

**Training Title**

**ADVANCED DRILLING AND WELL COMPLETION TECHNOLOGY**

**Training Duration**

**5 days**

**Training Venue and Dates**

DE011	Advanced Drilling and well completion technology	5	08 – 12 January 2024	\$5,500	Dubai, UAE
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**In any of the 5-star hotels. The exact venue will be informed once finalized.**

**Training Fees**

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

**Training Certificate**

**Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.**

**TRAINING DESCRIPTION**

Drilling is essential and expensive part of the oil and gas industry.

Improving the drilling operation carries the greatest interest by the oil and gas operating companies. The oil and gas drilling industry are changing rapidly in the areas of technology, safety, environment, management, contractual relationships training, Drilling operations must confront extremely difficult technical, safety and control problems. This course is designed to provide participants with an up-to-date overview of the practical applications of oil and gas drilling techniques. The course covers drilling programming well control planning. Type of drilling (deviated, horizontal and multilateral) drill bit selection and hydraulics, drilling fluid program, casing and cement operations, well Engineering & control operations, drilling problems& solving, well completion operations and reporting procedures.

**TRAINING OBJECTIVES**

**Upon successful completion of the course participants will be able to:**

- Review drilling data and plan the well from spud to production phase.
- ✓ Well design and optimize drilling &work over schedule.
- ✓ New Drilling techniques ERD, MSD and MPD applying.
- Incorporate the completion plans into the drilling plan

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- Drill a well cost effectively and maximize penetration rate.
- Evaluate stuck pipe problem and avoid potential problems
- Evaluate and maintain drilling fluids
- Optimize hole cleaning
- Design casing, drill string and BOP/Wellheads
- Evaluate and implement cementing programs
- Design and implement bit and hydraulics programs.
- Incorporate directional drilling and deviation control
- Recognize and evaluate well control problems
- Production system optimization.
  - ✓ Design well completion
  - ✓ Type of well completion
  - ✓ Troubleshooting and remedial action
  - ✓ What's new in the oil industry.

### **WHO SHOULD ATTEND?**

Drilling engineer, Drilling, supervisor, superintendent, Petroleum Engineers and technical staff

### **TRAINING METHODOLOGY:**

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

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## DAILY OUTLINE

### Day 1

#### **Overall Drilling Process:**

##### **Pretest**

- Introduction
- Types of rigs
- Rig equipment
- Methods of drilling
- Well proposal & design
- Well drilling program
- Video film CD-DVD (How to drill well)

##### **Well planning and operations:**

- Making Hole & Bit Selection
- Drilling Fluids (Mud types)

### Day 2

- Casing design
- Casing Operation
- Cement design
- Cementing Operation
- Case study
- Video film CD-DVD

#### **Drilling Well Engineering**

- Type of wells
- Design Deviation, Horizontal and Multilateral Wells
- New Drilling techniques ERD, MSD and MPD applying.
- Optimize drilling and work over operations.
- Well completion design.

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- Type of well completions

### Day-3

#### Hole Problems & Prevention:

- Lost Circulation
- Stuck Pipe
- Kick & well control
- Shale problems
- Fishing operations
- Sidetrack
- Directional drilling
- Problems and Practical Exercises

### Day-4

#### Well Control

- Rules and Regulations
- Origin of abnormal pressure
- Predicting formation pressure
- Type of pressure
- Well barrels
- How to optimize and control wells
- Causes of kick
- Kick warning signs
- Kick detection
- Pressure concept and calculation fracture pressure and MAASP.
- Well control procedures.
- Shallow gas kicks
- Case study
- Video film CD-DVD

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**Day-5**

- Killing Methods
- Exercises on well control
- Kill sheet exercises.
- Diverters and closing system.
- Unusual well control methods
- Associated problems during well control
- Well control equipment.
- Diverter system
- Top up drive operations and maintenance
- Bops' equipment exercises
- RISK Assessment and well integrity
- HSEQ in oil industry
- Case study, practices exercises
- Review and discussion
- Post-test

**NOTE:**

**Pre & Post Tests will be conducted**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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P.O BOX 45304  
ABU DHABI, U.A.E

T +971 2 6264455  
F +971 2 6275344

[www.definettraining.com](http://www.definettraining.com)