CASE STUDY

Wellbore Integrity SOLUTIONS

North Sea

ProLATCH™: Redefining Multi-String Casing Cutting with a Quad-String Cut in Under 5 Hours

Data-driven advancements in multi-string cutting, eliminates pre-milling and significantly reduces rig time for a major North Sea P&A campaign

Wellbore Integrity Solutions (WIS) delivered a disciplined, data driven enhancement program that transformed our multi-string conductor cutting methodology—reducing rig time, improving cut quality, and increasing operational efficiency.

During a large-scale, platform-based plug and abandonment (P&A) campaign, the WIS UK team supported a major North Sea operator in overcoming a key challenge: completing a single run severance of four casing strings—9⅝-inch production casing, 13⅜-inch intermediate casing, 20-inch casing, and the 30-inch conductor. Traditionally, operators would mill a window in the 9⅝-inch casing before performing a triple string cut, adding time, complexity, and operational risk.

Applying a continuous improvement approach, WIS engineered a second generation TruEdge™ insert knife design, building on the proven performance of WIS mechanical pipe cutters. This enhanced design eliminated the need for pre-milling and enabled a reliable quad string cut with reduced cutting time.

The cutting assembly was deployed with the ProLATCH™ casing retrieval system, enabling controlled surface applied tension and drillstring rotation. The 9⅝-inch casing was pulled free during the cut and secured away from the cutting interface. The remaining 13⅜-inch, 20-inch, and 30-inch casings were then successfully cut in a combined quad-string operation lasting 4 hours and 35 minutes.

The operation concluded with the successful recovery of the 9⅝-inch casing and confirmation that the remaining strings were free for retrieval. Final recovery was performed using a boring and pinning methodology to maintain safe, controlled operations.

This campaign highlights WIS's commitment to challenging conventional P&A methodologies and delivering innovative cutting technologies that enhance efficiency and performance in complex multi-string abandonment environments.

CHALLENGE

- Required to sever four casing strings in a single operation (9⅝", 13⅜", 20", and 30")
- Traditional method required milling a window in the 9⅝" casing, adding time, complexity, and operational risk

SOLUTION

- Implemented a data-driven continuous improvement program to refine WIS multi-string cutting methodology
- Developed a second generation TruEdge knife enabling quad-string cutting without pre milling
- Deployed the enhanced cutter with the ProLATCH casing retrieval system for controlled tension and rotation

RESULT

- Achieved a quad string cut in under 5 hours
- Successfully confirmed all remaining casing strings were free for retrieval
- Completed recovery using a safe boring and pinning process
- Delivered a step-change in multi-string cutting efficiency, reducing rig time and improving overall reliability

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