

LiteCRETE

Low-density slurry system that reduces multiple-stage cement operations

APPLICATIONS

- Cementing across potential lost circulation zones
- Surface, intermediate, and production casing primary cementing jobs
- Production liner cementing with a single low-density slurry
- Whipstock plugs set at lower densities

BENEFITS

- Eliminates two-stage operations
- Achieves production-quality zonal isolation across fractured formations
- Enables longer cement columns without losses from hydrostatic pressures
- Allows safer operations and simpler logistics than foamed cement

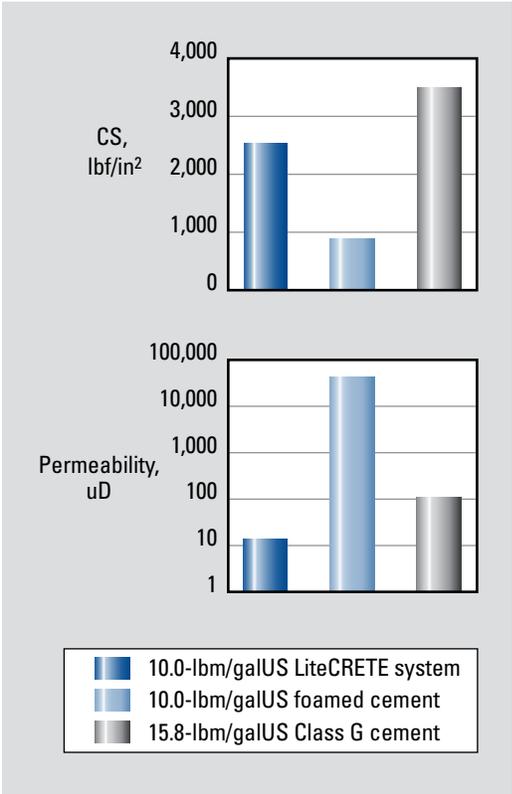
FEATURES

- Low-density slurry with set-cement properties necessary for zonal isolation
- Easier slurry preparation without special equipment or additional personnel
- Superior set-cement properties compared with other lightweight systems at equivalent densities
- Greater solids content, resulting in a set cement highly resistant to aggressive formation fluids



Schlumberger is continuously developing cement systems that provide zonal isolation for the life of the well.

When drilling weak formations, it can be difficult to place sufficient cement behind the casing without extended low-density cement slurries or multiple-stage cementing operations. A simple, low-density slurry can allow deeper casing points or perhaps eliminate the need for a particular casing string. LiteCRETE* technology offers a well construction solution with low permeability and low density. Superior quality cement columns can be pumped higher in the annulus so multiple-stage cementing becomes unnecessary.

