

Firma™ Solution Provides Permanent Abandonment for 32 Wells, Finishes 150 Days Early



Weatherford used a number of customized and proprietary tools, including the M.O.S.T. Plus tool, to safely abandon 32 North Sea wells.

Objectives

- Permanently abandon a series of 32 subsea wells within budget, time, and regulatory constraints. Where necessary, use section milling—an operation rarely performed from a semisubmersible rig—to provide a basis for a rock-to-rock barrier and long-term well integrity.

Our Approach

- As part of a Firma abandonment solution, Weatherford began with a 2-month planning phase that created a detailed execution and contingency plan for each well. A team of experienced offshore fishing supervisors deployed to the semisubmersible rig and were supported by an onshore support team. The teams customized a section milling program for the rig, and tools were manufactured specifically for the job to ensure that all equipment was on hand to fulfil the needs of the project.
- Abandonment operations started in March 2012. A typical well in the campaign involved section milling 9 5/8-in. casing, then cutting and pulling the 10 3/4- and 13 3/8-in. casing, and finally using the M.O.S.T. Plus mechanical outside-latch, single-trip tool to cut and pull the 20- and 30-in. casing and to retrieve the wellhead.
- Abandonment operations ended in June 2015. Despite numerous challenges—including the age of the wells and the fact that each well presented unique challenges—the wells were safely and efficiently abandoned due to continual process optimization and applying lessons learned from previous wells. In total, 21 of 32 wells required section milling, all of which was completed without any rig downtime.

Value to Customer

- The Weatherford Firma solution provided a permanent and safe abandonment operation for all 32 wells within regulation and with no lost time. Despite the challenging parameters of the project, the operation finished 150 days ahead of schedule.

LOCATION

North Sea, United Kingdom

RIG TYPE

Semisubmersible

PROJECT SCOPE

32 wells

AVERAGE WATER DEPTH

459 ft (140 m)

CASING SIZE (SECTION MILLING)

9-5/8 in., 47 to 53.5 lb/ft

PRODUCTS/SERVICES

- Firma abandonment and slot recovery solutions
- Fishing and re-entry services
- Section milling services
- M.O.S.T. Plus tool
- Wellbore cleaning services

