



BaraKlean®-926 Casing Cleaner Delivers Fast, Effective Results, Saving USD 30,000 Per Well in Costs and Rig Time

OFFSHORE OPERATOR REDUCES WASTE VOLUME BY TWO-THIRDS ON ERD WELL CLEANOUT

UNITED ARAB EMIRATES

CHALLENGES

- » Achieve effective casing and drillstring cleaning
- » Decrease volume of contaminated brine
- » Minimize rig time in cleanup operation

SOLUTION

- » Perform comparison tests on prior cleaner and BaraKlean®-926 surfactant-solvent blend
- » Model cleanup and displacement with CFG simulation software
- » Pump engineered BaraKlean-926 pill as per modeling outputs

RESULTS

- » Achieved near 100 percent cleaning efficiency for casing and drillstring
- » Reduced chemical costs by USD 25,000 per well
- » Saved 30 minutes of displacement time, valued at USD 5,000

OVERVIEW

An operator was preparing to complete extended-reach drilling (ERD) wells located offshore United Arab Emirates (UAE). The extended lateral reservoir sections – some reaching up to 18,000 feet (5486 meters) – were drilled with an INNOVERT® non-aqueous fluid (NAF) drill-in system. The operator wanted to improve wellbore cleanout efficiency and optimize displacement to sodium bromide (NaBr) completion brine.

On prior wells, the operator had used a solvent/surfactant blend to displace the well to clear NaBr fluid. However, it was difficult to minimize the contaminated fluids volume and decrease the amount of the slops generated.

CHALLENGES

The goal was to efficiently clean the casing and the drillstring, while minimizing the volume of contaminated fluid. Previous cleanouts had produced 150 bbl of waste fluid. Limited onsite storage capacity created a challenge for both the waste management service company and the operator.

An additional challenge was ensuring that any proposed cleanout system would be optimized according to the modeling produced by the Baroid proprietary Completion Fluids Graphics (CFG) software.

SOLUTION

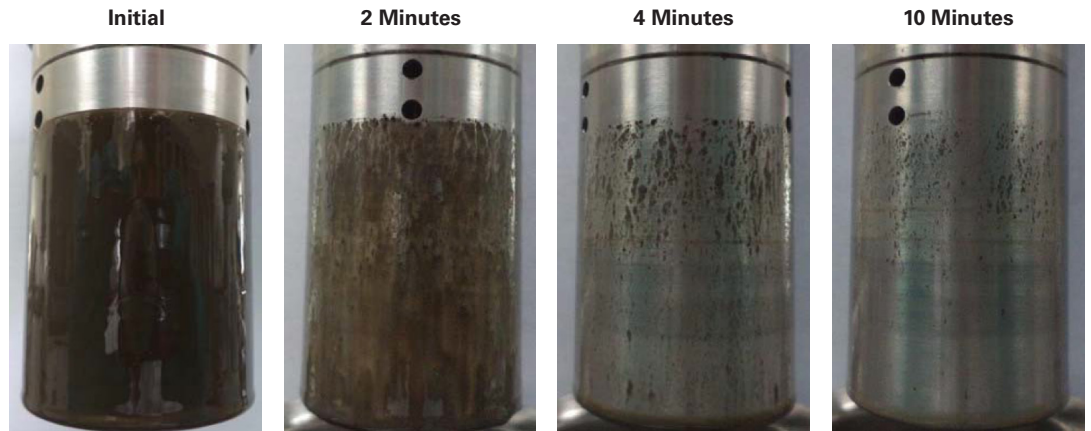
The Baroid team recommended BaraKlean®-926 casing cleaner to clean out the extended lateral production zone. BaraKlean-926 casing cleaner is a powerful blend of surfactants and solvents that breaks up and disperses mud film and residue, and leaves tubular surfaces clean and water-wet.

During preliminary lab testing, the proposed BaraKlean-926 cleaner was compared to the previously used wash pill. As shown below, the BaraKlean-926 casing cleaner delivered near-perfect performance in one-third of the time and with a 50 percent lower concentration.

Pill Formulation	% Cleanup at Room Temp.	% Cleanup at 150°F (65.5°C)	Test Time (min.)
20% v/v Previous Wash Pill Formula	72.99	82.68	30
10% v/v BaraKlean®-926 Casing Cleaner	99.45	100	10

RESULTS

BaraKlean-926 casing cleaner successfully reduced the contaminated NaBr brine volume to only 50 bbl, compared to 150 bbl with the previously used solvent and surfactant blend. This reduced the brine cost per well by USD 25,000. The displacement was completed 30 minutes faster than planned, saving the operator an additional USD 5,000 in rig time. In summary, the operator saved USD 30,000 per well, and avoided storage and treatment issues associated with contaminated fluids.



The 10-minute test results of the BaraKlean®-926 casing cleaner indicate excellent mud film and residue removal.



Drillstring before pumping
BaraKlean®-926 casing cleaner



Drillstring after pumping
BaraKlean®-926 casing cleaner

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