DeepQuest® HT Fracturing Service for HPHT Reservoirs
Performs at High Temperature and Pressures Without Exceeding the Safety Limits of Surface Equipment

DeepQuest® HT service enables fracture stimulation of high pressure and high temperature reservoirs without exceeding the safety limits of surface treating equipment and wellbore tubulars. The high density fracturing fluid used in the service can help overcome these HPHT stimulation challenges, both onshore and offshore:

- Bottomhole temperatures up to 375°F (191°C).
- Bottomhole treating pressures in excess of 15,000 psi.
- Formation stress gradients above 0.95 psi/ft.
- Limited availability of 20,000 psi fracturing equipment.

The ability of DeepQuest HT service to reduce surface treating pressure can eliminate the Operator’s need and costs for obtaining higher-pressure equipment. Lower surface treating pressures also translate into safer operating conditions.

DeepQuest HT fluid is a delayed crosslinked fracturing fluid with rheology properties comparable to conventional high temperature fracture fluids.

The fluid can be used in wells with bottomhole static temperatures (BHST) of 300°F to 375°F (149°C to 191°C).

For lower temperature wells with BHST of 80°F to 300°F (27°C to 191°F), lower-temperature-range DeepQuest fluid provides excellent performance.

**DeepQuest HT Fluid Properties**

DeepQuest HT service harnesses the power of gravity to reduce the surface treating pressure required to achieve adequate fracturing pressure (Fig. 1). The typical specific gravity for an aqueous frac fluid is 1.00 to 1.04; the specific gravity of DeepQuest HT fluid is 1.14 to 1.50.
Case History

DeepQuest™ HT Service Helps Unlock Hot, Tight Gas Reservoir

Saudi Arabia – DeepQuest HT service was used recently when Saudi Aramco faced a high-pressure and high-temperature (HPHT) stimulation challenge in a new field. – 375°F (191°C) reservoir temperature and more than 15,000 psi required for fracturing. The challenge for Saudi Aramco went beyond this well. Developing an innovative way to frac under these conditions – HPHT tight gas sandstone – was crucial to stimulating and proving the reserves of the tight gas formations in northwestern Saudi Arabia.

The Halliburton Saudi Arabia Production Enhancement team worked with experts in Duncan, Oklahoma, and Houston to develop the DeepQuest HT fluid system to perform under these extreme conditions.

The Saudi Aramco job was performed flawlessly by pumping 16.4 barrels per minute at 21,000-psi bottomhole treating pressure. As specified in the design, Halliburton’s Production Enhancement team pumped 80,000 gallons of the gel system and placed more than 150,000 pounds of proppant.

For more information about how DeepQuest® HT service can add real value in HPHT fracturing treatments, contact your local Halliburton representative or email stimulation@Halliburton.com.

© 2011 Halliburton. All rights reserved. Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.