, the 5-1/2 in. casing was run to bottom and cemented with no problems.

The Details

The pill was mixed in a 78-bbl slugging tank and comprised 55 bbl of water and 120 sacks of FORM-A-BLOK. The pill was thoroughly mixed and weighted up to 9.5 lb/gal (1.14 SG) in 1 ½ hours.

Pumping of the pill began at a rate of 2 bbl/min at 42 strokes (str). Calculations showed a total of 67 ¼ bbl pumped to the bit with 994 str, followed by pumping 52 bbl of mud at 749 str to clear the pill.

At that point the crew closed the annulus and began the hesitation squeeze at a rate of 5 bbl every 15 min. Initially, the squeeze was pressured up to 580 psi before being bled back to 340 psi. The subsequent sequence entailed:

- Squeezing 5 bbl at 3 bbl/min, pressured up to 585 psi and bled back to 330 psi
- Squeezing another 5 bbl at 3 bbl/min, pressured up to 590 psi before being bled down to 320 psi
- Another 5 bbl was squeezed also at 3 bbl/min. The squeeze was pressured up to 640 psi and bled down again to 320 psi.
- The pressure was held at 300 psi for two hours.

After the two-hour period, the pill was circulated at 750 psi. The pipe was pulled at 6,400 ft (1951 m), whereupon, it was observed that 10.2 bbl was gained during the trip. The pipe was tripped back to the hole and run to 9911 ft (3021 m) where circulation resumed. The hole was circulated for four hours with no losses encountered. Consequently, the operator was able to drill ahead to 10271 ft (3,131 m) with no losses.

Consequently, the operator was able to drill to the casing point, pull out of hole, run casing and cement successfully with no additional losses.

Questions? We'll be glad to answer them.

If you'd like to know more about the FORM-A-BLOK product and how it's performing for our other customers, please call the Alpine Specialty Chemicals or M-I SWACO office nearest you.

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