



BASIC PETROLEUM INDUSTRY FOR NON-PETROLEUM PERSONNEL

Highly Intensive, Interactive & Practical Workshop

COURSE OVERVIEW:

This 4-day introductory course provides the participants with a basic overview of the oil and gas industry. It presents the main aspects of the industry with focusing on the origin of fossil fuels, exploration, drilling, development, production and of oil and gas reserves. The course addresses some of the theoretical and practical issues of the oil & its origin & make-up. It addresses reservoir appraisal, field development options and optimisation, supported by numerous examples.

WHO SHOULD ATTEND?

The course is designed for those who have an engineering or basic science background working in the oil industry. It would cater for; Newcomers, juniors and seniors in the oil & gas industry.

COURSE CONTENT:

Introduction

Our Industry

- ▶ Introduction
- ▶ General principles
- ▶ History & origin

Origin & Accumulation Of Oil & Gas

- ▶ Conditions of generation
- ▶ Migration
- ▶ Entrapment & Accumulation
- ▶ Faults
- ▶ Porosity & permeability

Exploration For Hydrocarbons

- ▶ Exploration Methods & Techniques.
- ▶ What is Seismic & how does it help
- ▶ Hydrocarbons' Play Concept.
- ▶ Risk Assessment.



Drilling & Well Construction

- ▶ Well Planning.
- ▶ Rig Types & Rig Selection.
- ▶ Drilling Systems & Equipment.
- ▶ Drilling Techniques.
- ▶ Drilling Fluids.
- ▶ Well Logging, Coring & Testing.
- ▶ Casing & Cementing.
- ▶ Drilling Problems.
- ▶ Xmas tree & downhole joules.

Oil & Gas Reservoirs

- ▶ Reservoir Geology.
- ▶ Effects of porosity & permeability on hydrocarbon in place
- ▶ Reservoir Fluids.
- ▶ Petrophysical Properties.
- ▶ Rock-Fluid Systems.
- ▶ Data Gathering & Analysis.
- ▶ Evaluation of Reserves & Uncertainties.
- ▶ Impurities in hydrocarbons reservoirs.

Reservoir Development

- ▶ Gas Reservoirs.
- ▶ Oil Reservoirs.
- ▶ Effect of water drive
- ▶ Choice of Well Type & Well Completion.
- ▶ Oil Recovery Method.
- ▶ Development Optimization.

Field Facilities

- ▶ Field Structures.
- ▶ Topside Facilities for offshore development.
- ▶ Surface facilities for onshore development.
- ▶ Oil and Gas Processing.
- ▶ Flowlines & gathering systems
- ▶ Three phase separation
- ▶ Oil refining & processing
- ▶ Gas dehydration & clean-up

Oil & Gas Fields' Development Cycle

- ▶ Development cycle
- ▶ Cash supply & demand



Development Cost & Management

- ▶ Capital Costs
- ▶ Operating Costs.
- ▶ Phasing & Organisation.
- ▶ Planning & Control Contracting.
- ▶ Contract executions
- ▶ Project management.

Safety & The Environment

- ▶ Safety Management Systems.
- ▶ Environmental Impact Assessment.
- ▶ Environmental Concern.
- ▶ HSE issues and how to address them.

The Petroleum Industry Chain

- ▶ World Oil & Gas Reserves.
- ▶ World Energy Supply & Demand.
- ▶ The Petroleum Companies – OPEC.
- ▶ Transportation of Oil & Gas.
- ▶ Oil & Gas Markets.

OPEC & Its Role In The Oil & Gas

- ▶ Who is OPEC
- ▶ OPEC Objectives
- ▶ The way forward