METAL MUNCHER AMT performed washover test, reduced rig time by 92%

An overseas customer requested Baker Hughes, a GE company (BHGE), conduct a test to prove a 9 5/8-in. GT LOK-SET™ retrievable bridge plug could be washed over as a last resort retrieval method in a remedial well application.

A similar operation had been performed earlier in the same region for a 10 7/8-in. GT LOK-SET retrievable bridge plug that was stuck in hole and required being washed over to retrieve. That operation took 196 hours and five washover shoes to complete the job.

Because of recent new developments in milling technology, BHGE recommended running a washover shoe dressed with a combination of several METAL MUNCHER™ advanced milling technology (AMT) carbide cutting and milling structures, including Glyphaloy™ dressing. METAL MUNCHER cutters are extremely durable and greatly reduce milling time even through the most abrasive materials.

BHGE ran multiple tests at the Bossier City, Louisiana, test rig for the customer and proved conclusively that with the appropriate cutting structures and dressing, the BHGE 9 5/8-in. GT LOK-SET retrievable bridge plug could be washed over with one rotary shoe in 15.58 hours. Compared to the previous operation, rig time was cut by 92%.

Challenges
- Remedial well application
- Customer requested test to see if the Baker Hughes GT LOK-SET plug could be washed over to be removed from wellbore

Results
- Reduced rig time by 92%
- Saved equipment cost by using one washover shoe instead of five for the same operation
Glyphaloy-dressed rotary shoe washed over the GT LOK-SET plug in 15.58 hours

Grade 3 Glyphaloy cutters on face of shoe with G-3 cutter inserts as leading edge