

Fit-For-Purpose Solution Prevents Formation Damage in Horizontal Well After 8-d Rig Standby, Ecuador

FLOPRO NT fluid and BREAKDOWN system provide good filtration control and filtercake removal, assuring production

An operator using FLOPRO NT* water-based reservoir drill-in fluid and the BREAKDOWN* enzyme and chelant filtercake breaker system avoided reservoir damage following an 8-d suspension in completion activities during external factors in Ecuador.

Finish completion operations with excellent performance and without HSE incidents

During the completion operations of a horizontal well, the rig operations were suspended for 8 d in the middle of running a 4½-in slotted liner because of external factors. An operator in Ecuador hoped to avoid formation damage.

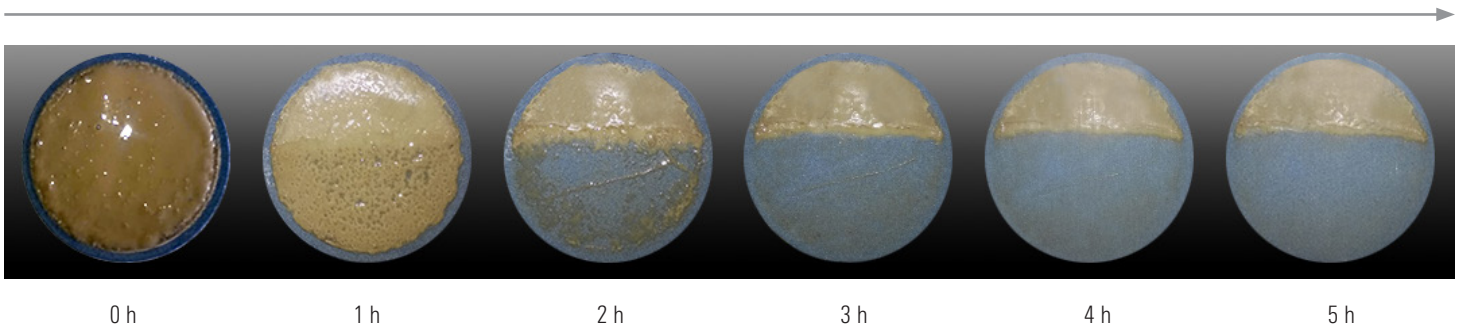
Optimize production rate and avoid damage

FLOPRO NT fluid optimizes production rates across a range of completion methods. With a low friction factor, it enables low pump pressures and high ROP. The fluid formulated in a water-based fluid environment effectively meets global environmental compliance and technical needs for reservoir drilling. BREAKDOWN system prevents reactions with formation fluids and solids by reacting only with specific filtercake components.

Result: FLOPRO NT fluid and BREAKDOWN system prevent formation damage

M-I SWACO completed a comprehensive design of reservoir drill-in fluid (RDF) and completion fluids to minimize formation damage. FLOPRO NT fluid and BREAKDOWN system were formulated as a fit-for-purpose solution for the reservoir to provide effective bridging and filtration control.

Following the 8-d rig standby, the operator drilled the well with 9.2 lbm/galUS of FLOPRO NT fluid at 11,050 ft MD. The calibration trip showed a completely stable open hole in excellent condition after the well had been out of circulation for 9 days, enabling completion operations to resume. A solids-free pill was displaced in the open hole and a 4½-in slotted liner was run. Following removal of the filtercake, the reservoir was clean and ready to produce. The oil production rate exceeded the forecasted rate, demonstrating how combining FLOPRO NT fluid, BREAKDOWN system, and completion fluid systems provides an effective solution for avoiding damage and increasing productivity in horizontal wells.



BREAKDOWN system performance test carried out with a field fluid sample.