Schlumberger

ClearFRAC XT

Expanded-temperature-range, polymer-free fracturing fluid

APPLICATIONS

- Fracturing at bottomhole temperatures up to 265 degF [130 degC]
- Nitrogen foam fracturing treatments
- Stimulation through coiled tubing
- Fracture height containment

BENEFITS

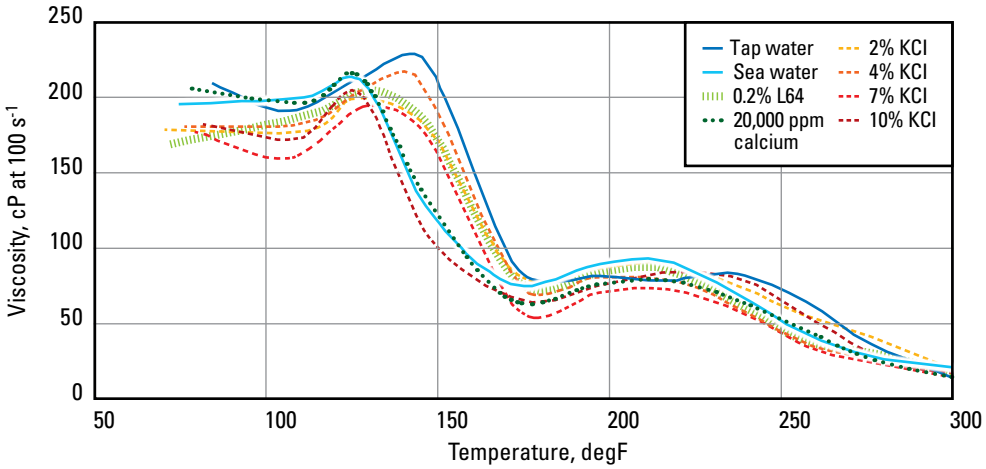
- Improves early production response with rapid flowback and fracture cleanup
- Enhances cost efficiency and logistic simplicity with insensitivity to oilfield brines
- Reduces costs by lowering friction pressure and horsepower requirements

FEATURES

- Formulation flexibility, permitting use of fresh water, KCl or organic clay stabilizers, or field brines
- Excellent fluid and slurry friction reduction properties
- Simplicity in field mixing
- Excellent proppant transport characteristics
- Polymer-free formulation

Reduced surfactant concentration and cleanup time

ClearFRAC XT* expanded-temperature-range, polymer-free fracturing fluid can be used at temperatures from 50 to 265 degF [10 to 130 degC]. Part of the proven ClearFRAC* family of polymer-free fracturing fluids, the innovative ClearFRAC XT fluid enables reduced surfactant concentrations, which significantly reduces fracture cleanup time and allows preparation with a wide variety of water and brines. It is an environmentally friendly, surfactant-based, nonresidue fluid that, like other ClearFRAC fluid systems, leaves the proppant pack virtually damage-free.



The ClearFRAC XT system exhibits excellent proppant transport at low surfactant concentrations and low viscosity.

Compatibility with fresh water, potassium chloride, brines, and nitrogen

Flexibility is key to the ClearFRAC XT fluid, which may be prepared with fresh water, water containing up to 7% KCl or 0.2% organic clay stabilizer, or some produced formation waters. Foaming ClearFRAC XT fluid with nitrogen also provides very stable, high-viscosity fracturing fluids. The viscoelasticity exhibited by the fluid offers excellent proppant transport at low surfactant concentrations and viscosity. This enables easy alteration of viscosity to better control fracture geometry (reduced propensity for height growth), thus increasing effective fracture half-length without compromising proppant transportability. With friction pressures lower than those of polymer-based fluids, ClearFRAC XT fluid also exhibits the excellent drag-reduction characteristics of viscoelastic fluids.

The low friction-pressure capability makes the ClearFRAC XT fluid ideal for CoilFRAC* stimulation through coiled tubing.

Lower HSE risk on location

After the treatment, the ClearFRAC XT fluid will experience viscosity reduction from dilution with formation brines, contact with any preflush fluids, contact and mixing with hydrocarbons, or the addition of chemical breakers. The proppant-pack breaker for the ClearFRAC XT fluid is nonoxidizing, reducing health, handling safety, and environmental concerns on location. Viscosity is reduced immediately upon release (fracture-closure) as a result of disruption of the micelle structure.

ClearFRAC XT fluid provides faster fracture cleanup while reducing HSE risk on location.

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