TECH REPORT

KEATHLEY CANYON, GULF OF MEXICO

LUCIUS FIELD, KC

Well type

Deep water

Background

In the Gulf of Mexico, an operator planned to use a 1.52-sg VERSAPRO* invert-emulsion reservoir drill-in fluid system to lay down a nondamaging filtercake in an openhole well. A ClearPAC* polymer-free viscoelastic surfactant gravel-pack fluid would be used to gravel pack the interval. A 1.56-sg VERSA-OUT* system was formulated with the PEN-8* advanced breaker surfactant package to break down the ClearPAC fluid and disperse the VERSAPRO* invert-emulsion reservoir drill-in fluid system filtercake for optimal production after the gravel pack to avoid the added time and cost of a coiled tubing operation.

Technology

- PEN-8 advanced breaker surfactant package
- VERSA-OUT water-based filtercake breaker system
- VERSAPRO invert-emulsion reservoir drill-in fluid system
- ClearPAC polymer-free viscoelastic surfactant gravel-pack fluid



VERSA-OUT System with PEN-8 Package Enables Removal of VERSAPRO System Filtercake in Less than 24 Hours

Well cleanup saves 24 hours and avoids coiled tubing operations



The well successfully produced during well test operations, eliminating the need for coiled tubing contingency operations.
The well cleaned up in less than 24 hours, rather than the anticipated 48 hours, and well test data indicated low skin

The PEN-8 package successfully dispersed the filtercake left by the VERSAPRO system. The filtercake before dispersal is shown on the left; the filtercake after dispersal is on the right.