



Legion-LCM

Legion-LCM improved cement to surface rate from 50% to 100%

Overview

Deep surface cement jobs in the Bakken were experiencing severe lost circulation issues and achieving cement to surface roughly only 50% of the time. Replacing a competitive LCM with Legion-LCM increased the success rate to 100%. The success rates were measured over multiple pads with little to no other changes to the cement job design other than the LCM.

Solution

Riteks' Legion-LCM was selected to replace the current LCM to improve the success rate of cement to surface. Legion-LCM is an efficient multi-modal lost circulation material capable of bridging and sealing. Its 'all-in-one' concept improves operational efficiency and its efficiency as an LCM provides greater success even at lower concentrations than other LCMs.

Problem/Challenge

An operator in the Bakken was experiencing severe lost circulation issues on their deep surface cement jobs. Despite using a high concentration of LCM, the lost circulation issues persisted and often led to unsuccessfully returning cement to surface, resulting in low Tops of Cement and requiring remedial or topout cementing. Lowering ECDs and increasing cement excess helped but increased costs and still was not 100% successful.

Result

Replacing the current LCM with 4 ppb of Legion-LCM in the lead cement improved the success rate of cement to surface from 50% to 100% for multiple pads. The consistent 100% success rate allowed a lower cement excess on future jobs, and eliminated NPT and remedial/topout cement jobs related to the low tops of cement, drastically reducing operator costs.



Picture of Dry Legion-LCM

Loss Type	Seepage	Partial	Severe
Slot Size Association	0.5 mm	1 mm	3 mm
Legion Concentration Required to Plug Slot*	1 lb/bbl	3 lb/bbl	12 lb/bbl

*with Riteks Sealing Spacer



Picture of Legion-LCM bridging and sealing a 3mm slot

Scan to Request a Sample

