

Navigator Training

# PETROLEUM ENGINEERING FOR FINANCIERS

Two-day interactive workshop for financiers that unfolds the mysteries behind the science of oil and gas explorations

As the world's demand for oil and gas increases, so does the demand for professionals with the knowledge to manage oil and gas projects. Navigator's Petroleum Engineering for Financiers course will help financiers understand the science behind oil and gas explorations as well as the key considerations when managing operational risks.

## Do you want to

- + Understand the inherent factors affecting the oil and gas industry
- + Discover the science behind complex processes and how they affect the recovery of oil and gas
- + Learn what engineers look for when planning oil and gas explorations and how reserves are determined
- + Get to know the latest in drilling technology and equipment
- + Learn how to mitigate the risks and impacts of oil and gas accidents following BP's oil spill in 2010
- + Assess the economics and risks analysis of petroleum engineering

If the answer is YES, then this course is for you.

Navigator's Petroleum Engineering for Financiers course is designed and delivered by industry experts with decades of experience in petroleum engineering. It will introduce you to the world of petroleum engineering through the use of clear-cut and descriptive concepts.

This course has been designed to suit an audience from a wide range of professions. It can also be further tailored to suit your needs, regardless of the area or industry that you work in.

## The Navigator approach to training

At Navigator we believe in an interactive approach to training. We cap our class sizes allowing plenty of opportunities to ask questions and bring your own problems for discussion. Our trainers are currently active industry professionals.

## This course will enable you to

- + Understand the science and behaviour of hydrocarbon substance and monitoring
- + Acquire a good understanding of key terms and industry jargon
- + Understand what goes on behind an oil and gas exploration from start to finish
- + Be familiar with the ways reserves are measured
- + Gain in-depth knowledge about oil and gas production and refining options
- + Be aware of the safety issues surrounding exploration wells
- + Perform petro-economics and risk analysis

Secure your spot today - visit [www.navigatorPF.com](http://www.navigatorPF.com) or call  
Sydney +61 2 9229 7441 | Singapore +65 6440 8803 | London +44 20 3402 6034

## DAY ONE

# Introduction to the industry, hydrocarbon properties and extraction methods

Day one introduces you to the world of petroleum engineering, from the study of molecular properties in hydrocarbons to the processes involved in building extraction oil rigs.

### You will learn

#### Industry overview

- + Identify supply and demand dynamics affecting the oil and gas industry
- + Gain insights into the changing profiles of world consumption and reserves
- + Examine the forces stabilising oil prices and the presence of cartels
- + Understand the mechanics of upstream and downstream operations
- + Study the different oil field service facilities
- + Obtain an overview of the geological processes and life cycles

#### Formation of oil and gas reservoirs

- + Understand the characteristics defining onshore and offshore reservoirs
- + Study reservoir composition and formation
- + Learn how to distinguish between different types of hydrocarbon traps



#### Rock and fluid properties and exploration methods

- + Learn about the chemistry of petroleum
- + Gain insights into the interaction of pressure volume and temperature in oil wells
- + Know the different techniques used in exploration in different terrain
- + Gain insights into how engineers measure fluids for facilities design

#### Drilling methods and equipment

- + Understand the process from planning and drilling to exploration well set up
- + Examine visuals on well structures and terminologies used
- + Identify different types of rigs and platforms

#### Well testing and stimulation

- + Understand the procedures in testing wells for production
- + Learn about the units used to measure well productivity rate
- + Perform analysis on problem wells
- + Learn about well management to optimise production

#### Reserves determination and pressure maintenance

- + Learn about reserves definition determined by industry standards
- + Gain an understanding of different reserves estimate methods
- + Be acquainted with the analysis of technical curves and its purpose

## COURSE PARTICIPANTS



Day two covers production, processing issues and methodologies. You will learn how to analyse the costs and benefits of different alternatives and run assessments on risks and costs analysis.

