

Setting temperature	340 degF [171 degC]
Slurry density	14.5 lbm/galUS [1,737 kg/m ³]
Curing time	6 days

Background

Fulcrum* cement-conveyed frac performance technology modifies the rheology of nonaqueous drilling fluid (NAF) in channels next to the cement. To quantify the rheology change, scientists prepared vials containing 15-mL slurries of conventional cement and the same cement with Fulcrum technology, added 2 mL of diesel-based drilling fluid, and allowed the samples to set at a common downhole temperature. After 6 days, the vials were opened and the yield points of the drilling fluids measured.

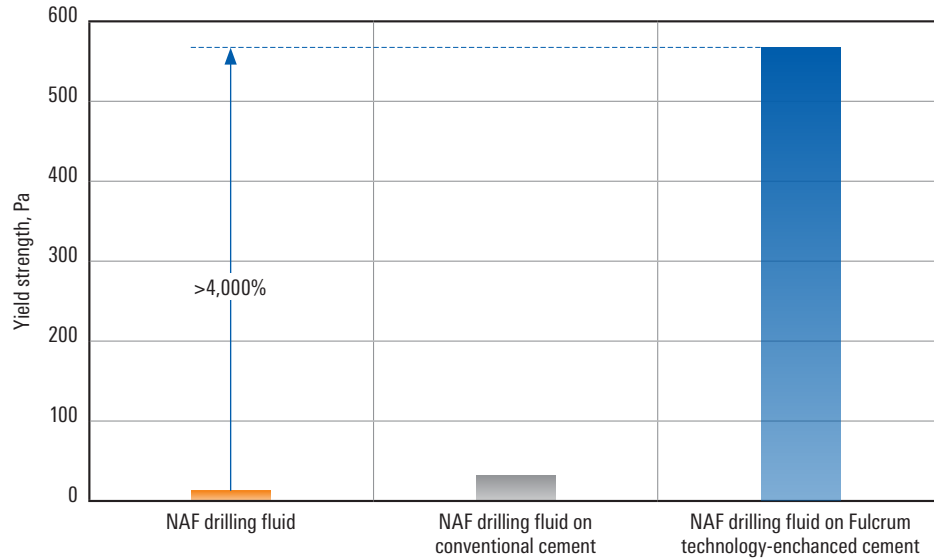
Technology

Fulcrum cement-conveyed frac performance technology

*Mark of Schlumberger
Other company, product, and service names are the properties of their respective owners.
Copyright © 2019 Schlumberger. All rights reserved. 19-CE-643210

Enhanced Cement Limits Drilling Fluid Mobility

Fulcrum technology increases mud yield point >4,000% to prevent flow through channels behind the casing



Conventional cement had a slight effect on drilling fluid rheology, but the Fulcrum technology-enhanced cement increased the drilling fluid yield strength by more than 4,000%. For details and additional testing data, see [SPE-191561](#).