

OIL & GAS EXPLORATION & PRODUCTION FUNDAMENTALS

2-Day Training Course: The Essential Techno-Commercial Introduction To Oil & Gas

Build your confidence & understanding of the petroleum business lifecycle & its technical jargon by examining the geological, physical, engineering & commercial components of exploration, drilling, production & facilities management.

26-27 June 2019 • Perth



**Our Expert
Course
Instructor**



Professor Peter Moore

Professor Moore has over 30 years of expertise as a very successful oil & gas explorer & business leader, being involved in numerous, significant discoveries throughout Australia & overseas

Key Learning Objectives

- ▶ Review the global make-up of the oil and gas industry, its jargon and its challenges
- ▶ Gain awareness of basic petroleum geoscience, petrophysics and field appraisal
- ▶ Discover petroleum exploration, drilling and evaluation/testing techniques and methods
- ▶ Appreciate reservoir engineering and the uncertainty surrounding resource/reserve estimation
- ▶ Understand field development planning techniques, economic assessments and reservoir management
- ▶ Determine the basic components of production engineering, managing field decline, processing and refining
- ▶ Appreciate the balance between commercial and technical risk, uncertainty and opportunity in a project lifecycle
- ▶ Review the design, construction, commissioning and decommissioning of facilities

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ABOUT THE COURSE

This intensive 2-day course will provide participants with a solid all round grounding in the technologies, concepts, methods and language used in upstream oil and gas projects.

The technical and commercial building blocks of oil and gas projects will be examined, and how a venture progresses; from the point of acquiring a license, through exploration, appraisal, concept selection and the development phase, into production, late field life and finally decommissioning.

The link to downstream is bridged with a discussion on refining and the LNG business.

Participants will learn to appreciate the impact of geological and reservoir uncertainty on concept selection and production management, and how the right combination of technology, business processes and decision making can improve project value.

Towards the end of the program, the critical roles of the many different disciplines and stakeholders involved in upstream projects will be discussed.

The commercial aspects of how oil and gas fields are evaluated and which profitability indicators are used to screen and rank projects will be analysed.

WHO WILL BENEFIT

This course is not a basic level introductory course. It has a specific techno-commercial focus for technical and business oriented professionals who are either new to the upstream oil and gas industry or experienced in one part but could benefit from a wider perspective.

- Technical (exploration and production, geoscience and engineering).
- Non-technical (commercial, finance, marketing and legal) backgrounds.
- Those who have recently joined an petroleum market development/project.

Would You Like To Run This Course On-Site?

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If you have **8+** interested people, an onsite course can be an ideal solution. Speak with **Anton Long** or **Holly Baldwin** on **+61 (02) 9080 4454** to discuss your customised learning solution, or email training@informa.com.au

EXPERT COURSE INSTRUCTOR



Professor Peter Moore

Professor Peter Moore is a senior oil and gas executive and has over 30 years of industry experience in large operating companies, including ExxonMobil and Woodside Petroleum Ltd.

He is a successful explorer, being involved in numerous hydrocarbon discoveries throughout Australia and overseas, with the most famous being the giant Pluto gas discovery that resulted in a \$15B LNG development and the giant Calliance discovery that will underpin the planned floating LNG development of Woodside's Browse fields (both while VP Exploration Australia at Woodside).

Professor Moore was the Executive Vice-President for Exploration from 2009 to 2013 for Woodside Energy Ltd (Australia's largest dedicated oil and gas company) where he led the company's worldwide exploration efforts with an annual budget of roughly \$0.5B. Prior to Woodside, he was head of Global Studies for ExxonMobil in Houston.

Professor Moore joined the Curtin Business School (CBS) in April 2014 & works part time as Professor & Executive Director Strategic Engagement. As part of his role at the Curtin Business School he is involved in reviewing the Faculty's strategic plans, as well as developing CBS's relationships and partnerships with key interest groups including industry, government and research bodies both in Australia and overseas. With Professor Moore's prior experience, he is also helping guide Curtin University's strategy around oil & gas.

WHAT OUR CLIENTS SAY

"Industry knowledge, ability to translate difficult concepts into layman terms and relevant experience (Australia Woodside) so able to give recent examples. Overall, really enjoyed the course and will apply daily in my role. Peter Moore exceptional choice of instructor."

Associate, **CT Partners**

"Great overview with enough detail to explain the concepts even if you have no technical background."

Information Officer, **NOPSA**

"Very knowledgeable, good 'on the ground' experience, kept the presentation moving along, very approachable."

