

Training
Course

Underbalanced Drilling Specialist UBD Techniques and Equipment

Course Plan

Introduction

Underbalanced Drilling (UBD) is an advanced drilling technique designed to minimize formation damage, increase rate of penetration (ROP), and enhance reservoir productivity. As oil and gas fields become more complex, UBD has become an essential tool in the drilling engineer's arsenal.

This course is designed to equip participants with the knowledge and practical skills required to plan, execute, and evaluate UBD operations safely and efficiently. It covers specialized equipment, pressure control techniques, and real-world applications of underbalanced drilling technologies.

Course Objectives:

- ✓ Understand the principles and objectives of underbalanced drilling.
- ✓ Identify suitable reservoir conditions for UBD applications.
- ✓ Compare UBD to conventional drilling and managed pressure drilling (MPD).
- ✓ Describe UBD methods and fluid systems.
- ✓ Select and operate key UBD equipment.
- ✓ Apply well control and safety measures during UBD.
- ✓ Design and evaluate UBD programs for different formations.
- ✓ Analyze real-time data and make operational adjustments.

- ✓ Troubleshoot challenges specific to UBD operations.
- ✓ Integrate UBD into overall well planning and completion.

Who Should Attend?

- Drilling engineers and supervisors
- UBD and MPD specialists
- Well planners and operations engineers
- Field service engineers and tool specialists
- Petroleum and reservoir engineers
- Rig managers and drilling contractors
- HSE personnel involved in well control
- Technical staff in oil and gas companies
- Recent graduates in petroleum engineering

Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

Course Outline:

Day One

- Introduction to Underbalanced Drilling (UBD)
- Benefits and Challenges of UBD
- UBD vs. Conventional Drilling vs. MPD
- Reservoir Suitability for UBD
- UBD Fluid Systems (Gas, Foam, Mist, Aerated Mud)

Day Two

- UBD Equipment Overview
- Rotating Control Devices (RCDs)
- Choke Manifolds and Backpressure Control
- UBD Drilling Techniques and Methods
- Multiphase Flow Behavior in UBD Operations

Day Three

- Downhole Pressure Management and Monitoring
- Well Control in Underbalanced Conditions
- Gas Injection Systems and Control
- Cuttings Transport and Hole Cleaning
- Real-Time Data Acquisition and Interpretation

Day Four

- Drill String Design for UBD Operations
- Surface Separation Systems and Gas Handling
- Safety and Risk Management in UBD
- Casing and Cementing Considerations in UBD Wells
- Regulatory and Environmental Aspects of UBD

Day Five

- Planning and Design of UBD Programs
- Troubleshooting Common UBD Problems
- Case Studies from UBD Projects Worldwide
- Integration of UBD in Horizontal and Multilateral Drilling
- Future Trends and Innovations in Underbalanced Drilling

Training Details

Course Duration	5 Days
Pre-Schedule	23 – 27 Feb 2026
Venue	Kaiserin Elisabeth – Hotel - Vienna
Training Fees Per Person	KWD 1800 (One Thousand Eight Hundred Only)
Course Fees Include	<ul style="list-style-type: none"> ✓ Tuition documentation ✓ Curriculum and Training Handout ✓ Five star Lunch ✓ Completion Certificates ✓ Lunch Included