

CHALLENGE

Expected well conditions anticipated the need for high concentration LCM to heal the hole without plugging the MWD or making a trip to lay down the directional tools.

SOLUTION

- Utilize EvoOne's pulser anti-jam technology including its robust carbide rotor/stator and high torque 50:1 ratio drive line.
- EvoOne comes with eight mud pulse configurations to choose from to fit the downhole situation.

OUTCOME

1. EvoOne pulser successfully handled a 80 pounds per barrel sweep of LCM.
2. Pulser telemetry continued to decode as expected to TD at 21448ft.

Difficult Drilling Conditions

The regular sweeps consisted of 30 pounds per barrel cotton seed hulls pumped at 700 gallons per minute and the high concentration LCM used consisted of a 80 pound per barrel sweep pumped at 200 gallons per minute. The EvoOne pulser handled the high concentration LCM without packing off or excessive jamming. In addition to the aggressive LCM used the BHA also had dual agitators in the string which can be difficult to decode due to attenuated mud pulses.

EvoOne Mud Pulse Versatility

The ability of EvoOne to load 8 different EM configurations as well as 8 different mud pulse configurations allows the user to downlink to the tool to choose the configurations as needed. Depending on the situation the user can slow down or speed up the mud pulse telemetry. On this well the client started in 0.5 second pulse width at 1.09bps but later switched to a slower configuration, 0.75 second pulse width at 0.73bps to improve decoding after the agitators were added.

nLight™ Post Run Display

Below we see EvoOne's post run software display of the loss circulation event in the strip log format.

