

Expro Excellence

Streamlining wellbore clean-up with travel joint technology

Coretrax | ORIGIN



Objectives and background

- Although the single-trip concept is highly attractive, combining all critical operations poses significant limitations. Key tasks - including drilling out cement and float equipment inside a 4½" liner, polishing a 15,000 psi-rated PBR, conducting an inflow test, and verifying lower completion integrity - require precise tool positioning and distinct landing points.
- These operations are inherently incompatible in one continuous deployment, making it essential to strike a balance between minimizing trips and ensuring technical integrity and functionality

Expro Excellence

- Travel joint technology was introduced as a first-of-its-kind solution to eliminate the conventional three-trip WBCU process. The system integrates the drilling bit, completion polish mill, and inflow test packer (liner top test tool) into a single run while navigating the need to land at two distinct points within the well
- The travel joint is pinned with shear pins in the extended position, giving a positive indication when the tool is functioned
- At the first landing point, weight is applied until the shear pins break at the predetermined value
- After shearing, the upper string can be lowered to tag the second target and set the liner top test tool
- This design allows two distinct operations - clean-up and inflow testing - to be performed in one trip without conflict, reducing both time and complexity

Value to the client

- The integrated assembly successfully combined completion polish mill accessories, WBCU tools, and an inflow test packer with a 3 5/8" bit into one optimized run. This enabled the operator to:
 - Successfully drilled to 126ft of hard cement and float equipment inside the 4½" liner under controlled parameters
 - Land accurately at two different points
 - Conduct negative and positive inflow tests
 - Polish the 15,000 psi-rated PBR in a single trip

Time Efficiency:

- Achieved consolidation of the conventional two-trip system into a single optimized run, saving time and reducing logistical complexity
- Conventional method: 3 separate trips × 36 - 45 hours each = ~108 hours
- Travel joint method: Single optimized trip = ~40 hours
- The travel joint reduced completion time by more than 60%, eliminated logistical complexities, and lowered exposure to operational risks. This successful deployment demonstrates the travel joint's effectiveness in streamlining complex completion operations while preserving technical integrity
- Due to the mechanical nature and positive indications of landing on the liner tops, the client has confirmation of the actual liner tops depths

Cost saving



Integrated approach

