

Helix Decommissioning Support

'New Approach to P&A'

SPE Aberdeen Well Late Life & Well **Abandonment Conference**

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P&A Overview

Traditional Approach

- Use of MODU & Jack Ups
- Use of 21" Marine Riser
- BOP Stack Use
- One size fits All from simple to complex well abandonments

Alternate Approach

- Use Of the ROAM
- On a Heavy Well Intervention Vessel
- 8.5/8" HP Riser
- IRS Stack (EDP/LRP/TRT)

NOTE: Alternate Abandonment approach is tailored to well type and reservoir need (no requirement for over loading equipment spread).



New Technology - ROAM

Functionality

- Normal Operations = Environmental Containment
 - Annular BOP and circulation lines
- Pressure Test & In-flow test
- Emergency = Well Isolation
 - Dual Shear-Seal Rams
 - EQD functions

Lower overall cost of P&A

- De-risk P&A campaign by using Cost effective HWIV
 - Enable logging behind casing by pulling Upper Completion open water
 - Full Well P&A capabilities by addressing remediation scenario
- Minimize use of Drilling Rig for P&A

Layout

- 18-3/4" Re-entry mandrel
- 18-3/4" 10,000psi Annular BOP
- 18-3/4" 10,000psi Double BOP
 - Shear & Seal rams
- 18-3/4" H4 connector
- Flow spools with 3" stabs
- 2" circulation lines
- Emergency Disconnect
- OneSubsea Subsea Control Module

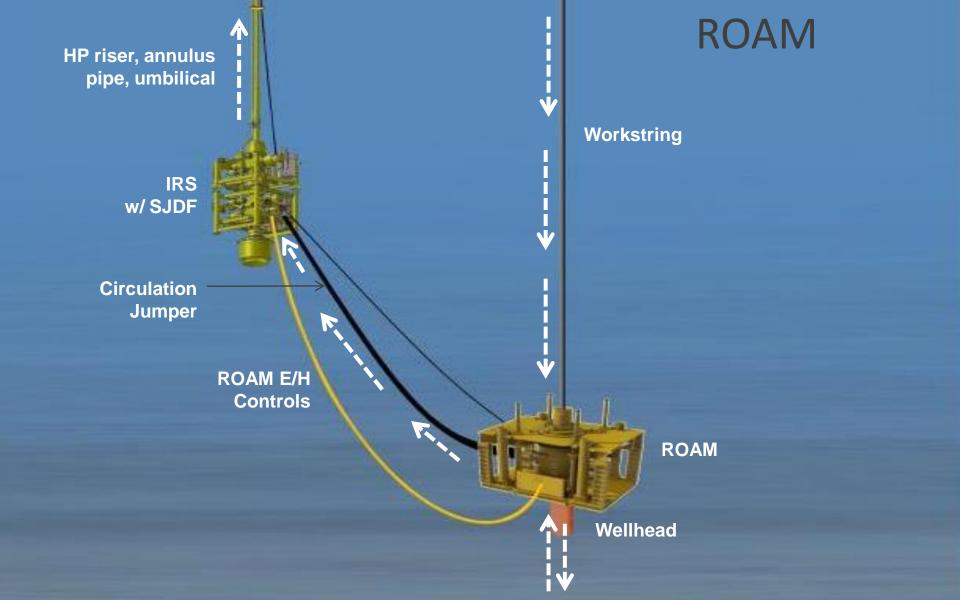




P&A Operational Steps w/ROAM

Well Phase 1 Phase 2 Phase 3 Preparation Reservoir (lower) barriers Intermediate (upper) barriers WH removal Bullhead tubing cement plugs Release & Permanent plugs Surface Plug Conductor removal Mechanical Plugs on CT/DP Across/ recover Seabed Clearance Recovery Tubing retrieval casings MODU c/w BOP MODU c/w CWOR **Through Bore Full Bore** LWIV + Full bore access **LWIV** LWIV Deployed in parallel over the side Diving Unset and pull TH open water Open water Services with specialized tooling Well prep (Barriers, injectivity test, **Enabler for Intermediate Abandonment** for cutting drift run) + Infrastructure Decommissioning Bull heading/circulation + Seabed Clearance Mechanical plugs Through tubing cement VXT recovery HWIV + IRS As per LWI + CT mechanical access + CT cement placement

Q7000 + ROAM



Helix Decommissioning Support



Helix Decommissioning Support

All Inclusive Service Offering

- We own the assets
 - Including vessels, SIL, IRS, ROV, Trenchers,
- Have relevant experience
 - In house crew not 3rd party many with 20yrs+ experience
 - · Includes marine, intervention, diving, ROV
- Single contracting
- Contractual flexibility
 - · Risk/reward, lump sum, qualified TCE etc.

PM & Engineering | Pipeline Survey | Hot tap | Pipeline flushing | Pipeline recovery | Pipeline trenching | Mattress recovery | Sat diving | Jacket diving | Well work | Facility removal | Structure Cutting | Heavy lifts | Wellhead removals | | Seabed clean up | Overtrawl | Clearance certificate







Thank you

