



Driving Operational Efficiency and Safety in Subsea Well Access Operations

This case study details the successful deployment of 4Subsea's Electro-Hydraulic Distribution Module (EHDM) for a prominent international Oil & Gas operator. The EHDM enabled the client to achieve a more streamlined and integrated subsea control system for their multi-vendor XT assets for a safer, more efficient installation and workover process.

Through the provision of a complete subsea control package, including all topside and subsea equipment, 4Subsea allowed the client to manage critical components like the Electro-Hydraulic Control Module (EHDM), Tree Running Tool (TRT), and Subsea Xmas Tree (XT) from the customer's rig on the Norwegian Continental Shelf.

THE QUICK OVERVIEW

WHO: International Oil & Gas Operator

WHAT: Supplied a complete Electro-Hydraulic Distribution Module (EHDM) package to integrate and control multiple XT vendor systems, allowing for efficient installation and workover of subsea assets.

WHERE: The Norwegian Continental Shelf (NCS)

HOW: Implemented a unified control system with all necessary topside and subsea equipment, enabling smooth, consistent operations across multiple XT assets, while reducing footprint, weight, and red zone risks.

WHY: To improve operational safety and efficiency by replacing the traditional Workover Control System (WOCS & IWOCs).

CLIENT OVERVIEW

The client, a key player in the oil and gas sector, continually seeks to improve operational efficiency while prioritising safety. In this partnership, the client was driven to find a solution that could integrate multiple XT vendor systems without requiring dedicated setups for each one, thus reducing equipment complexity, weight, and footprint.

CHALLENGES

Traditional Workover Control Systems (WOCS) presented several challenges, including the need for large, heavy topside equipment, extensive deck space on the rig, and cumbersome XT umbilical management during operations. These aspects not only increased operational costs and complexity but also posed heightened Health, Safety, and Environmental (HSE) risks. Recognising these limitations, the client sought an innovative solution that would allow for efficient, safe XT operations without the constraints of conventional WOCS systems.

OBJECTIVE

The client's primary goals were to implement an integrated, multi-XT subsea control system that could standardise operations across various third-party equipment for XT and Tubing Hanger installations. Additional aims included minimising equipment requirements, reducing red zone operations, and lowering overall costs while improving HSE standards.

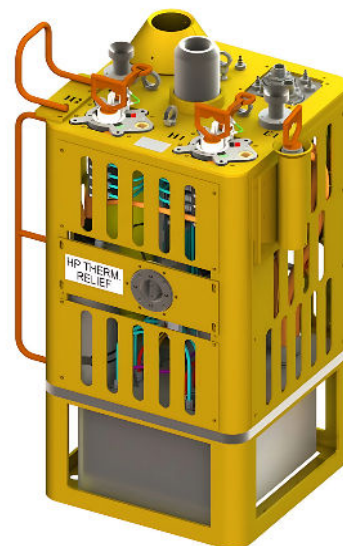
SOLUTION

4Subsea delivered a robust solution with the EHDM, engineered to operate seamlessly across multi-vendor XT systems. The EHDM provided a common interface to manage hydraulic and electrical needs for diverse XT assets, ensuring uniformity and ease of operation regardless of the XT vendor.

This modular, compact design allowed for a consistent setup across campaigns, improving operator familiarity and reducing changeover time. The system's smaller umbilical reduced handling difficulties, while its streamlined package minimised equipment footprint and weight on the rig, thus significantly decreasing HSE red zone activities and personnel exposure.

CONCLUSION

The deployment of the EHDM allowed the client to complete 12 wells with 100% uptime, demonstrating the system's reliability and operational efficiency. The successful deployment of 4Subsea's EHDM for the client underscores the value of innovative, integrated control solutions in modern subsea operations. By moving away from the traditional WOCS model, the client was able to standardise its XT operations, improve HSE outcomes, reduce person on board (POB) and achieve substantial efficiency gains. This case highlights how next generation subsea control systems can redefine operational workflows, delivering both safety and efficiency improvements across complex offshore environments.



4Subsea is a leading provider of technology and services that help operators optimise energy production from subsea oil & gas fields and off-shore wind farms. We combine domain expertise with data analytics and digital services to maximise lifetime of assets, reduce operational cost and optimise future projects through data-driven design.

The company was established in 2007 and clients include the major energy operators as well as the large suppliers of subsea equipment. 4Subsea is headquartered in Asker, Norway with additional offices in Bergen, Kristiansand, Stavanger, Rio de Janeiro, Kraków and Aberdeen. 4Subsea is a company in the Subsea 7 Group.

4Subsea - Share ideas, move forward

Contact +47 66 98 27 00 | contact@4subsea.com | www.4subsea.com