TBlockSure® Diverter Agent Revives Abandoned Gas Well in Multistage Fracturing Operation to Stabilize Production at 7 MMSCF/D

Objectives

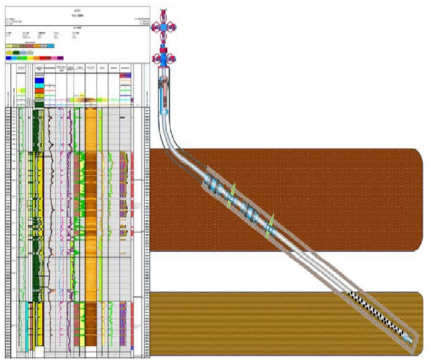
- Revive production by fracturing missed or nonactivated zones in an abandoned deviated gas well. Original stimulation attained an initial production rate of 14.1 MMSCF/D that declined to 3.17 MMSCF/D, which led the operator to abandon the well with barite in the production tubing.

Our Approach

- Weatherford completions experts met with the operator for a pre-job analysis. Production logs revealed three intervals that would benefit from refracturing: two of which were completed using liner with multistage fracturing (MSF) ports, while the other had been completed with a perforated slotted liner. The Weatherford team proposed pumping TBlockSure degradable flow diverter as an alternative to mechanical isolation systems. This solution directs stimulation fluids away from effectively fractured zones to focus the treatment on unfractured intervals. Further, because the diverter system is completely dissolved and removed during drawdown, the process takes substantially less time than ball-drop methods
- Weatherford fracturing fluid experts conducted laboratory tests to measure the diverter polymer dissolution time in frac fluid and to evaluate optimal diverter and carrier fluid types. They also performed laboratory simulations to establish the optimal fluid concentration, particle ratio, and injection rate.
- A Weatherford crew deployed to the wellsite and successfully pumped the flow diverter and proppant in three stages.
- Following a wellbore cleanout, production logging tool (PLT) analysis confirmed the creation of new fractures in the targeted zones. Production results revealed that well flow rate doubled the previous rate..

Value to Customer

- The Weatherford TBlockSure diverter revived a previously abandoned gas well. PLT logs indicated new fractures within the targeted zones, and yielded an 12.3 MMSCF/D, which stabilized at 7.06 MMSCF/D after four months of production.



Logs indicated three perspective intervals for refracturing within two pay zones.

LOCATION
Purovsky district, Yamalo-Nenets Autonomous Okrug, Russia

FORMATION
Lower Cretaceous Achimov sandstones and siltstones

WELL TYPE
Onshore gas producer

DOWNHOLE TEMPERATURE
230°F (110°C)

MAXIMUM DEVIATION
89.1°

LINER SIZE
4.5-in.

TREATMENT DEPTH - FRAC SLEEVES
14,009 to 14,012 ft (4,270 to 4,270.8 m)
14,273 to 14,726 ft (4,487.7 to 4,488.5 m)

TREATMENT DEPTH - SLOTTED LINER
15,617 to 16,421 ft (4,760 TO 5,005 m)

PRODUCTS/SERVICES
- Pressure pumping services
- TBlockSure diverter system

Weatherford®

