



CASE STUDY: After pumping an 8-bbl pill, losses stopped completely, saving operator over \$400,000

Completion Fluids—Lost Circulation Materials

BaraGel™ W-602 Cross-Linked Gel System Delivers Deepwater Success in Gulf of Mexico

Location: Mississippi Canyon, Gulf of Mexico

Operator’s Challenge

On a deepwater job in the Gulf of Mexico’s Mississippi Canyon, the operator knew that, in the design and planning stage, lost circulation material (LCM) would be needed if the completion tool’s mechanical fluid-loss device failed. The LCM would need to minimize formation damage, control fluid loss, and not interfere with the completion tool.

Halliburton’s Solution

The Baroid team worked with the operator to understand the LCM requirements. The team initiated testing for both the Baroid BaraGel™ W-602 cross-linked, solids-free polymer and a traditional solids-laden carbonate LCM.

The new cross-linked gel system can be used to control fluid losses and to suspend fluid leak-off to perforations during completion and workover operations. The high viscosity of the gel controls losses without the addition of solids, thus protecting the formation from fluid invasion. When operations are completed, the gel is easily dispersed with acid.

For the Mississippi Canyon well, testing included return permeability, fluid-loss control, and LCM acid solubility. Results showed that the BaraGel W-602 system cleaned up without using acid and returned more than 50% permeability.

In the completion phase, the well’s perforated zone from 23,600 ft to 23,725 ft (7,193 m to 7,231 m) showed initial fluid losses in the range of 13 bph. At this point, the decision was made to mix and pump the BaraGel system pill.

The Baroid team pumped an 8-bbl pill, and the fluid losses were stopped completely.

Economic Value Created

This single application saved the operator valuable rig time, and limited the loss of completion fluid. The savings totaled \$350,000 in rig time and \$122,000 in fluid costs. The operator plans to continue the practice on subsequent deepwater projects.

CHALLENGE	SOLUTION	RESULT
The operator needed an effective LCM that would minimize formation damage and not interfere with the completion tool.	An 8-bbl pill of Baroid BaraGel™ W-602 cross-linked, solids-free polymer was spotted in the perforated zone.	The initial 13-bph loss rate dropped to zero, saving \$350,000 in rig time and \$122,000 in fluid costs.

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Solving challenges.™

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