Coring systems achieved record slimhole continuous core run, saved 5 days

A major operator in British Columbia, Canada, needed a solution to efficiently core multiple areas of the Montney formation. The original design from the operator was to acquire 5 to 6 short core intervals over the entire 350-m (1,148-ft) Montney section with drilling in between each interval. After conducting a needs assessment, however, Baker Hughes, a GE company (BHGE), proposed a different plan.

The BHGE coring experts determined the entire section could be cored efficiently and effectively using the HT Series™ core barrel system and premium Talon™ Force high-velocity PDC drill bits. The optimized coring assembly used the high-torque core barrels, enabling longer assembly without the risk of tool failure. The Talon core drill bits featured optimized blade design for stability and dual chamfer cutter technology for overall durability.

The objective was to attempt three core runs using a 126-m (413-ft) assembly.

BHGE has recently achieved a high level of success with longer core assemblies. The company holds the current record for the longest continuous core run with a 216-m (708-ft) core in a larger hole size. The record in Canada for longest continuous core run in slimhole 171 mm (6.75 in.) or smaller, was previously 117 m (383 ft), also held by BHGE. The BHGE team conducted the coring operation with precision and encountered no issues. A total of 355 m (1,164 ft) of core was cut over the course of four runs with 100% core recovery. With the first core run, BHGE cut 126 m (413 ft), breaking their own record for the longest continuous slimhole core in a Canadian well.

Overall, the four core runs were completed safely, with zero health, safety, and environmental issues. By deploying the HT Series system coupled with the Talon Force PDC drill bits, BHGE reduced rig time by five days over the previous deployment with the customer, saving approximately $250,000 USD.

Challenges
- Reduce rig time involved in coring operations
- Core the entire 350 m (1,148-ft) section of the Montney interval efficiently
- Ensure bit durability to cut multiple formations without premature wear

Results
- Reduced rig time by 5 days over previous deployment for customer
- Cut 355 m (1,164 ft) of core in 4 runs overall with 100% core recovery
- Core Run #1 cut 126 m (420 ft) of core
- Core #2 Cut 126 m (420 ft) of core for second run