



Superior Dual Casing Milling Performance Achieved Across Multiple Wells in the UAE, Reducing Well Abandonment Costs

Wellbore Integrity Solutions (WIS) utilized ProMILL Duo Technology to enhance performance, minimizing trips for 150 ft windows across multiple wells.



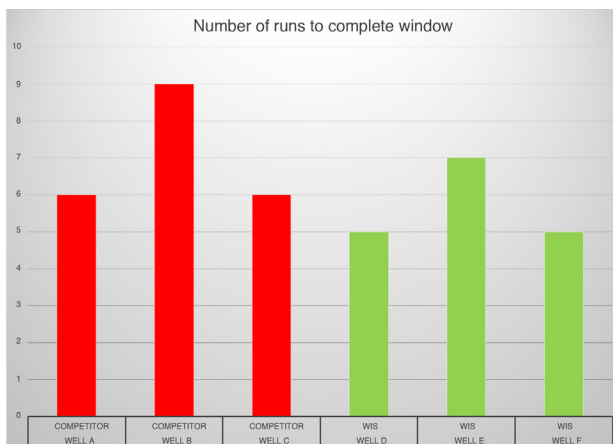
Optimizing Performance in Plug & Abandonment: Efficient Dual Casing Section Milling

Dual casing section milling is often perceived as unpredictable, with a high risk of exceeding planned operational schedules. However, through meticulous planning and optimized job design, WIS has demonstrated the ability to achieve operational targets with fewer trips compared to conventional market alternatives.

Key milestones contributing to this success include:

- **ProMILL* One-Trip Section Milling and Underreaming** BHA deployment eliminated the need for a separate run to scrape the outer casing after milling the inner casing. This enabled the completion of 9⁵/₈ inch casing milling and 13³/₈ inch ID scraping in just two runs across all three wells in the campaign.
- **TruEDGE* Insert Technology** for inner casing milling allowed for continuous 170 ft milling runs to total depth (TD), eliminating the need for unplanned additional runs.
- **ProMILL Duo* Technology** for outer casing milling minimized the number of required runs by utilizing mill-ahead knives from the first run, removing the need for dedicated cut-out runs typically required by other technologies.

This streamlined approach significantly reduced rig time and enhanced operational efficiency in plug and abandonment operations.



CHALLENGE

Mill a 150 foot window through 9⁵/₈ inch inner casing and 13³/₈ inch outer casing to prepare for setting a rock-to-rock abandonment plug.

SOLUTION

A four-step strategy utilizing ProMILL* technology was designed as follows:

- Perform a dedicated trip to cut the inner casing using the 8200 K-Mill.
- Deploy the 8000 ProMILL system to section mill the inner casing and scrape the outer casing ID in a single trip.
- Use 8000 ProMILL Duo* BHAs to mill the outer casing.
- Deploy the standalone ProMILL HRU to enlarge the formation behind the casing up to 17¹/₂ inch.

RESULTS

- Successfully deployed the ProMILL section milling and scraping BHA, eliminating the need for dedicated scraping runs.
- Successfully deployed the ProMILL Duo to mill the outer casing, achieving a 150 ft window in just two runs for two out of three jobs.
- Wells were successfully abandoned by the customer after completing the final underreaming operations.



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