Sirocco™ Fracturing Service

The latest addition to Halliburton’s high-performance low-polymer fracturing systems performs up to 400˚ F - and it’s salt tolerant.

New Sirocco™ service extends the proven benefits of low polymer fracturing fluid to higher temperature wells with the added benefit of salt compatibility. Sirocco fluid provides the excellent proppant transport capabilities of conventional CMHPG fluid systems but uses less base polymer resulting in much higher regained conductivity.

Sirocco Fluid System Helps Provide Increased Producibility Through Several Important Benefits

• Can be used with 2% KCl water or KCl substitute as the base and does not suffer the almost total viscosity loss exhibited by CMG-based fluid systems.

• Provides very predictable viscosity and fluid efficiency. Sirocco fluid tends not to “thermally thin” as quickly as other widely-used fracturing fluids. Sirocco fluid can be customized to provide the optimum break based on reservoir requirements.

• Provides increased regained conductivity for improved production. Up to 80% reduction in fluid insolubles compared to conventional fluid systems. Polymer loading can be varied throughout a treatment to maximize regained conductivity.

• Integrated into Halliburton’s state-of-the-art stimulation software to enable tailored treatment designs. Temperature prediction model enables real-time, on-location, on-the-fly modifications.

• Provides excellent proppant transport throughout the treatment, resulting in improved effective fracture length.

• Precise viscosity control enabled by Halliburton’s patented ViCon™ NF breaker technology.

Notice from this graph that Sirocco fluid with significantly lower polymer loading provides similar or improved long-term viscosity versus temperature as the CMHPG fluid system. Both fluid systems have identical stabilizer and breaker packages.
Compared to CMG crosslinked fluids, Sirocco fluid exhibits superior viscosity with high proppant loadings, even at extended times. This fluid property is important for extended pump times with exposure to high formation temperatures.

Compared to CMG, Sirocco service provided 17.6% additional regained conductivity.

This temperature profile shows the treatment fluid achieving BHST of as high as 369°F in the lead fluid; however, the fluid profiles indicate rapid cooling at the end of the treatment with the proppant-laden fluids cooled to as low as 117°F at the near wellbore vicinity. In the model for this treatment, colors represent temperature ranges: red - 337 to 369°F, yellow - 306 to 337°F, green -243 to 274°F, and blue - 117 to 148°F. Temperature profiles greatly affect breaker and gel stabilizer designs. Halliburton has integrated proprietary FracproPT® capability into Sirocco service to enable real-time treatment optimization.

*Mark of Pinnacle Technologies, Inc.

For more information about how Sirocco fracturing service can help improve your profitability, contact your local Halliburton representative or e-mail stimulation@Halliburton.com.