TECH REPORT

BELMONT COUNTY, OHIO

ONSHORE

Background

During well construction, ultrafine metallic debris in the mud system can bypass surface magnets, pass through shaker screens, and contaminate the active mud system. If this occurs, it can cause rotary steerable issues, BHA component wear, and bit dulling. This was a significant problem for an operator in North America. Schlumberger suggested using two MAGNOGARD* openhole magnets as part of the BHA to capture this ferrous debris. The operator used this approach in two separate wells.

Technology

- MAGNOGARD openhole magnet

MI SWACO
A Schlumberger Company

MAGNOGARD Magnet Removes Average of 68.2 lbm of Ferrous Debris from Wellbore

Openhole magnet attached to BHA removes 63% and 80% of total collected ferrous debris from two wells

The MAGNOGARD magnets recovered an average of 68.2 lbm [30.9 kg] of debris. Compared with the surface magnet, which recovered an average of 28.87 lbm [13.1 kg] of debris, the downhole magnets were able to collect 63% and 80% of total ferrous debris recovered between two runs. Capturing this amount downhole prevented the debris from being reduced to an ultrafine particle size due to the string rotation.

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