



*Training Course:
Directional Drilling & Accompanying Operations*

12 - 23 October 2025

Dubai (UAE)

Residence Inn by Marriott Sheikh Zayed Road, Dubai

Training Course: Directional Drilling & Accompanying Operations

Training Course code: EN236146 From: 12 - 23 October 2025 Venue: Dubai (UAE) - Residence Inn by Marriott Sheikh Zayed Road, Dubai Training Course Fees: 8820 € Euro

Introduction

Directional drilling has revolutionized modern oil and gas exploration and production, allowing operators to reach reserves previously deemed inaccessible. This 12-day specialized training program by Global Horizon Training Center is designed to provide drilling engineers, supervisors, and technical professionals with a deep and practical understanding of directional drilling techniques and accompanying operations, including well planning, trajectory control, bottom hole assembly design, and real-time monitoring. The program also integrates supporting technologies such as MWD/LWD, hole cleaning, wellbore stability, and sidetracking strategies.

Objectives

By the end of the course, participants will be able to:

- Understand the principles and objectives of directional drilling.
- Plan and execute directional and horizontal wells effectively.
- Design and evaluate bottom hole assemblies BHA for trajectory control.
- Analyze and interpret MWD and LWD data.
- Handle operational challenges such as torque, drag, and hole cleaning.
- Implement best practices in sidetracking, fishing, and wellbore surveying.
- Integrate new technologies into directional drilling programs.
- Minimize risks and improve drilling efficiency and wellbore placement.

Organizational Impact

- Enhanced drilling performance and reduced non-productive time
- Improved well placement and reservoir contact
- Better risk mitigation and operational control
- Increased competency in advanced drilling technologies

- Strengthened collaboration between drilling, geological, and engineering teams
- Reduction in well failure and sidetrack costs

Target Audience

- Directional Drilling Engineers
- Drilling Supervisors and Superintendents
- Well Planning Engineers
- MWD/LWD Specialists
- Petroleum Engineers and Technologists
- Field Engineers and Toolpushers
- Geologists and Geosteering Personnel

Training Program Outline

Day 1: Fundamentals of Directional Drilling

- Objectives and benefits of directional drilling
- Directional well types and applications
- Introduction to trajectory design: build, hold, drop
- Key terminology and tools overview

Day 2: Surveying and Wellbore Positioning

- Surveying methods magnetic, gyroscopic
- Measurement accuracy and error analysis
- TVD, MD, Inclination, Azimuth calculation

- Anti-collision and proximity rules

Day 3: Well Planning and Trajectory Design

- Planning directional, S-shaped, J-shaped, and horizontal wells
- Build-up rate and turn rate calculations
- Dogleg severity DLS and minimum curvature method
- Case planning: trajectory modeling

Day 4: Bottom Hole Assembly BHA Design

- Types of BHAs for different build tendencies
- Stabilizers, motors, rotary steerable systems
- BHA selection based on trajectory needs
- BHA modeling software overview

Day 5: Downhole Motors and Rotary Steerable Systems

- Mud motors: types, operation, and limitations
- RSS: types, operation principles, and advantages
- Steering principles and control methods
- Motor vs RSS decision-making

Day 6: Measurement While Drilling MWD & Logging While Drilling LWD

- MWD fundamentals: inclination, azimuth, gamma ray
- LWD applications in reservoir navigation
- Tool positioning and telemetry

- MWD/LWD troubleshooting

Day 7: Real-Time Drilling and Geosteering

- Real-time trajectory adjustments
- Formation evaluation and steering techniques
- Geosteering principles and tools
- Case study: horizontal reservoir navigation

Day 8: Torque, Drag, and Hole Cleaning

- Mechanical models for torque and drag
- Hole cleaning best practices
- Friction factors and ECD management
- Case studies of stuck pipe and hole problems

Day 9: Sidetracking and Fishing in Directional Wells

- Sidetracking planning and tools
- Cement plugs, whipstocks, and retrievable systems
- Fishing operations in deviated wells
- Operational risk management

Day 10: Wellbore Stability and Drilling Fluids

- Borehole collapse and washout prevention
- Mud properties and hydraulics
- Fluid loss, filter cake, and pressure balance

- Use of OBM, WBM, and managed pressure drilling

Day 11: Directional Drilling Software and Modeling

- Overview of directional drilling software Landmark, Compass, etc.
- BHA modeling and wellpath prediction
- Trajectory visualization and anti-collision scans
- Hands-on exercises

Day 12: Best Practices, Safety, and Future Trends

- Drilling efficiency metrics and performance KPIs
- HSE considerations in directional drilling
- Emerging technologies automation, AI, digital twins
- Wrap-up: lessons learned and action planning

Registration form on the Training Course: Directional Drilling & Accompanying Operations

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Full Name (Mr / Ms / Dr / Eng):
Position:
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Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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