

Reservoir Engineering Fundamentals

The essentials in a day

TRACS Training Master classes

One day Master classes are designed for people who want to update or refresh on specific topics without having to spend a week out of the office. The classes are led by experts in their respective fields and provide an opportunity for learning, inspiration, conversation and networking.

Designed for:

Those who interface with reservoir engineering professionals and need to understand the language, techniques and assumptions they make in forecasting reservoir performance under various development schemes.

Duration:

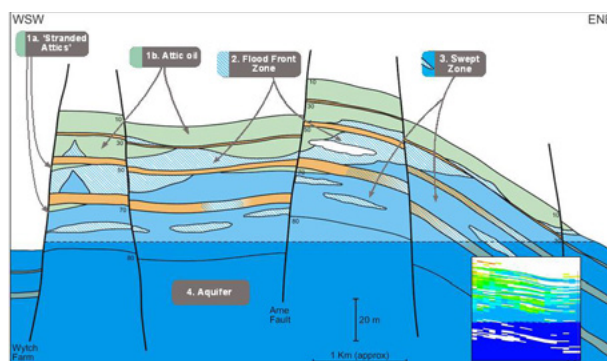
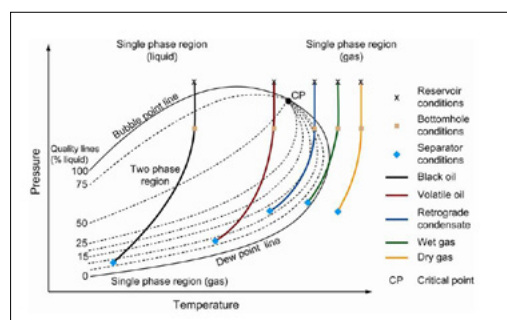
1 Day

Have you been on reservoir engineering classes in the past, heard the terms, seen the equations but not used any of it directly yourself? Would you like someone to run over the basics and just pick out the essentials - the parts everyone really needs to know?

This one day Master Class is designed to explain how Reservoir Engineers make subsurface interpretations, use these to build models to make forecasts and use these in turn to influence significant investment decisions.

The day will cover what types of models the reservoir engineer uses; from simple analytical (spreadsheet) tools to more complex numerical simulators, and will put in context the key fundamentals of rock and fluid properties, well performance and processing. The day will illustrate how these fundamentals and the commercial E&P context place constraints on forecasts, and why a significant associated range of uncertainty results.

This will be done in plain language accessible to those working outside reservoir engineering with the aim of giving you what you need to know to understand the subject - just the essential details.



Early Development
E&P Overview
Reservoir
Wells

Business & Risk
Open Air
Coaching
Master Class



Reservoir Engineering Fundamentals continued

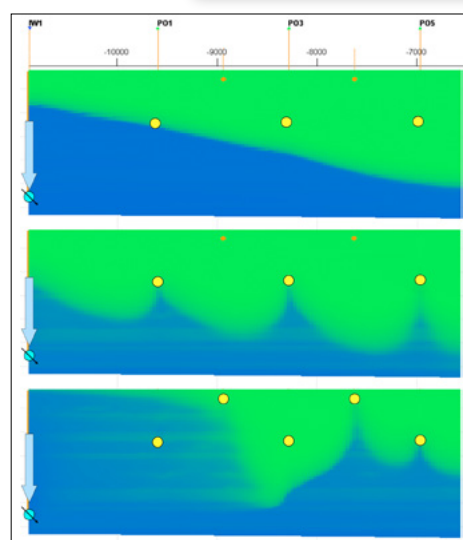
Course Content:

The day will cover six fundamental principles of reservoir engineering which everyone working with resource estimations and production forecasts should understand fully:

1. The influence of reservoir fluid properties on phase behaviour during production
2. What well testing really tells us about the reservoir
3. How reservoir fluids are displaced on a macroscopic and microscopic scale, ranging from the influence of reservoir architecture down to core plug scale heterogeneities
4. How to choose appropriately scaled models to select an optimal production mechanism for oil and gas fields
5. How to monitor reservoir performance and production forecasting and how this changes through the field life
6. How we manage uncertainty in reserves and resource booking, or in many cases fail to

Course Duration:

1 day



Courses available from this series:

E&P Business in a Day
Uncertainty and Risk in Development
How to Make a Good Reservoir Model
Common Fallacies in Casing and Tubing Design
Reservoir Engineering Fundamentals
Field Development Planning
Geomechanics Integration
New Trends in Data Analysis
The Energy Transition in a Day
Carbon Capture and Storage (CCS)

Course Tutor



Mark Cook BSc, MBA

Mark Cook founded TRACS International in 1992 after working with Shell as a reservoir engineer for 11 years. As a Director of TRACS he managed the UK and Russia Reservoir Management consultancy business until 2011. His particular interests lie in the combination of technical and commercial risk analysis, and he released the textbook "Petroleum Economics and Risk Analysis" in 2021. He practises as a consultant on projects and in the delivery of related training courses, and has been an SPE Distinguished Lecturer.