MICRO-PRIME Maximized Wellbore Clean-up

Baker Hughes successfully delivers efficient system in Gulf of Mexico

The Baker Hughes MICRO-PRIME high-efficiency wellbore clean-up spacer system was used to displace an 18.3 lb/gal DOBM fluid for a major operator in the South Marsh Island area, Gulf of Mexico. The MICRO-PRIME system is designed to optimize the wellbore clean-up process when displacing OBM or synthetic-based fluids (SBM).

The MICRO-PRIME system included two Mesophase spacers designed to maximize cleaning efficiency and minimize waste generation. The MICRO-PRIME lead spacer was mixed on location, while the MICRO-PRIME cleaning spacer was mixed at Baker Hughes’ Fourchon, Louisiana, facility and sent to the rig in 25 bbl Coast Guard-approved tanks. Baker Hughes’ advanced DISPLEX engineering software was used to hydraulically model, simulate, and predict displacement, clean-up operations, and spacer contact time for an effective application.

Spacers were easily identified at the surface, and interfaces requiring disposal were minimized. The pipe was tripped and the riser brushes, brush subs and tool joints were inspected. No mud cake or drilling fluid residue could be seen on any of the metal surfaces, indicating that all surfaces had been successfully cleaned and converted to water-wet. Due to rig space limitations, brine filtration was completed post displacement, with NTUs dropping from 1,100 to below 23.

This project was another in several successful applications of the clean-up spacer system on a shelf Gulf of Mexico application. The technology used in the MICRO-PRIME system provided maximum wellbore cleaning efficiency while reducing the cost and risks associated with OBM/SGM deepwater displacement and cleanup operations.