


MODULAR EFFICIENCY REDUCES OFFSHORE P&A COSTS BY OVER 50 PERCENT

- Project
 Technology
 Waste Management
 Operator
 Cleaning
 Well P&A
 Disconnection
 Removal & Lifting
 Other (Please Specify)

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Company Details		
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Overview
<p>The Optimus modular drilling unit is certified NORSOK Z-015 Temporary Equipment, this allows it to operate on a host platform in the North Sea without requirement for the operator to modify the safety case. All drilling equipment is certified to DNVGL-OS E101 Drilling Plant. The Optimus Unit can complete a Drilling work scope utilising our field proven modular mud package or a mud system installed on the host platform.</p>

Challenge
<p>ExxonMobil were seeking a cost effective solution to conduct plug and abandonment (P&A) activities on 20 wells on the Jotun B platform.</p> <p>The scope of work set out for the project specified:</p> <ul style="list-style-type: none"> • The unit had to be lightweight and have as small a footprint as practicable • The unit required to be installed onto existing derrick footings • Have low POB requirements • Capable of workover and drilling operations • Comply with temporary equipment standards and be fit for use in the Norwegian Continental Shelf • Mast self-erecting in part due to crane height limits

Solution

Petro Well Services AS (PWS) tendered with Halliburton recommending the provision of a modular unit solution for P&A operations. Offering a concept design for a new breed of modular unit (Optimus), the proposal was accepted, developed and implemented over 14 months, providing:

- A unit capable of drilling, P&A and workover operations with a hoisting system of 350Te pull
- Low power consumption capable of running unit independently with portable power generation and minimal power integration to platform services
- Easy interface with rig F&G, PA, platform general essential power and UPS supply requirements
- Installed utilising specially designed interface beams between the Optimus and Jotun B.
- Unit designed for full integration with existing or standalone mud system and pressure control unit
- Extensively automated unit reducing exposure to injury
- Low footprint and standalone modular unit capable of installation in 12T lifts
- Compliance with latest relevant standards – incl. NORSOK 2015, DNVGL-OS-E101 and other applicable NORSOK standards
- Low POB operations with multi-skilled team (5 dayshift and 5 nightshift with a further 2 at build stage)
- Quick mobilisation, installation and interface integration to the platform

Results

PWS successfully delivered and now operate a low cost, low POB, standalone P&A, drilling and workover unit, that can be promptly deployed, commissioned and integrated with an offshore platform. All targets set out by ExxonMobil were fulfilled on time. All phases from design through to build, installation and commissioning were completed with no incident. Current performance demonstrates tripping up to 30 super singles per hour with no LTI's or reportable incidents throughout the build, commissioning and operations phases offshore and well ahead of planned schedule. The integrated well intervention solution has **reduced offshore P&A costs by over 50 Percent.**



Interface beams installed on Jotun B



Self erecting hinged mast



Optimus on Jotun B