

Advanced Deepwater Drilling and Completions

Course Price

£3050

Course Description

This Course is designed for technical persons desiring to pursue their experiences in deepwater and Ultra deepwater ever growing operation and techniques. This course highlights the challenges of venturing into the deepwater generation and covers operational guidelines, risk management and well control concepts.

Abandonment procedures as per regulators requirements and relief well operations overview are reviewed in details.

Course Objectives

Who Should Attend

Operator persons who are involved in deepwater operations and have relevant experiences and contractors person in similar assignment and operation categories. Logistics managers, Finance controllers, safety officers and management persons of deepwater operating companies.

Prerequisites

Sound knowledge of deepwater and ultra-deepwater Drilling and Completion Operations, well control, offshore emergency and safety practices and cost control experiences.

Course Content

Deepwater E & P challenges

Worldwide drilling activities

Deepwater operating guidelines

Comparing the offshore regulatory regimes

HSE management

Risk management

Subsea well control

Blowout contingency plans

Deepwater well design
Deepwater well construction
Drilling riser management
Subsea Drilling and Production Equipment
Deepwater drilling procedures
Well completions
Relief well operations overview

Day 1

Introduction to Subsea Drilling Systems

- History of Offshore Drilling
- Terminology of Deepwater
- Influence of Deepwater
- Features of Deepwater
- Drilling Units

Worldwide Deepwater Activity

- Summary of International Activities
- List of Current Deepwater Drilling Units

Deepwater Challenges

- Availability of Funds
- Integrated Asset Management Team
- Requirement of Specialized Equipment
- Awareness of Risks and Challenges

Deepwater Drilling Concerns

- Deepwater Drilling Vessel Selection
- Wellhead, Riser and BOP Stack
- The effects of water depth Jetting the 30" Foundation pile
- Environmental Window
- Riser Margin
- Lack of Overburden pressure
- Mud and Bulk Volumes
- Flow Rate Requirements
- Cementing
- Concurrent operations during anchor handling, open water work
- Hydrates
- Deepwater Well Control Considerations
- Shallow Water Flow
- Shallow gas
- Losses
- Effects of Hydrate Formation
- Expansion of gas in the riser



Day 2

Risk Management

- Risk Management Process
- Risk Assessment
- Risk Analysis
- Risk Reporting and Communication
- Risk Treatment
- Risk Monitoring
- Hazop Analysis

Drilling Hazard Management

- Performance Begins with Planning
- Risk Assessment
- Mitigation Methods

Deepwater Well Control Considerations

- Shut-in Procedures
- Circulating Pressures
- BOP Stack and Control System
- Dual Shear Ram Requirement
- ROV Intervention
- Shallow Water Flow
- Shallow Gas
- Effect of Hydrate
- Expansion of Gas in the Riser
- Ultra-Deepwater Blowout

Blowout Contingency Plan

- Response
- Data Document
- Logistic
- Roles and Responsibilities

Day 3

Seas and Weather

- Buoy Development
- Sensor Description
- Ocean Currents
- Gulf of Mexico Loop Current

Positioning of the Rig

- The Grid System
- Measurement Methods
- Coordinate System
- Mooring and DP Capability
- Motion Compensation

Well Design

- Objectives for Deepwater Exploration Wells
- Environmental Factors
- Water Depth and Seabed Condition
- Weather and Current
- Rig Selection, Rig Upgrades, and Rig Operating Limits
- Survival Limits
- Disconnect Operations
- Subsea Operating Limits
- Deck Loads
- Temperatures
- Subsurface Hazards
- Surface Foundation Pipe
- Fluids Program
- Cementing Program
- Completions
- Well Control
- Well Testing

Day 4

Drilling Fluids

- Fluid Response to Temperature
- Subsalt Wells
- Shallow Water/Gas Flow
- Hole Cleaning
- Gas Hydrate

Cementing

- Mud conditioning
- Preparation for cementing
- Cement classes
- Cement additives
- Laboratory Testing
- Cementing Equipment
- Cement Mixing
- Cement Displacement
- Quality Control

Subsea Drilling Equipment

- Subsea Wellhead
- System Consideration
- Subsea BOP Stack System
- BOP Control System
- Riser Integrity
- Riser System
- Lower Marine Riser Package
- Riser Running Equipment

Day 5

Deepwater Drilling Procedures

- Jetting 30"/36 Construction Pipe
- Jetting Tools Design
- Post Jetting Considerations
- Drilling 26" Hole and Running 20" pipe
- Running BOP stack and Riser
- Drilling 12 1/2" Hole, Running 13 3/8" Casing
- Drilling the 12 1/4" Hole, Running 9 5/8" Casing
- Well Completion

Deepwater Completion Systems

- Open hole Completions
- Cased hole Completions
- Perforating
- Frac Pack
- Intelligent Completions

Offshore Operating Procedures

- Health Safety and Environment
- Casing and Cementing Overview
- Deepwater Drilling Equipment
- Equipment Definition

CPD Unit

Continuing Professional Development

35 HOURS CPD