

# **BTS**Training & Consultancy

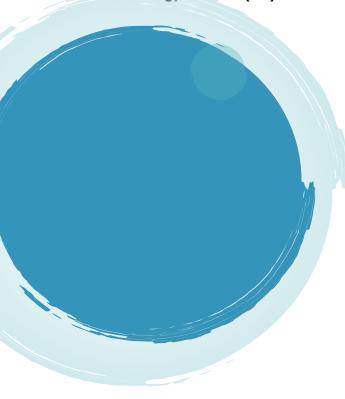
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# Petroleum Engineering for Other Disciplines

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### Introduction:

This 5-day course is intended for professionals with a non-petroleum engineering degree, who currently work in, or wish to work in, the Petroleum Industry.

The course will address the story of oil from its origin to the end user. The objective is to provide an overview of the fundamental operations in exploration, drilling, production, processing, transportation, and refining of oil and gas.

This is one of our longest running courses and has been delivered as an open CPD course since 2004. The course contents have been improved and revised in response to participant feedback and changes within the industry. This course could be tailored to the specific needs of the participants, as required. Please contact us if there are specific topics you would like us to include or expand on.

# Recent participants include professionals from:

- Advanced Drilling Fluids
- Asia Connecting Center
- ATP Oil & Gas Corporation (ATP)
- Baker Hughes
- Caerketton Ltd
- Crondall Energy Consultants
- Heriot-Watt University





- James Walker
- Kosmos Energy Ghana HC
- Mærsk Oil and Gas
- Petromar Angola
- Rothschild
- Senergy
- Talisman-Energy
- TNK-BP
- Weatherford

- Hydrafact
- ADTI
- OMV Petrom S.A.

...and many more who wished to improve their employability through developing their understanding of Petroleum Engineering

# Who should attend?

Professionals who wish to enhance their existing skills set to support their employment and career progression in the Oil and Gas Industry.





# **Course Outline:**

#### Introduction

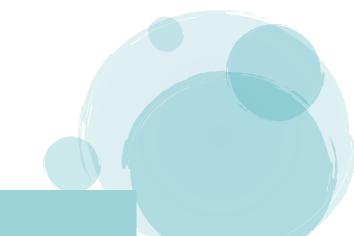
- A brief history
- Origin of petroleum
- Plate tectonics
- Units in petroleum engineering
- Overview of the industry

#### Geology

- Petroleum geology and geophysics
- Fluid migration
- Reservoir formation
- 2, 3 and 4 D seismic

#### **Drilling**

- Drilling operations (onshore, offshore)
- Rig components
- Top drive
- Formation pressure



- Cement log (CBL/VDL)
  - Directional drilling
  - LWD
  - MWD

- Leak off test
- Drilling problems
- Coring
- Casing design
- Cementing

#### **Production**

- Field development (onshore, offshore)
- Logging (open/cased hole)
- PLT
- Production technology
- Inflow Performance
- Vertical lift
- Flow through chokes



- Well intervention
- Workover
- Coiled tubing
- Abandonment
- Well Integrity Management
- Artificial lift
- Formation damage
- Well test
- Well stimulation
- Sand control

- Nodal analysis
- Well completion
- Downhole and surface components
- Perforation
- Intelligent wells
- Wireline operations



#### **Reservoir Engineering**

- Reserve estimation
- PVT and phase behavior
- Equation of State
- PVT tests and reports
- Properties of reservoir fluids (density, viscosity, IFT)

- Reservoir rock properties
- Production mechanisms (primary, secondary, EOR/IOR)
- Material balance
- Reservoir simulation

#### **Processing**

- Oil production
- Processing and treatment
- Gas production and processing
- as/oil transportation



#### Scale

Wax

Flow assurance

Asphalting

**Hydrates** 

- Corrosion
- Slugging

- Pigging
- Emulsion
- Foaming

#### **Additional topics**

- Heavy oil
- Unconventional reservoirs
- CO2 capture transport and storage
- Digital fields
- Refining
- End products and their usage
- Environment

# Course requirement

A degree in science or engineering is desirable.