

## Introduction to the Oil & Gas Industry

### Course Objectives

This wide-ranging and practical industry overview covers each key phase of the exploration and production industry. It offers oil and gas professionals the opportunity to gain a technical and commercial understanding of the industry fundamentals.

### What Will You Learn?

- The scientific origins of oil and gas
- The commercial issues underpinning hydrocarbon exploration, development and production
- The role of government and its agencies
- Oil and gas terminology
- The technological process of exploration
- The technological process of drilling
- Understanding field development options
- The technological process of production
- The challenges of decommissioning

### Who Should Attend

This course is extremely popular with personnel from all sectors of the oil and gas industry – government agencies, authorities, operators, contractors and service companies. It is especially valuable for newcomers to the industry and non-technical personnel working in areas like HR, Finance, IT, Contracts and Administration or for those working one specific discipline who feel they could benefit from gaining a wider appreciation of the ‘big picture’.

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### **Course Content**

#### **Petroleum Geology – The Origins of Hydrocarbons**

- The formation of petroleum
- Oil and gas reservoirs
- Reservoir rock and fluid properties

#### **World Energy Supply and Demand**

- Oil and gas supply and demand
- Classification of reserves
- Oil pricing and market issues
- Gas pricing
- Unconventional oil and gas

#### **Ownership and Exploitation of Reserves**

- Licensing/Concessions
- Joint venture agreements
- Production Sharing Contracts

#### **Exploration and Appraisal**

- Geological and commercial factors necessary for successful exploration
- Seismic surveys

#### **Drilling**

- Drilling rigs
- Equipment and processes involved in drilling a well
- Completing a well and preparing it for production
- Horizontal drilling
- Well workover operations

#### **Field Development**

- Onshore/offshore developments
- Shallow/deep water developments
- Gas field developments
- Aspects of well and facilities design

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### **Petroleum Economics**

- Field development decision making
- Key economic indicators and their uses

### **Health, Safety and the Environment (HSE)**

- Safety
- The environment

### **Petroleum Production and Treatment**

- Reservoir production mechanisms
- Artificial lift systems
- Well stimulation – fracturing, acidising and sand control
- Production and Treatment of Reservoir Fluids
- Processing the production from oil and gas fields

### **Maintenance and Logistics**

- Well and facility maintenance
- Reliability centered maintenance
- Corrosion and how it is controlled
- Transportation of personnel and materials

### **Decommissioning**

- Possible decommissioning solutions
- Scope of decommissioning obligations

### **Future Issues and Challenges**

- Meeting future energy demands
- Environmental sustainability
- Security of supply

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### Testimonials

*"It was all perfect from the first communication with MDT to register, very helpful. The instructor is one of the best I have come across. Coming from an accounting background the course has added a lot to my knowledge on the technical side."*

**Tasneem Abdelgadir, Petronas**

*"Great introduction to the oil and gas industry that filled in the (vast) gaps in my knowledge. Great to be able to ask lots of questions and get answers."*

**Vince McCaughey Premier Oil**

*"One of the very few courses where I felt like "keep on going" with the course. Best part was the industry examples and stories to connect the theory. Very good energy over the two days."*

**Harit Famish, Maersk**

*"I came to the course with very little understanding of the industry whilst having to have very technical conversations with my clients. I have far greater confidence now in my knowledge, and this will have a large positive impact on my role."*

**Ashkan Kazeonian, TSC Inspection Systems**

*"I really enjoyed learning. It was amazing how much I learnt in just two days. The course was the perfect thing I needed, huge eye opener. I wish to attend a course on leadership and people management skills in the future. Thanks MDT!"*

**Victoria Minja, Ophir Energy**