Wellbore Integrity SOLUTIONS

ProMILL Duo* Delivers Record Savings in a Brunei Well Abandonment Application

A permanent well barrier across 7 inch x 9⅝ inch x 13⅜ inch casing was accomplished in record time for the customer, saving $2.5MM and 17 days of rig time.

CHALLENGE

The customer required a 22m long permanent well barrier across three string of casings, 7 inch, 9⅝ inch and 13⅜ inch. Multiple casing centralizers were also present that required to be milled. Maintaining the integrity of the outer 13⅜ inch casing, was also of paramount importance to ensure the integrity of the well barrier.

SOLUTION

WIS recommended and deployed a selection of well abandonment technologies to deliver the solution. This included the 6000 series ProMill Duo to mill 9⅝ inch inside 13⅜ inch. Special ProMill Duo arm sets were utilized to ensure that the ID of the 13⅜ inch casing was free from damage. A new configuration of ProMILL underreamer arm was also utilized to effectively clean cement inside the 13⅜ inch casing.

RESULT

- A successful project execution that saved 17 days of rig time and a cost saving of $2.5MM for the customer.
- Multiple technologies functioned as intended, including the ProMILL Duo, the unique milling structures, the new arm profiles to protect the outer casing ID and the new ProMILL underreamer clean out arms.

ProMILL Duo technology continues to deliver operational success globally.

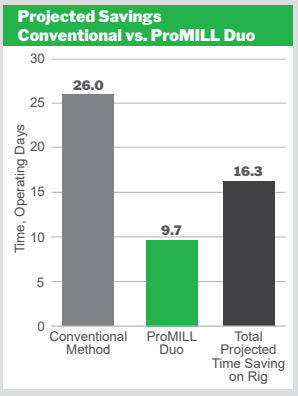
In this example from Brunei, the challenge was to provide a well barrier across three strings of casings without compromising the integrity of the outer casing. This was a deviated well application that also included multiple casing centralizers that had to be milled.

This project was successfully achieved in a record time with proper planning, selection and utilization of WIS technologies.

Highlights:

- The inner, 7 inch 29ppf casing was milled successfully with WIS section milling technology.
- The ProMILL Duo was then deployed to drift through the 7 inch casing and mill the 9⅝ inch, 47lbs/ft casing. A new arm configuration was used to ensure that the outer, 13⅜ inch casing was not damaged.
- The 13⅜ inch casing ID was cleaned out with a new design of arms for the ProMILL Underreamer to assist in the assurance of a high quality cement barrier.

The combination of the robust ProMILL Duo system and experienced WIS Field Personnel resulted a successful project, completed in record time.



Left: Section Mill 5500 Series
Left Center: ProMILL Underreamer 12.191 inch OD post run
Right Center: ProMILL Duo 6000 Series prior to running in hole
Right: Time saving ProMILL Duo comparison vs. conventional method