

# D239

## Cement extender

### APPLICATIONS

- Cementing operations, especially in environmentally sensitive areas

### BENEFITS

- Meets stringent environmental regulations
- Achieves superior slurry dispersion
- Improves extended slurry rheology and stability
- Reduces fluid loss

### FEATURES

- Compatible with automated LAS\* liquid additive system with no mixer needed
- Compatible with MUDPUSH\* spacer family for cementing
- Designed for use in density ranges of 12 to 15 lbm/galUS [1,440 to 1,800 kg/m<sup>3</sup>] and temperature ranges of 104 to 185 degF [40 to 85 degC]

D239 cement extender enables operators to engineer lightweight slurries with good rheological properties that improve slurry stability and fluid displacement in the annulus while maintaining simplicity in the operation. Slurries created using D239 extender improve mud removal and zonal isolation.

D239 has been successfully used in 13<sup>3</sup>/<sub>8</sub>-in [34-cm] and 9<sup>5</sup>/<sub>8</sub>-in [24.5-cm] casing cementations, where it

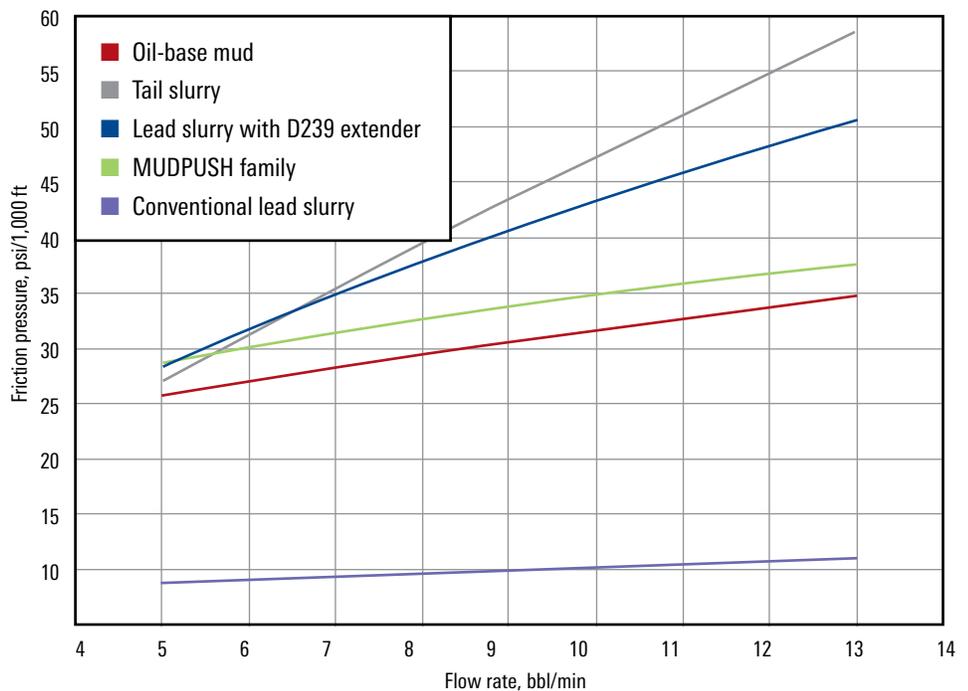
- prevented lead slurry from channeling into the previous casing shoe in deviated sections, thus avoiding high pressure in the annulus caused by thermal effects
- completed the cement job in one stage with a lightweight slurry that minimizes fluid loss
- performed mud removal to maintain zonal isolation and well integrity.

### Application

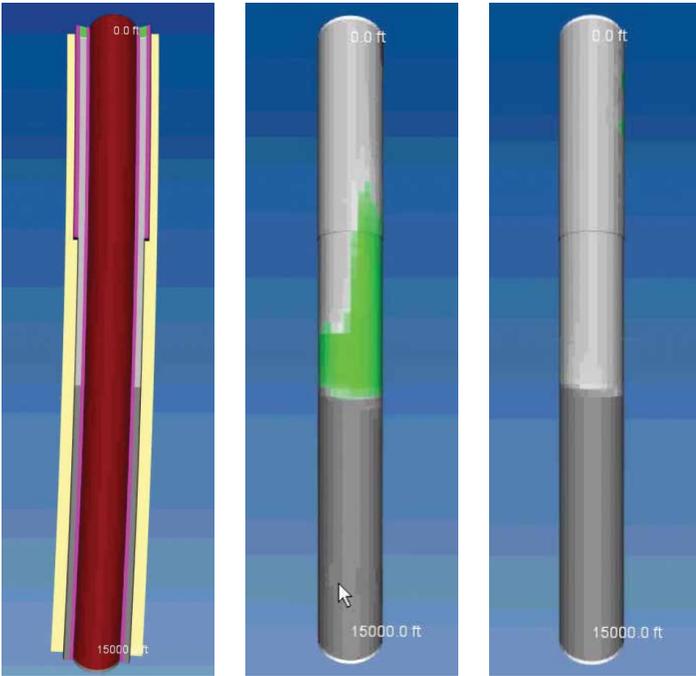
Adding D239 decreases the stages required and helps cement pipe through weak zones with minimal slurry loss and reduced risk of fracturing. By increasing viscosity, the extender helps stabilize both free fluid and sedimentation in cement slurries with density ranges of 12 to 15 lbm/galUS with limited retardation. D239 extender also minimizes fluid loss when used in proper concentration with a dispersant. Unlike other extenders that may shorten cement setting, it has little impact on thickening time.

### Minimal environmental risk

D239 extender is composed of 100% PLONOR (Pose Little or No Risk to the Environment) substances. It is approved for use in areas with stringent environmental restrictions, making it an ideal choice for environmentally sensitive areas such as the North Sea, Canada, and the Gulf of Mexico.



D239 optimizes lead slurry rheology as compared to conventional additives.



*Simulations performed with CEMENTICS\* zonal isolation software demonstrate improved mud removal using D239 extender. Slurries made with conventional extenders tend to bypass the spacer, while slurries made with D239 do not (image on the right).*