AquaLinear® HT High Temperature Gravel Pack Fluid Service
A Viscosified Fluid System Used for Gelling Water-Based Completion and Treating Fluids

AquaLinear HT service enables a substantial amount of design flexibility for a number of applications including the following:

- Gravel packing.
- Fluid loss control.
- Friction pressure reduction.
- Other applications benefiting from a shear-thinning, low-damage fluid system.

AquaLinear HT fluid properties enable a simple mixing procedure and rapid viscosity development in a number of water-based fluids including:

- Fresh water.
- Potassium chloride brines.
- Sodium chloride brines.
- Sodium bromide brines.

Rheological Properties
AquaLinear HT fluid provides excellent sand or gravel suspension under static conditions at temperatures up to 270°F (132°C). It is a shear thinning fluid that has relatively low viscosity at high shear rates and very high viscosity at low shear rates as shown in Fig. 1.

Because of AquaLinear HT fluid’s very high viscosity under low shear conditions, this service can be designed so the gelled fluid suspends sand similar to a cross-linked gel.

In addition, the high viscosities under low shear attained with these polymer loadings can be used to help control fluid losses during workover and completion operations with reduced damage to the formation.

At lower polymer levels, AquaLinear HT fluid can produce a “slick brine” consistency to help reduce pumping friction pressures.

Field Applications
By using appropriate polymer loadings and fluid volumes, AquaLinear HT service can be used in a wide variety of applications:

- Carrier fluid for Halliburton’s Ex-tension PacSM service.
- Carrier fluid for Halliburton’s concentric annular pack screen system (Shunt tubes alternative path technology).
- Viscosifying agent for completion fluid or brines for fluid loss control.
- Sand washing and coiled tubing cleanout operations.
- Drill-in fluids displacement sweep for openhole horizontal completions.

Returned Permeability
The polymer used in AquaLinear HT fluid is specially treated during its manufacturing process to enable it to yield consistently high returned permeability from treated cores (Fig. 2).

AquaLinear HT Service Can Help Save RigTime
The base polymer can be rapidly dispersed in water without going through a complex mixing protocol or an extended, time-consuming hydration period. Its ease of mixing and rapid hydration apply to seawater and monovalent brines used in completion operations.

![Fig. 1 - Viscosity of 60 lb./Mgal AquaLinear HT fluid in synthetic seawater](image)

![Fig. 2 - Permeability retention of 60 lb./Mgal AquaLinear HT fluid.](image)
For more information on the AquaLinear® HT High Temperature Gravel Pack Fluid Service,
please call your local Halliburton representation or email us at completions@halliburton.com.

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