

ProMILL Duo* Section Milling Expands Window Length in East Malaysia

P&A operation using 9⁵/₈ in x 13³/₈ in ProMILL Duo system achieves 178ft long window

CHALLENGE

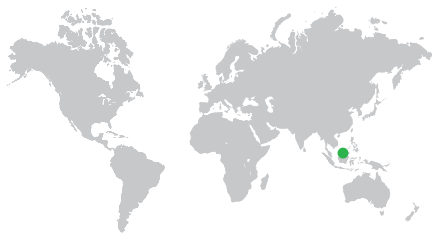
- Efficiently section mill a 235 ft long window in 9⁵/₈ in inner casing and 178 ft long window in 13³/₈ in outer casing
- Achieve 164 ft long final cement plug
- Optimize swarf handling on surface

SOLUTION

- Utilize 8000 series ProMILL Duo to drift through 9⁵/₈ in casing and mill 13³/₈ casing
- Eliminate rig time required to mill entire 9⁵/₈ in casing string
- Utilize WavEdge insert technology on the section mill knives for increased durability and performance
- Use of surface swarf handling services to efficiently and safely handle the swarf

RESULT

- Successful 9⁵/₈ in cut out and window completion inside 13³/₈ in outer casing
- Successful 13³/₈” window completion length of 178 ft
- Underream to 20 in diameter for rock-to-rock interface
- Competent annulus barrier installation



Well Abandonment in challenging conditions in East Malaysia

A customer in Malaysia was planning a P&A operation which involved the requirement to section mill the 9⁵/₈ in x 13³/₈ in dual casing in order to place a cement plug within virgin formation for a permanent rock-to-rock well abandonment barrier. This operation was required after unsuccessful PWC operations. Minimizing trips and optimizing BHAs and technology selection were primary concerns for the client.

Using integrated solutions and new technologies

Wellbore Integrity Solutions focused on the best solution for the client to achieve the desired result in a cost effective and time sensitive fashion. The 8000 series ProMILL Duo system was used to drift through the 9⁵/₈ in inner casing and expand to mill the 13³/₈ in outer casing. This eliminated all rig time to cut and remove 9⁵/₈ in casing to the top of cement and all rig time associated with casing milling the entire 9⁵/₈ in casing cemented to the surface. A competent annulus barrier was successfully achieved.

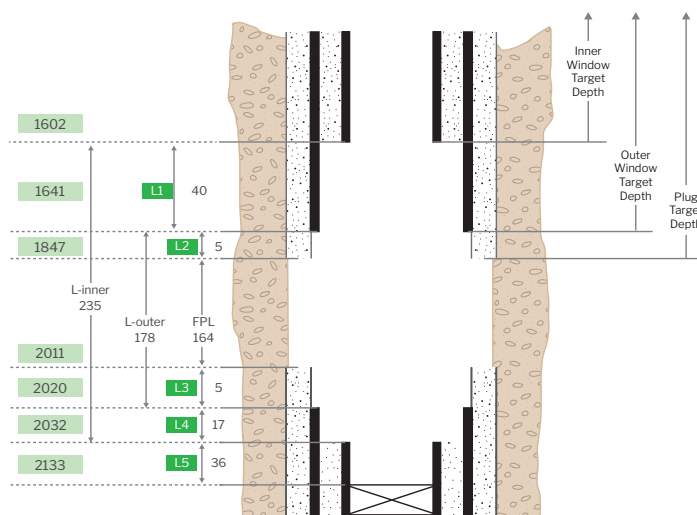
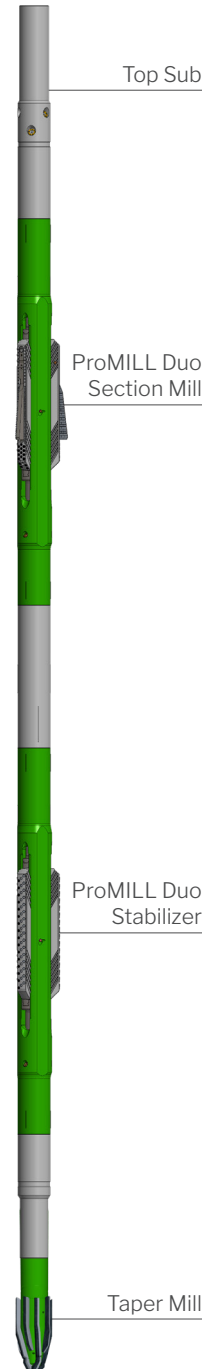


Figure 1: Final window plan of well



*Mark of Wellbore Integrity Solutions. Other company, product, and service names are the properties of their respective owners. Copyright © 2020 Wellbore Integrity Solutions. All rights reserved. WIS-FS-MKT-060_rev2