Global Horizon
TRAINING CENTER

Training Course:
Deep Well Drilling Engineering

16 - 27 November 2025
Dubai (UAE)
Residence Inn by Marriott Sheikh Zayed Road, Dubai

Training Course:
Deep Well Drilling Engineering

Training Course code: EN236170 From: 16 - 27 November 2025 Venue: Dubai (UAE) - Residence Inn by Marriott Sheikh Zayed Road, Dubai Training Course Fees: 8400 Euro

Introduction

Deep well drilling is one of the most technically challenging and cost-intensive operations in the upstream oil and gas sector. Success requires a thorough understanding of subsurface behavior, advanced engineering techniques, risk management, and real-time operational control. This 12-day intensive training program, developed by Global Horizon Training Center, is designed to equip drilling engineers, supervisors, and field professionals with the knowledge and technical skills required to plan, design, and execute deep well drilling operations efficiently and safely.

Objectives

By the end of this training, participants will be able to:

- Understand the fundamentals and complexities of deep well drilling.
- Analyze and plan the complete drilling program for deep wells.
- Apply advanced casing, cementing, and well control practices.
- Assess and mitigate drilling hazards, formation pressures, and wellbore instability.
- Optimize drilling parameters and hydraulics in high-pressure/high-temperature HPHT environments.
- Manage cost, safety, and performance challenges specific to deep well projects.

Target Audience

- Drilling engineers and superintendents
- Rig supervisors and toolpushers
- Well planning and design engineers
- Petroleum and reservoir engineers
- Geologists and geomechanics specialists
- Oilfield service company personnel

Organizational Impact

Participating companies will benefit by:

- Improved deep well project planning and execution
- Reduced drilling time and non-productive time NPT
- Enhanced safety and well control during critical drilling phases
- Cost savings through optimization and better risk assessment
- Stronger integration between subsurface and operations teams

Training Outline

Day 1: Introduction to Deep Well Drilling

- Overview of deep and ultra-deep wells
- Challenges in deep well environments
- Drilling technologies evolution
- Case studies: complex deep wells

Day 2: Geological and Geomechanical Considerations

- Formation evaluation and pressure prediction
- Pore pressure and fracture gradient analysis
- Mud weight window optimization
- Geomechanical modeling basics

Day 3: Drilling Program Design for Deep Wells

- Components of a deep well drilling plan
- Hole size and casing design overview
- Drill bit selection for deep formations

- Depth vs. cost vs. risk analysis

Day 4: Advanced Casing Design and Running

- Casing setting depths and loads
- High-strength casing materials
- Collapse and burst pressure calculations
- Casing wear and fatigue in long intervals

Day 5: Cementing Operations for Deep Wells

- Cement slurry design and displacement
- Managing cement shrinkage and contamination
- Use of lightweight and high-temp cements
- Cementing challenges in high-pressure zones

Day 6: Drilling Fluids and Hydraulics

- Deep well drilling fluid properties
- HPHT fluid systems and additives
- Hydraulic calculations and ECD control
- Avoiding losses and formation damage

Day 7: Directional Drilling and Extended Reach Applications

- Directional drilling tools and techniques
- Planning build, hold, and drop sections
- Managing torque and drag in deep holes
- Extended Reach Drilling ERD considerations

Day 8: Wellbore Stability and Hole Cleaning

- Borehole collapse and breakout mechanisms
- Hole cleaning challenges in long wells

- Use of stabilizers and centralizers
- Real-time monitoring and early warning signs

Day 9: Well Control in Deep Drilling Environments

- Deep well pressure regimes and kick detection
- Well control methods driller's and engineer□s method
- Subsea and surface BOP systems
- Gas expansion effects in deep vertical wells

Day 10: Drilling Optimization and Real-Time Monitoring

- Rate of penetration ROP optimization
- Real-time data WITSML, MWD, LWD use
- Drilling parameter control and surveillance
- Performance benchmarking

Day 11: Drilling Hazards, HSE, and Contingency Planning

- Common risks: stuck pipe, well control, blowouts
- Deep well-specific HSE requirements
- Emergency response and contingency plans
- Non-productive time NPT and cost management

Day 12: Final Review

- Group exercise
- Casing program, mud program, and cost estimation
- Presentation and feedback
- Final Q&A

Registration form on the Training Course: Deep Well Drilling Engineering

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

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
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Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.