

FlexSEAL

Advanced flexible expanding cement

APPLICATIONS

- Wells with potential
 - gas migration
 - sustained casing pressure
 - post-placement pressure and temperature variations

BENEFITS

- Helps ensure long-term well integrity by preventing unwanted gas migration, sealing microannuli, and withstanding cement sheath stresses
- Reduces risk of
 - annular pressure buildup
 - mechanical well damage
 - cement sheath failure
 - collapsed casing
 - tensile cracks
 - cement debonding
 - costly remedial cementing jobs

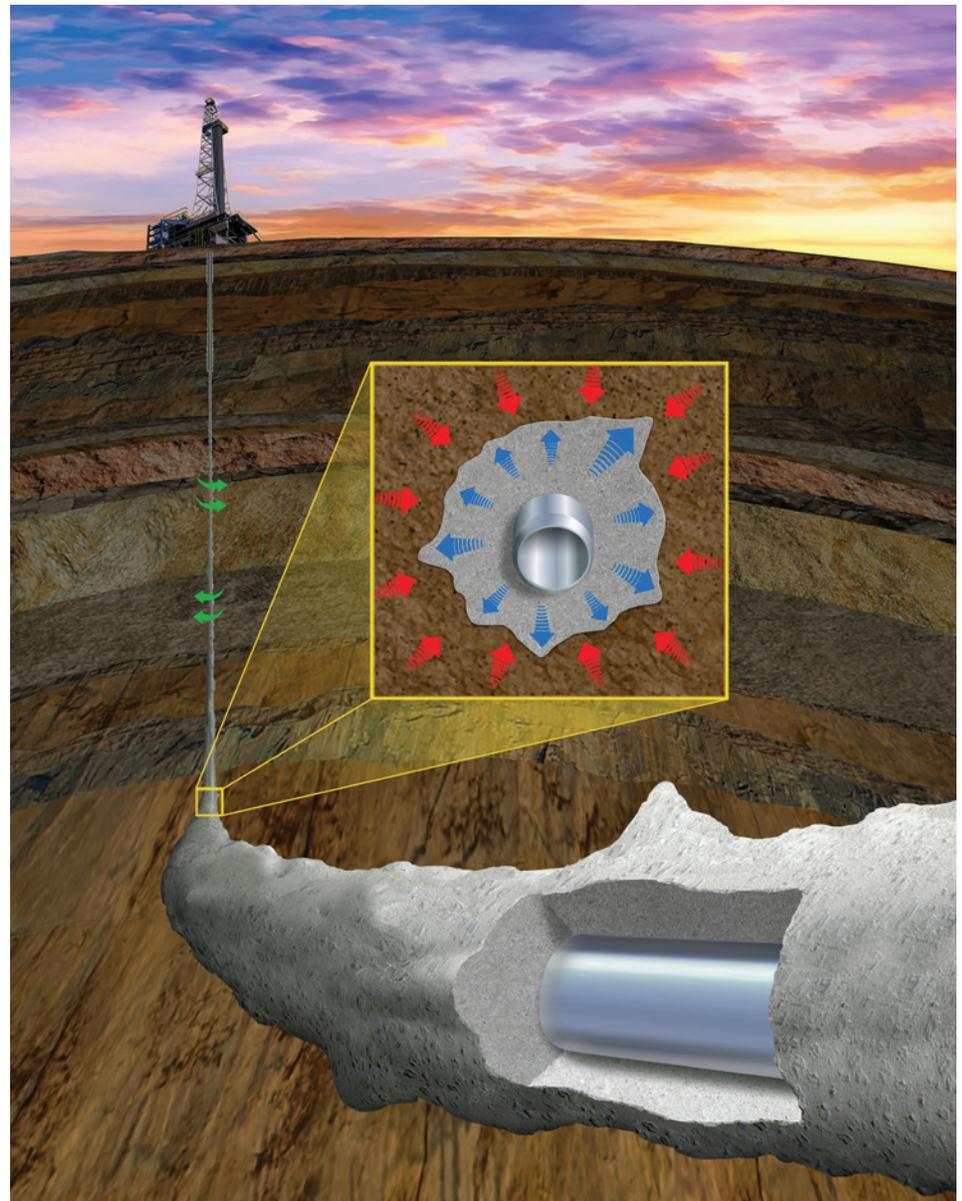
FEATURES

- High resistance to fluid migration, wellbore stresses, and corrosion
- Compatibility in 40 degF to 300 degF [4 degC to 150 degC] temperatures
- High solids volume fraction (up to 60%) for improved mud and cuttings removal
- Low Young's modulus
- Computer-aided treatment design, execution, and evaluation via CemSTRESS* cement sheath stress analysis software and WellBook* software

Achieve long-term zonal isolation

FlexSEAL* advanced flexible expanding cement helps ensure well integrity from drilling to abandonment. Unlike conventional cement systems, FlexSEAL cement expands after setting, improving cement bonding and sealing microannuli that can cause unwanted gas migration. Low Young's modulus enables the FlexSEAL system to withstand cement sheath stresses due to

- perforating
- well completion
- stimulation treatments
- pressure changes
- temperature changes
- drilling
- natural tectonic activity
- gas and water injection.



FlexSEAL cement expands to seal microannuli, preventing unwanted fluid migration. Its flexibility enables it to withstand wellbore stresses that can compromise conventional cement systems.

FlexSEAL

Resist stress, gas migration, and corrosion

FlexSEAL cement incorporates particle-size-distribution technology, extending density, pressure, and flexibility limits. Optimized slurry viscosity and solids volume fraction provide effective mud removal, fluid loss control, and flat interface of fluids. After placement, FlexSEAL technology exhibits low gel strength, short transition time, and high compressive strength. It also provides high resistance to gas and fluid migration, and corrosion. After FlexSEAL cement sets, it withstands stresses in the wellbore and formation, reducing mechanical well damage and minimizing risk of cement sheath failure.

Withstand pressures during stimulation

During hydraulic fracturing treatments, casing pressures can exceed 8,000 psi. This places compression and tensile stresses on the sheath, which induce cracking and debonding, and compromise zonal isolation. The FlexSEAL system survives these stresses when conventional cement systems do not.

Customize cement designs for each well

CemSTRESS and WellBook software can be used to optimize the treatment design, execution, and evaluation of FlexSEAL cement jobs. This helps eliminate expensive, difficult remedial cementing operations by forming a customized seal for each well.

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