Divisional Manager, **AON Risk Services Limited**

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2-Day Intensive Course Outline

Global energy context: oil and gas supply and demand

- Main producing countries and regions – OPEC vs. non OPEC
- Main consumers now and in future – can we deliver?
 - Money and muscle – the increasing power of the national oil companies
 - The exploration and production value chain – an overview of the asset management cycle

The petroleum system

- Basins, basin formation and plate tectonics
- Components of oil and gas accumulations – source, seal, reservoir and trap
- Petroleum provinces of the world – geological framework
- Gaining entry: exploration license types and agreements
 - Production sharing contracts vs. tax and royalty systems

Exploration methods

- Gravimetry
- Magnetometry
- Seismic – 2D and 3D onshore and offshore
- How much oil or gas to be found?
- Valuing a prospect – risked volumes and expected monetary value
- Outcrops and analogues
- The environmental impact of exploration (EIA)

Practical activity - Country entry problem – to go or not to go

Drilling systems and techniques

- Types of drilling rigs – onshore and offshore
- The rotary system – conventional, top drive and rotary steerable
- Drilling fluids, types and functions
- Automated rigs
- Well planning considerations
- Site preparation
- Drilling a well
- Casing and cementing
- Things that can go wrong – stuck pipe, overpressures, lost circulation and kicks
- Well control
- Mud logging

Reservoir description

- Reservoir rock types
- Depositional environments – the role of heterogeneity
- Structures – faults, folds and fractures
- Diagenesis and reservoir property modifications
- Reservoir fluids and composition
- Drive mechanisms – how does a well flow
- Volumetric estimates and reserves classification
- Well testing and reservoir surveillance – data gathering activities
- Reservoir modelling and simulation

Field appraisal

- Role of appraisal and uncertainty
- More data vs. a more flexible concept
- Appraisal planning
- The value of information

Practical activity - Designing an appraisal strategy

Concept selection and field development planning

- Defining requirements and specifications
- HSE requirements in field development
- From reservoir to surface – well completions and artificial lift
- Basic processing equipment
- The process flow scheme – from well head to refinery
- Facilities options and concepts – onshore/offshore
- Evacuation options

Petroleum economics

- Elements of a project cash flow and commercial indicators
- Discounting
- Production profiles into revenue
- Commercial risks, uncertainties and opportunities
- Oil vs. gas
- Profitability indicators used for oil and gas projects
- Project screening and ranking
- Economics vs strategies – publicly traded companies vs. national oil and gas companies

Managing production

- Managing the subsurface
- Managing surface facilities and maintenance
- De-bottlenecking
- Managing the external factors

Managing field decline

- Infill drilling
- Workover activities
- Facilities and process integrity issues
- Enhanced oil recovery techniques
- Incremental projects and near field opportunities

Refining and LNG

- Review how crude oil is refined via a short movie
- Understand the physical separation of crude via fractionation into the main fractions required for market ie. gases, gasoline, diesel, kerosene and residue/heavy fractions
- The LNG business; basic plant/process, separation into gas components and contaminants and commercial impacts

Decommissioning

- Legislation
- Economic vs. technical lifetime
- Decommissioning funding
- Decommissioning methods

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Easy Ways to Register

1 Web
www.informa.com.au/oilandgasproduction

2 Telephone
+61 (02) 9080 4395

3 Email
training@informa.com.au

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Oil & Gas Exploration & Production Fundamentals

	Location	Course Dates	Super Early Bird price valid until 17 May 19		Early Bird price valid until 7 Jun 19		Standard price valid after 7 Jun 19		4+ Dels Discount	
P19GR26PE	Perth	26-27 Jun 19	\$2,595 + \$259.50 GST	\$2,854.50	\$2,795 + \$279.50 GST	\$3,074.50	\$2,895 + \$289.50 GST	\$3,184.50	\$2,236 + \$223.60 GST	\$2,459.60

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Informa Corporate Learning – On-site & Customised Training

Informa Corporate Learning has a long-standing track record of delivering very successful customised learning solutions achieving real and measurable value for our clients through our senior training consultants.

If you have 8+ interested people, an on-site course can be the ideal solution – giving you the opportunity to customise our course content to your specific training needs, as well as attracting significant savings compared to public course costs.

Why Choose On-site With Informa Corporate Learning?

- 1. Custom design** – Together, we will identify the best blended learning solution for your culture, your people and your training objectives.
- 2. Quality Assured** – We design market-leading training programs, concepts and methodologies, with a 400+ course portfolio. Our rigorously selected 900+ instructor faculty are recognised experts in their field. Quality of their content and delivery methods is assured through continuous monitoring and evolution.
- 3. On-site training** is a cost effective way to train your people and achieve your defined outcomes.

Our Long Standing Clients Include:

Ambulance Victoria, BHP, Department of Planning, Transport & Infrastructure, SA, Origin Energy, Electricity Generating Authority of Thailand (EGAT), ActewAGL, Ajilon, Arrow Energy, Barrick, Chevron Australia, Coffey International, ConocoPhillips, Dalrymple Bay Coal Terminal, Department of Education, ENI Australia, Fortescue Metals Group, IBM, Jemena, Office of the National Rail Safety Regulator, Pacific National, PT Freeport, Public Transport Authority – WA, QGC – BG Group, Rio Tinto, UBS, Woodside, IP Australia, ANU, Health Purchasing Victoria, Telstra, Queensland Rail, EY, Litmus Group and more...

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