

ChannelFix™ Cement Additive

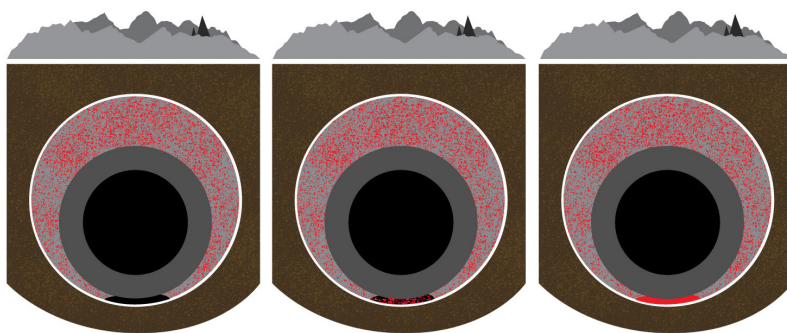
ADDRESSING IMMOVABLE MUD CHANNELS AND INCREASED STIMULATION INTENSITY IN LONG-LATERAL WELLS

OVERVIEW

ChannelFix™ cement additive is a swelling solution designed to place dependable barriers in the expanding unconventional market. The constant increases in both the length of well laterals and the speed of drilling continue to create new challenges for operators. The efficiency gains in long laterals are driving an increased demand on the resilience of the cement sheath. Over a six-year period, stage counts have tripled across North America, while laterals have nearly doubled in length.

Successful development of an unconventional field requires a constant focus on driving efficiencies and maximizing production per lateral foot. If a reservoir is under-stimulated, the economics of an unconventional well can be compromised. Frequently, under-stimulation can occur due to immovable mud channels in the annulus that allow the treatment to communicate with previous stages. This challenge is amplified by brittle cement sheaths that are not tailored for intensive stimulation. The result is a poorly producing well with a failed cement barrier.

ChannelFix cement additive can provide the reassurance of a barrier for stimulation, even when mud removal is compromised. Through contact with an oil-based mud (OBM) or a synthetic-based mud (SBM), the additive will swell to fill the channel and create a barrier capable of withstanding over 2,500 psi per 10 feet (3 meters) of annular space. With the benefit of increased elasticity, the barrier is also fit to withstand the many pressure cycles of a typical unconventional completion.



Unconventional well with OBM channel beneath casing

ChannelFix™ additive contacts the OBM channel

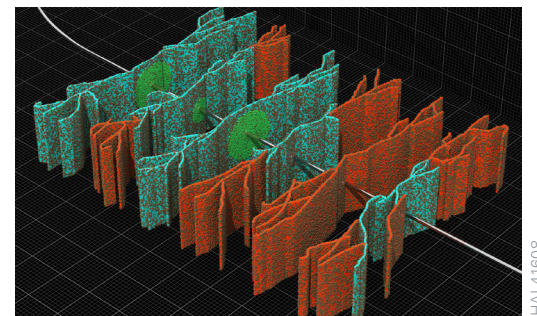
ChannelFix™ additive swells and seals channel for effective stimulation

FEATURES

- » Helps provide increased cement sheath elasticity
- » Controlled swelling in the presence of hydrocarbons
- » Compatible with conventional cement slurries
- » Effective up to 350°F (176°C)

BENEFITS

- » Mitigation of residual OBM channels
- » Improved zonal isolation
- » Increased cement barrier dependability
- » Higher resistance to cyclic loading
- » Effective stimulation placement



ChannelFix™ additive provides the barrier to effectively stimulate the reservoir as designed.

HAL41608

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H03423 12/19 © 2019 Halliburton. All Rights Reserved.