### You will learn

#### Recovery mechanisms and methods

- + Learn about the different recovery methods; primary, secondary and tertiary
- + Understand the concept of Enhanced Oil Recovery
- + Understand the tradeoffs of water flooding and gas injection methods
- + Learn about efficient recovery and how it is measured

#### Artificial lift methods

- + Study artificial lift as a production method
- + Examine visuals on how the gas lift system works
- + Understand the working principles of jet pumps and valves

#### Oil and gas separation

- + Study the processes involved in separating oil and gas and how to achieve optimum liquid recovery
- + Gain insights into oil field processing
- + Get to know the different types of separators and valves



#### Refining options

- + Understand the steps involved in the refinery processes
- + Learn about the different refinery products
- + Learn to define the parts making up a refinery

#### Petro-economics and risk analysis

- + Learn about considerations to ensure profitability
- + Understand how to select between alternatives in exploration methods
- + Learn when and how to apply a decision tree analysis
- + Gain insights into different capital expenditure costs involved (engineering, materials and construction)
- + Conduct sensitivity analysis and petroleum economic evaluation flowchart

#### Treatment, storage and transportation

- + Understand the purpose of oil treatment and the factors affecting it
- + Get to know the characteristics defining emulsions
- + Learn about the objectives and methods of crude oil dehydration
- + Learn about the features of crude storage tanks and oil tank farms
- + Acquire insights into transportation systems (flow-lines, sub-sea lines)

#### Safety and production considerations

- + Gain knowledge of the hazards working with hydrogen sulphide
- + Learn about the effects of exposure and protection methods available
- + Study the growing issues with pollution and corrosion

## PREVIOUS PARTICIPANTS

*"Having used or worked in the past with the bigger corporate finance training houses, it has become clear that the UK and Europe's best modelling and project finance course provider is headquartered in Australia... Navigator trainers are expert modellers and true project finance professionals, continuously engaged with actual project finance model build assignments..."*

**Mr Matéo Celi-Cadieux, Project Executive, EDF Energy Renewables**

*"I was extremely impressed with the manner in which the training was conducted. Our trainer had vast knowledge of the subject and was very well experienced, he could answer any question related to project finance."*

**Shehzad Omar, Advisor - Transactional Advisory Services, KPMG**

*"We found Navigator to be experts in their field and flexible in delivery. We really appreciated that it was tailor-made and customized to ensure consistent understanding and approach across our already experienced team."*

**Bela Onken, Project Finance Modelling, KfW IPEX-Bank**

## Advisory · Modelling · Training

Navigator Project Finance is a world leader in the provision of project finance advisory, modelling and training services. We provide leading project finance professionals with in-house training and public courses in Asia, Australia, Europe, the United States, Canada, South Africa and the Middle East.

Navigator's principals are highly regarded thought leaders in project finance and our team consists of dedicated transaction, modelling and training specialists. We believe in an interactive approach to training and will tailor our courses based on course participants' needs. Our courses and their case studies, along with the extensive experience of our delivery team, will provide you with an outstanding solution to your project finance training needs.

### Free resources

Navigatorpf.com promotes further learning with a library of free resources including tutorials, e-books, focus papers and our regular project finance and financial modelling blog.

### Pricing

Please refer to our web page for current pricing  
[www.navigatorPF.com](http://www.navigatorPF.com)

### Global Training Partner Program

Our Global Trainer Partners receive ongoing benefits.

Contact us on +61 2 9229 7441 to find out more.

### Discounts

Book eight weeks in advance to get the 30% Early Bird discount

### Group booking discounts

Book three courses or more and get a 30% Group discount. Group bookings are available for one person booking multiple courses or one organisation booking multiple participants on one course.

## 4 EASY WAYS TO SECURE YOUR SPOT TODAY

1. Call us  
Sydney +61 2 9229 7441  
Singapore: +65 6440 8803  
London: +44 20 3402 6034
2. Email us  
[training@navigatorPF.com](mailto:training@navigatorPF.com)
3. Fax this registration form  
+61 2 9229 7499
4. Via the web  
[www.navigatorPF.com/contact](http://www.navigatorPF.com/contact)

### Registration form

Course Name

Course Dates

Our public courses are strictly limited to a maximum of ten participants. In order to guarantee attendance on a course we need your registration a minimum of four weeks prior to the course start date.

### Your Details

Family name (Mr/Mrs/Ms)

First name

Company

Department

Position

Address

Email

Telephone