TBlockSure® System Achieves 1,000 psi Diversion, Enables Frac-Plug-Free Stimulation



The graphs at left illustrate the pressure increase and diversion once the TBlockSure system was in place. At right is a side-by-side map view of the near-wellbore tomographic fracture image for a plugand-perf well and a well treated with the TBlockSure system.

Objectives

 Replace mechanical isolation devices (frac plugs) on a per-stage basis with a temporary zonal isolation system that can withstand stimulation pressures.

Our Approach

- Weatherford deployed the TBlockSure system to replace standard bridge plugs. The system, which enabled a stage-by-stage completion plan, serves as a temporary diverting and zonal isolation system for stimulation or workover applications.
- The TBlockSure system was deployed downhole and achieved a 1,000-psi (6.9-Mpa) pressure increase. The system created a degradable, solid-particle diverting agent that enabled normal stimulation.

Value to Client

- The TBlockSure system achieved the desired diversion pressure of 1,000-psi (6.9-Mpa), sealed zones that had been previously treated, and initiated the breakdown of virgin perforation clusters.
- The team used the TBlockSure system in 2 wells for a total of 28 stages without the use of bridge plugs. Each frac stage included the desired 54 perforations.
- The use of degradable diverters required minimal workover and intervention operations, and negated the need for drilling out plugs with a coiled-tubing unit.

LOCATION Pennsylvania, USA

WELL TYPE Horizontal fracture

FORMATION Marcellus Shale

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NUMBER OF WELLS

WELL DEPTHS 8,500 to 9,000 ft (2,591 to 2,743 m)

WELL TEMPERATURES 150 to 155°F (66 to 68°C)

FRAC STAGES

PERFORATIONS PER STAGE 54

PRODUCTS/SERVICES TBlockSure System

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