

# **OIL EXPLORATION & DRILLING & ARTIFICIAL LIFTING**



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**TRAINING TITLE**

OIL EXPLORATION & DRILLING & ARTIFICIAL LIFTING

**VENUE**

Dubai, UAE

**DURATION**

5 Days

**DATES**

01 - 05 August 2021

**PRICE**

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

**TRAINING INTRODUCTION**

This course is intended to cover different aspects of crude oil production right from the exploration stage. The course will cover exploration, drilling technology, various types of well completion and testing methods, artificial lift, reservoir pressure maintenance practices, work-over, well stimulation and production, storage, processing of crude oil. Deep-water Technology, being latest, is also included. The theory and practical aspects of geology, completion in horizontal and vertical well, multilateral wells, rig layout- components, various types of fluids used in drilling and work-over operations, enhanced oil recovery and various well stimulation techniques will be discussed.

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 motivate everybody to find the right answers. The delegates will also be encouraged to raise their own questions and share in the development of the right answers using their own analysis and experiences.

**TRAINING OBJECTIVES**

- Review the basics of geology of the suitable rocks for favorable deposition of hydro-carbons
- Understanding the basics of drilling technology.
- In depth study of the well completion and various modes of testing

- Production from depleted zones by means of suitable modes of Artificial Lift.
- Reservoir management
- Imparting knowledge of Well repair and damage control.
- Enhancement of oil production through suitable stimulation techniques.
- Learn about surface production facilities.
- Highlight the frontier area of offshore technology including Deep Water.

## **TRAINING AUDIENCE**

This course is designed for Oil field 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.

## **TRAINING 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 favorable 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

#### c) 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
  - c) Offshore Practices
    - Introduction to offshore technology
    - Deep water: frontier area of technology

### **TRAINING CERTIFICATE**

**MAESTRO CONSULTANTS** Certificate of Completion for delegates who attend and complete the training course

### **METHODOLOGY**

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.