

**Training Title**

**Oil Exploration, Drilling, Well Completion & Production**

**Training Duration**

5 days

**Training Certificate**

Define Management Consultants Certificate of course completion will be issued to all attendees.

**Training Fees**

US\$ 3300 per participant including Very useful Materials/ Handouts, Tea/Coffee, Breakfast, Snacks, Refreshments, International Buffet Lunch

**Who Should Attend**

This course is designed for Oil filed Technologists, project managers, plant managers, plant supervisors, Production Supervisors, technical staff, Operators and Technicians and contractor personnel involved in the production of oil and natural gas. The greatest benefit arises from discussing the underlying principles of the various processes and the cause of the common operating problems. You will also be able to see which processes are available to you to de-bottleneck or modify existing processes. The practical techniques and examples provide useful insights that are valuable in daily operations. Participants are encouraged to introduce any operating problems they have encountered for group discussion.

**COURSE OUTLINE**

**Day 1**

**1) Exploration**

**a) Search for oil & gas**

- Terms and nomenclature of geology used in oil industry
- Petroleum: How it is formed and trapped, geology of the suitable rocks for favourable deposition of hydro-carbons

**2) Introduction to Drilling Technology**

## **b)Drilling methods**

- **Technical Definitions and practical Units**
- **Rotary Drilling practices**
- **Well Construction and Design of Casing String**
- **Drilling fluids**
- **Well control Equipment**
- **Fishing and fishing Tools**
- **Offshore drilling Practices**
- **Safety on the rig**

## Day 2

### **Well Completion and Testing**

- **Reservoir engineering aspects for well completion**
- **Phase behavior**
- **Performance Evaluation**
- **Production inflow performance**
- **Types of well completion: Corrosive high pressure completion: tubing less well completion: horizontal and multilayered completion, open hole completion, slotted liner completion, Special completion.**
- **Packer completion**
- **Perforation Techniques: over balanced and under balanced**
- **Well head equipments**
- **Down hole tools**
- **Classification of well production tests: transient pressure testing: well testing strategy: production testing tools: Drill stem Test: High pressure and high temperature testing : Testing of sour wells**
- **Well activation and flow measurements**

## Day 3

## **1)Artificial Lift**

### **a)Artificial lift**

- Need for artificial lift
- Various modes of lifts
- Selection criterion and design of suitable lift
- Trouble shooting
- Optimization

### **b)Reservoir pressure maintenance thro' water / gas injection**

#### **b) Reservoir pressure maintenance**

- Need for reservoir health management
- Types of water injection methods, peripheral and spot injection
- Frontier areas of EOR
- Compatibility of injection fluids
- Monitoring

## **Day 4**

### **Work-over operations and Well Stimulation, sand control**

#### **a)Work over rig components**

- Introduction
- Rig components
- Draw works
- Hoisting System
- Rotary equipment
- Mud Pumps
- Prime over

#### **b)Work over Jobs**

- Major Repair Jobs
- Casing Damage repair
- Fishing

#### **c)Well Stimulation**

- formation Damage

- various stimulation techniques
- gravel packing
- activation

**Day 5**

**1) Production, Storage, processing and Transportation**

**a) Production**

- Design of GGS/GCS/ EPS
- Design of CTF
- Sour component handling
- Demulsification and desalting
- ETP- design
- Transportation

**b) Introduction to Offshore Technology especially Deep water**

**b) Offshore Practices**

- Introduction to offshore technology
- Deep water: frontier area of technology

**Case Studies, Discussions, Last Day review will be carried out.**

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