

# Tuned<sup>®</sup> Defense<sup>™</sup> Cement Spacer

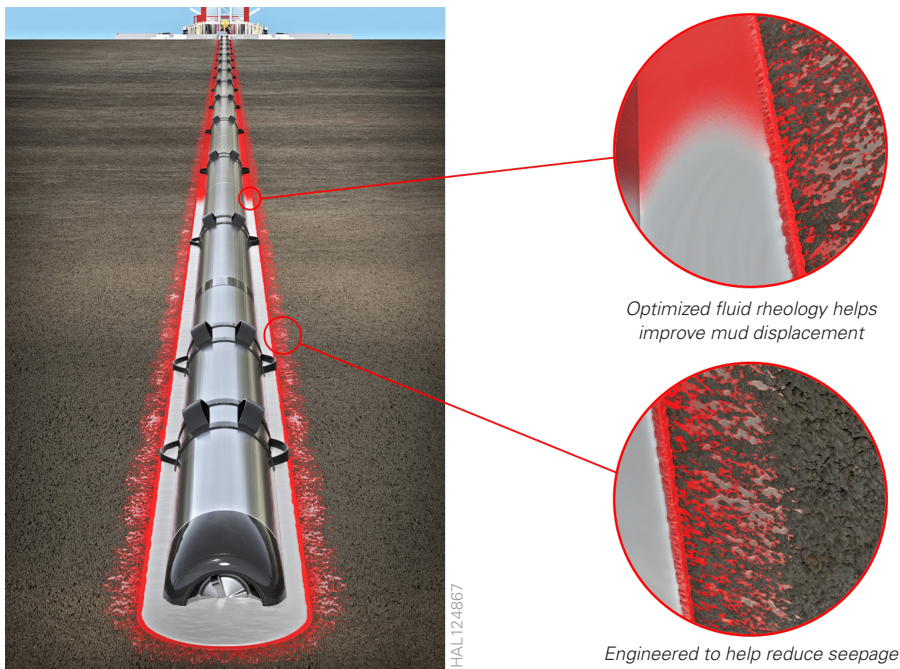
## DEFENDING THE WELLBORE FROM LOST CIRCULATION WHILE CEMENTING

### OVERVIEW

Tuned<sup>®</sup> Defense<sup>™</sup> cement spacer is the next-generation Halliburton spacer built on the leading performance of the Tuned<sup>®</sup> spacer family, now with the superior capability to help prevent lost circulation while cementing.

Lost circulation is a common challenge while drilling and cementing, and is the largest contributor to non-productive time (NPT). Losses during primary cementing can cause low top of cement, added rig time, costly remediations, and/or sustained casing pressure. This innovative cement spacer is tailored to help minimize such risks by reducing the permeability of pores and fractures.

The critical importance of fluid rheologies for optimum mud removal has been proven through 100 years of Halliburton solving cementing challenges. The Tuned Defense cement spacer has an easily adjustable yield point to achieve rheological hierarchy and enable a dependable barrier.



For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)

### FEATURES

- » Helps eliminate circulation losses and cement fallback
- » Optimized fluid rheology
- » Non-damaging to the formation
- » Operations up to 325°F/163°C\* and 19 lb/gal
- » Enhanced to treat severe losses with BridgeMaker<sup>™</sup> II lost circulation material (LCM)

### BENEFITS

- » Provides effective mud displacement
- » Helps achieve planned top of cement in challenging well conditions
- » Enables a dependable barrier to maximize production
- » Minimizes NPT while drilling and cementing

\*Defense Mod<sup>™</sup> 325 additive may be added above 300°F/149°C

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