

Production Geology

This course aims to illustrate the linkage between geological interpretations and the petroleum engineering end-product they feed into. Structured around case study material, insight is given into the relationship between the subjective nature of geological uncertainties and the need to quantify the broader subsurface uncertainties of petroleum engineering.

The course covers fundamental principles of structure, stratigraphy, sedimentology and diagenesis, viewed in the context of the tasks of well planning, volumetrics and the geological interpretation of seismic, log and core data. It is offered class based or outcrop based in Wales as part of the 'Open Air' course series.

COURSE CONTENT

Establishing purpose

- What do we need to know?
- How do we find out?

Seismic as a framework

Sedimentology

- rock types from core
- rock types from log data
- the concept of 'facies'
- depositional environments

Structure

- interpretation of structures from seismic and log data
- structural styles
- the relationship between structure and sedimentation

Diagenesis

Building the 3D geological model

- assessing uncertainties
- determining volumes

Using the model

- designing wells
- interpreting drilling results
- quantifying uncertainty in terms of value
- decision making in the light of that uncertainty

Duration

Full day 5 days

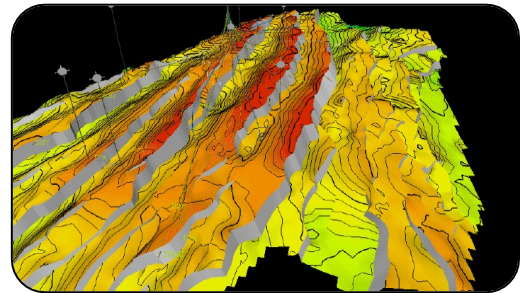
Duration is 5 days based on one trainer a field day is optional.

Learning Level

Skills ○○○
Knowledge ●●○
Awareness ●●●

Designed for:

The course is aimed at geoscientists early in their industry careers and is also well suited to petroleum engineers without an academic background in geology but who work with geoscientists on a regular basis.



Course Tutors



Mark Bentley PhD
30+ years - geoscience
Mark develops and runs courses in the Reservoir, E&P Overview, Open Air and Master Class series. He has a career background at Shell, AGR, TRACS and Langdale Geoscience. Mark is co-author of 'Reservoir Model Design', SPE and EAGE distinguished lecturer, Training Director for both AGR and TRACS. He is an Associate Professor Heriot-Watt University



Mark Bramwell BSc, PhD
35+ years - geoscience
Mark runs courses in the Reservoir, Early Development, E&P Overview and Open Air Series. He has a career background at Shell, KUFPEC, AGR and TRACS. Mark is programme manager for the Early Development and the E&P Overview Series.

