

Integrated Subsea Completion, Wellbore Cleanup Solution In the UK North Sea Executed Flawlessly, Reduces CO₂ by 75%

Objectives

- Design a comprehensive upper and lower completion solution that enables multistage frac completion and supports carbon dioxide (CO₂) emissions reduction. CO₂ was critical to securing regulatory approval. When the operator initially proposed a plug-and-perf solution, the regulator raised concerns about the environmental impact and completion integrity, resulting in significant pushback.
- Address these concerns while meeting technical, operational, and licensing timeline requirements.

Our Approach

- Although Weatherford has an extensive product portfolio for unconventional gas plays, the operator required a solution that enabled selective multistage stimulation, capable of being deployed via coiled tubing and/or drillpipe.
- Weatherford took the lead in conceptualizing, designing, and executing a fully integrated upper and lower completion system. This included all necessary ancillary services to ensure seamless deployment and operational efficiency.
- From the outset, Weatherford specialists worked closely with the operator and a third-party oilfield services provider to align technical objectives and mitigate identified risks.
- Weatherford coordinated all aspects of the deployment, including tool selection, contingency planning, chemical injection, and downhole monitoring integration, delivering a cohesive solution tailored to the well's unique technical and regulatory requirements.
- Key to meeting the operator's goal was the Weatherford ability to bring together disparate technologies and services into a single, unified completion offering that addressed the regulators concerns and was executed flawlessly within the licensing window.

Value to Customer

- The use of the integrated multistage frac tool significantly reduced operational time compared to a traditional plug-and-perf approach. This efficiency translated to a 75% reduction in CO₂ emissions during the completion phase, aligning with the operator's environmental objectives and regulatory expectations.
- The operator recognized the value of the seamless collaboration between Weatherford and a third-party oilfield service company, citing it as a key differentiator.
- Early engagement with the operator made it clear that a single-source completion award was their preferred strategy and Weatherford delivered on that expectation through comprehensive project ownership and execution.



Weatherford provides field-proven, reliable hydraulic-set and mechanical liner hangers with superb run-in features including large bypass area and high load capacity as well as rotating capabilities that enhances zonal isolation during primary cementing jobs.

LOCATION

United Kingdom

WELL TYPE

Openhole, multistage stimulated

FORMATION

Sandstone

HOLE SIZE AND ANGLE

6 in., horizontal

CASING SIZE AND TYPE

9-5/8 in., 53#

LINER SIZE AND TYPE

7 in., 29# x 4-1/2 in.
Weatherford frac liner

DEPTH

15,055 ft (4,589 m)

PRODUCTS/SERVICES

- Wellbore cleanup
- Liner hanger
- Chemical injection
- Electrical downhole monitoring
- Cementing accessories
- Weatherford completion equipment

