

## An Introduction to Reservoir Engineering

### Aims

An understanding of the behaviour and movement of fluids in the reservoir is fundamental to the economic appraisal, development and production of oil and gas fields.

This course covers the broad spectrum of reservoir engineering and management activities during the appraisal and development of oil and gas fields. The broad issues covered are:

- basic engineering issues in field appraisal and development
- how geological (static) models are developed and utilised
- development of dynamic models
- how critical parameters can be established to plan an efficient field appraisal programme to acquire the necessary data
- how these data can then be evaluated, analysed and used to optimise the development of the asset
- with time, how further dynamic data are used to enhance the understanding of the field to provide efficient reservoir management

### Benefits

You will learn:

- the concepts and vocabulary of reservoir engineering
- the issues and uncertainties
- how to converse with and question reservoir engineering colleagues

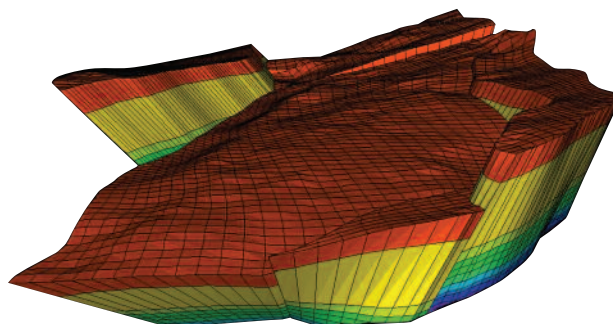
The course has been customised for integrated subsurface teams and has therefore been made more descriptive than mathematical. Learning will be reinforced through the completion of several practical exercises, both individually and in teams.

### Who should attend?

New and/or less experienced reservoir engineers, geoscientists, petrophysicists and facilities engineers. It is also suitable for technical managers and others involved in the subsurface management of oil and gas fields.

### Duration

- 3 days



### Course Instructors

Andrew Thomson is the founder of Reservoir Management Ltd (now part of Senergy) which was set up in 1990 and is currently the Chief Executive of Senergy Investments. He has nearly 30 years hands-on experience, with an extremely strong background in reservoir management, based on experience working as a petroleum, reservoir and operations engineer. He has played a central role in projects on pre-development, development and mature fields, both operated and joint venture. He has extensive working knowledge of the use and application of industry standard reservoir simulation packages. Andrew specialises in acquisitions, disposals and due diligence exercises and has conducted a large number of high level evaluations as well as providing technical input. He is a Competent Reserves Person under London Stock Exchange (LSE) Chapter 19 rules.

Mike Trees has over 30 years experience gained as a geophysicist, technical team leader and manager working for both major and independent oil companies. He has played a central role in projects on pre-development, development and mature fields, both operated and joint venture. He has extensive working knowledge of the use and application of industry standard geoscience packages. Mike is currently Technical Director of Senergy Investments.

## Course Description

Day one will cover:

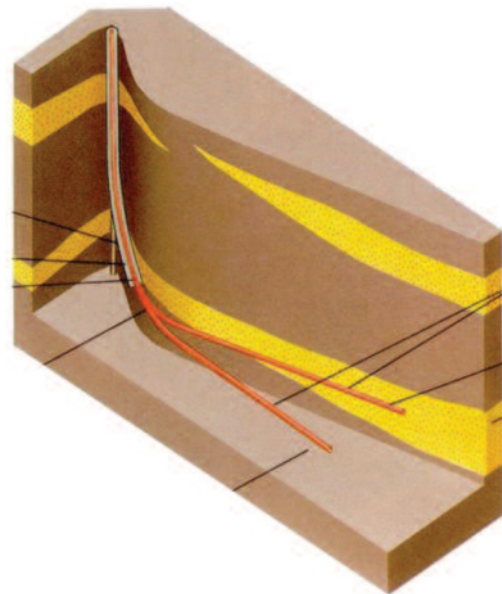
- introduction to reservoir engineering
- abbreviations and conversion factors
- subsurface pressures
- porosity and permeability
- capillary pressure
- relative permeability
- mobility
- PVT
- recovery mechanisms

Day two will cover:

- drilling engineering
- fluid sampling and appraisal well testing
- RFT analysis
- well test analysis
- production logging

Day three will cover:

- hydrocarbons in place
- recovery factors
- reservoir simulation
- production engineering/well technology
- short and long term forecasting
- improved recovery
- summary and conclusions



To book this course, please contact **Sarah McPhee** - Training Co-ordinator

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