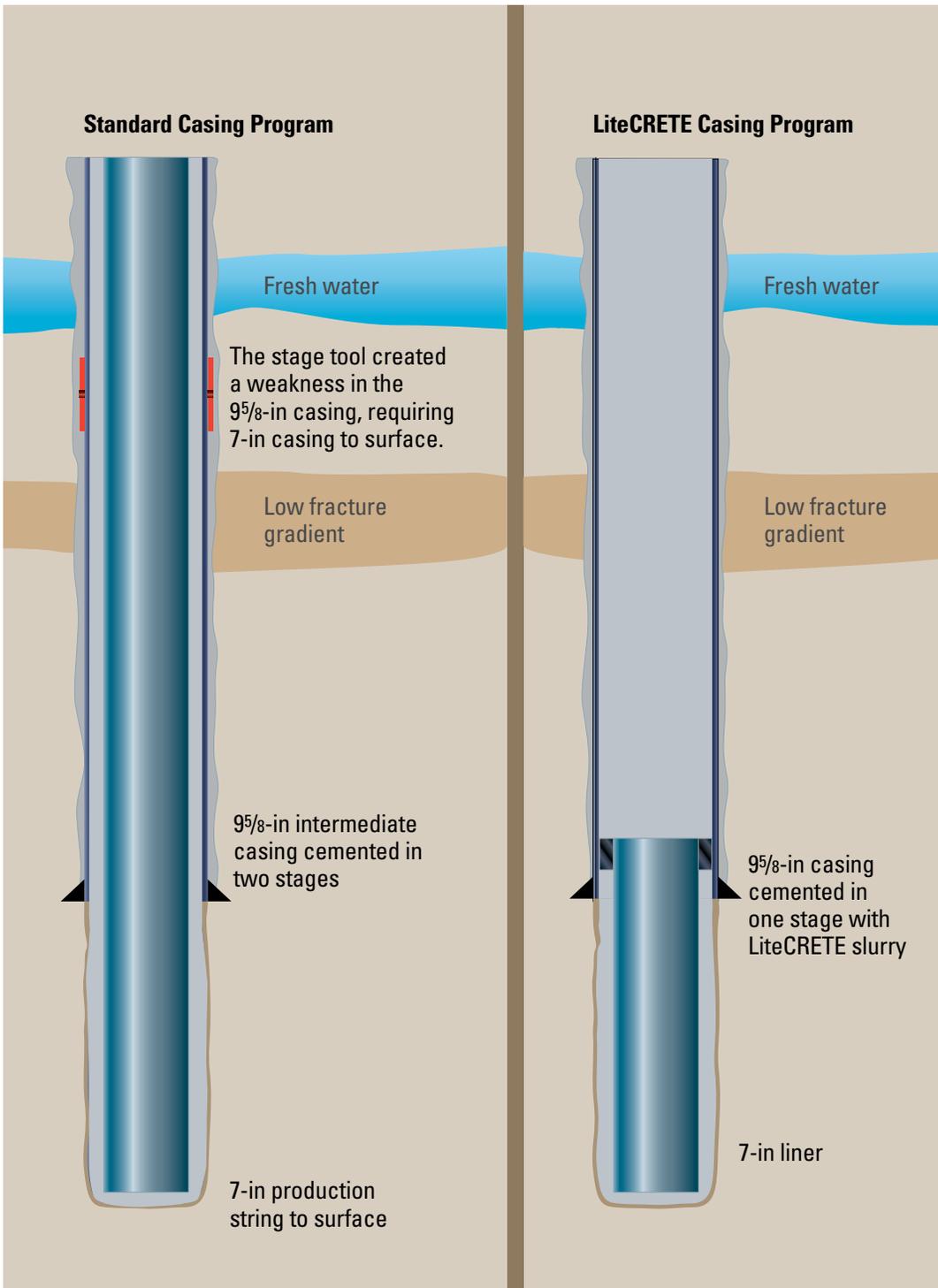


LiteCRETE systems have better performance than conventional lightweight systems at equivalent densities. LiteCRETE technology features lower weight, not lower performance.

HIGH-PERFORMANCE SYSTEM

LiteCRETE slurry technology is a high-performance lightweight system that could redesign your casing program. LiteCRETE technology, a CemCRETE* system, provides production-quality cement properties at extended-slurry densities. LiteCRETE slurries can be mixed from 1,042-kg/m³ to 1,558-kg/m³ [8.7-lbm/galUS to 13-lbm/galUS] density for easy placement across weak zones. Once set, LiteCRETE cement provides compressive strength (CS) and permeability properties superior to other lightweight systems and comparable to normal cements of 1,893-kg/m³ [15.8-lbm/galUS] density. Also, LiteCRETE blends in temperatures above 110 degC [230 degF] may not require additional silica for strength retrogression.

LiteCRETE slurry systems frequently eliminate stage-tool cementing in long intervals and achieve exceptional perforation quality without reducing cement integrity. LiteCRETE systems are strong enough for hydraulic fracturing treatments or setting kickoff plugs.



CASE STUDY—NORTH AFRICA

Critical water zones in a North African field required isolation with an intermediate casing cemented in two stages. The situation increased rig time, cost, and casing operation risks. Because the stage tool created a potential weakness in the intermediate casing string, the production casing ran to the surface to cover the stage tool and protect it from future production operations. A casing program redesign using LiteCRETE technology enabled replacement of the two-stage intermediate casing with a single-stage casing that required one cement slurry. This saved stage-tool running time, reduced rig costs, and eliminated the risk associated with a stage tool. Also, a production liner ran back into the intermediate casing, which saved additional time and expense in well construction.

LiteCRETE technology reduces the need for multiple-stage cementing operations.

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