DeepSTIM Pronto Sand Control Treatment Achieves Zero NPT

Case study: Operator uses flexible offshore mixing and pumping solution for frac-pack treatment in deepwater Angola

Challenge
Perform an efficient fracture stimulation operation in deep water offshore Angola.

Solution
Use DeepSTIM Pronto® modular, portable, and flexible offshore stimulation equipment, which allows high-bulk-capacity mixing and pumping as needed.

Results
Frac-packed the formation as needed with zero NPT and no environmental contamination.

Sand control needed in deep water
For a frac-pack drillstem testing (DST) operation in a high-permeability, deepwater reservoir in Angola, an efficient sand control frac-pack technique was required. The operator needed a flexible offshore stimulation solution with high bulk capacity that could mix fluid on the fly.

Fracturing/gravel packing system chosen
The company selected the DeepSTIM Pronto modular, portable equipment mounted on a vessel. The system permits offshore stimulation in locations where dedicated stimulation vessels are not readily accessible. Equipment consists of a control tower and skids, with a diesel engine as the prime mover and a high-performance pump that provides 100% redundancy for backup. All equipment is installed and locked down on the back deck of the vessel, saving time on location because the equipment arrives connected and ready to perform.

The equipment also offers large-volume treatment opportunities—1 million lbm of proppant, 6,000 bbl of fluid, and 32,000 galUS of acid. Using this system removes the extra requirements for mobilizing skid-mounted equipment. Fluid contamination and other problems caused by batch mixing are eliminated because mixing occurs as needed rather than batch mixing.

Along with the DeepSTIM Pronto system, the operator elected to use the StimPAC® fracturing/gravel-packing system, which provides optimal fluid design that reduces friction. The fluid system was a 20-lbm/galUS crosslinked guar, continuously mixed while pumping. An acid treatment was performed to clean the perforations and the critical matrix. The DeepSTIM Pronto system placed 37,500 lbm of proppant in the formation.

Pumping completed without incident
The sand management pumping job was completed without incident. The DeepSTIM Pronto system frac-packed the formation as needed, with virtually no environmental contamination, zero NPT, and no need for skid-mounted equipment.