CONCEPT

Well Plug and Abandonment and Oil and Gas Decommissioning: Barriers, Cement Plugs and Liability

15 – 19 March 2027
London - Central London four-star



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Ref: 130_9868 **Date:** 15 – 19 March 2027 **Location:** London - Central London four-star **Fees:** 23000 SAR

Introduction:

Late-life fields carry a growing inventory of wells and structures that must be permanently isolated and removed, and poor well plug and abandonment planning leads to failed plug tests, sustained casing pressure, rig overruns and understated decommissioning liabilities. This Core Concept course trains engineers and planners to assess well integrity before P&A, design and verify permanent cement barriers, choose rig or rigless methods, estimate and schedule campaigns, and select removal, leave-in-situ or reuse options for facilities and pipelines. Participants produce a Well Plug and Abandonment Programme and Decommissioning Cost and Liability Estimate.

Course Objectives:

- Assess the integrity of wells scheduled for abandonment using well records, annulus pressure data and cement and casing logs
- Design permanent well barriers and cement plugs whose depth, length and placement meet the minimum isolation criteria of NORSOK D-010 and the OEUK Well Decommissioning Guidelines
- Plan tubing retrieval, casing cutting, section milling and wellhead removal and select between rig, light well intervention and rigless methods
- Verify barrier placement through tagging, pressure testing and logging and resolve failed plug tests and sustained casing pressure
- Build a P&A cost estimate and campaign schedule with time-depth phases, uncertainty ranges and batch sequencing
- Compare removal, leave-in-situ and reuse options for facilities and pipelines and estimate the resulting decommissioning liability, waste streams and environmental effects

Target Audience:

- Drilling and completion engineers who plan and supervise abandonment operations on onshore and offshore wells
- Well integrity engineers responsible for barrier status, annulus monitoring and well handover records
- Decommissioning engineers who prepare end-of-life programmes for wells, facilities and pipelines
- Cost engineers and planners who estimate and schedule P&A and removal campaigns
- Asset and late-life field engineers who manage cessation of production and liability provisions
- HSE and environmental specialists who assess waste, discharges and seabed or site clearance

Course Outline:

Day 1: Late-Life Wells, Decommissioning Drivers and Pre-P&A Integrity Assessment

- Decommissioning Life Cycle: Cessation of Production, Well P&A, Facility Removal and Site Clearance
- Well Inventory Categorisation by Complexity, Access and Integrity Status
- Well Records Review: Casing Tallies, Cement Job Reports and Completion Schematics
- Annulus Pressure History and Sustained Casing Pressure Diagnosis
- Pre-P&A Well Integrity Survey and Barrier Status Diagram

Day 2: Well Barrier Philosophy and Permanent Barrier Requirements

- NORSOK D-010 Well Barrier Envelopes and Well Barrier Element Acceptance Tables
- OEUK Well Decommissioning Guidelines: Isolation Criteria for Formation Fluids
- Primary, Secondary and Open-Hole-to-Surface Barrier Placement Logic
- Barrier Material Qualification: Cement, Formation Creep and Alternative Sealants
- Permanent Barrier Schematic for Reservoirs, Flow Potential Zones and Shallow Hazards

Day 3: Cement Plug Design, Casing Removal and Execution Methods

- Balanced Cement Plug Design: Slurry Volume, Spacers and Setting Depth
- Cement Bond Log and Ultrasonic Log Interpretation Behind Casing
- Tubing Retrieval, Casing Cutting and Section Milling Procedures
- Perforate, Wash and Cement Technique as an Alternative to Section Milling
- Rig, Light Well Intervention and Rigless Method Selection Matrix

Day 4: Plug Verification, Problem Wells, Cost Estimation and Liability

- Plug Verification by Tagging, Weight Testing and Pressure Testing
- Remediation of Failed Plug Tests, Poor Annular Cement and Collapsed Casing
- P&A Time-Depth Cost Model with P10, P50 and P90 Ranges
- Campaign Scheduling, Batch Sequencing and Wellhead Severance Planning
- Facility and Pipeline Options: Full Removal, Leave in Situ and Reuse with Waste Inventory

Day 5: Case Work: Well P&A Programme and Decommissioning Liability Estimate

- Platform Well Case: Barrier Design for a Well with Poor Annular Cement
- Onshore Field Case: Rigless Abandonment Sequence for a Multi-Well Pad
- Pipeline and Topsides Case: Comparative Assessment of Removal and In-Situ Options
- Decommissioning Cost and Liability Estimate Build for a Late-Life Asset
- Well Plug and Abandonment Programme Drafting and Peer Challenge

Skills You Will Gain:

- Pre-Abandonment Integrity Assessment
- Permanent Barrier Design
- Cement Log Interpretation
- Casing Removal Planning
- Plug Verification Testing
- P&A Cost Estimating
- Decommissioning Comparative Assessment
- Liability Provision Planning

Why Attend This Course:

- Return with a Well Plug and Abandonment Programme and Decommissioning Cost and Liability Estimate built from a real well and asset case
- Reduce repeat plug jobs and rig days by designing barriers that pass verification the first time
- Defend P&A estimates and schedules to management and partners with transparent time-depth models and uncertainty ranges
- Compare abandonment and removal practice with engineers from operators, drilling contractors and service companies working onshore and offshore

Conclusion:

Permanent well isolation and asset removal are the last engineering decisions an operator makes on a field, and errors are costly to reverse. The course moves from pre-P&A integrity assessment and barrier philosophy, through cement plug design, casing removal and rig or rigless execution, to plug verification, problem wells, cost estimation and facility and pipeline options. The final day applies these methods to platform, onshore and pipeline cases and produces a Well Plug and Abandonment Programme and Decommissioning Cost and Liability Estimate.