

# HalKleen™ G Scale Removal Service

## HIGH-PERFORMANCE CALCIUM SULFATE SCALE REMOVAL FOR DOWNHOLE APPLICATIONS

### OVERVIEW

The formation of scale in hydrocarbon producing wells or injection wells can be detrimental to the profitability of the assets, causing a variety of challenges such as damage to downhole and surface equipment, costly workover interventions, formation damage, and/or deferred hydrocarbon production.

HalKleen™ G scale removal service is a fast-acting treatment for the removal of anhydrite, gypsum, and other forms of calcium sulfate (CaSO<sub>4</sub>) from tubing, perforations, and from downhole equipment in the wellbore. The scale dissolver is a liquid solution that facilitates the rapid dissolution and removal of CaSO<sub>4</sub> scale or deposits with a single fluid, eliminating long soak times or extended shut-in periods required by other dissolution treatments.

When spotted at a surface or location affected by CaSO<sub>4</sub> scale, HalKleen G begins working on contact. Total dissolution time of gypsum and anhydrite wellbore scales can be achieved in 60–90 minutes at 200°F (93°C), at ambient pressure and under static conditions (no agitation required).

HalKleen G is non-damaging to the formation or wellbore completion, recommended for use in temperatures up to 380°F (193°C). It requires no additional corrosion protection, and the scale dissolution system helps prevent re-precipitation of calcium, aluminum, and ferric ions in aqueous fluids. HalKleen G scale removal service is applicable for downhole scale removal, including removal from tubing, perforations, and from downhole equipment in the wellbore. Additionally, all the chemicals utilized in HalKleen G are non-damaging to the formation or wellbore completion.

For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)

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### APPLICATIONS

- » Fast acting scale dissolver for anhydrite, gypsum, and other forms of calcium sulfate (CaSO<sub>4</sub>), eliminating long soak times or extended shut-in periods required by other dissolution treatments
- » Applicable for downhole scale removal, including removal from tubing, perforations, and from downhole equipment in the wellbore
- » Compatible with most commonly used elastomers as well as ESP cables

### BENEFITS

- » Eliminates long soak times
- » Very effective in both high and low temperature applications. Fluid stability and efficiency for bottomhole static temperature (BHST) up to 380°F (193°C)
- » Formulated with a low emulsion tendency surfactant for efficient dissolution of oil-wet scale deposits
- » Non-corrosive towards most commonly encountered oilfield metallurgies
- » Non-hazardous products that are very easy to transport, store and handle

