

Petrogenium. Academy

Upstream (Geology)

Development Geology

Consultant / Trainer

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The **Petrogenium (in collaboration with EPTS) Development Geology** course will provide participants introduction to "Development Life Cycle" starting with the gathering of geological data, the interpretation thereof, the preparation of geological models and the quantification of subsurface uncertainty are discussed. The development geologist is equipped with the skills to construct these models. Attention is given to the impact on field operations and on field management during its entire lifecycle.



Participants

This **Petrogenium** course is aimed at Petroleum engineers and geologists involved with exploration and development of oil and gas reservoirs. Participants need a basic understanding of Reservoir/Petroleum Geology and preferably some 2 - 4 years experience.



Learning Objectives

At the end of the course participants will apply geological concepts, construct maps and sections and validate computer-generated interpretations.

- be able to calculate subsurface volumes and assess the uncertainties.
- learn about the contents of a well proposal.
- be able to plan appraisal wells and assess their economic value.
- acquire practical experience by working on an actual field study in teams
- better understand their own role in the development life cycle.

Why select Petrogenium.?

The above support will be provided by principal consultants with 30+ years world-class experience in the technology and hands-on know-how from operation of refinery units.

Contact Petrogenium.:

Email: training@petrogenium.com

Website: <https://www.petrogenium.com/training/>

Because Experience Matters

Programme

DAY 1

- Introduction & Course Overview, The energy business, Development projects, subsurface data
- Oil and gas development projects
- Robin Field: Team Exercise 1, Project activities planning
- Petroleum Geology Introduction of Interest to the Development Geologist:
- Depositional Environments (Sedimentology)
- Correlation Methods: Sequence Stratigraphy
- Structural Geology
- Petroleum Systems: Hydrocarbon generation - migration - analysis
- Various Group Exercises (Correlation and Field Appraisal).

DAY 2

- Subsurface Models, Input Data and Concepts
- Seismic data, acquisition, processing and interpretation
- Robin Field Exercise 2, Field Appraisal planning
- Structural types, traps, fault seals, maps and sections
- Robin Field Exercise 3, Correlation
- Clastic sedimentary environments
- Robin Field Exercise 4, Seismic well data structural map, cross section

DAY 3

- Measurements and Evaluation of Subsurface Data
- Basic well technology, horizontal wells, well data
- Log and core data, acquisition, analysis, interpretation, uncertainties and mapping
- Reservoir Properties (porosity - permeability, rock strength etc)
- Robin Field Exercise 5, Net sand mapping
- Carbonate reservoirs (optional)
- Subsurface pressures: Robin Field Exercise 6, Contacts

DAY 4

- Subsurface Development Options
- Volumetric Assessment, subsurface uncertainties (Geo-statistics)
- Robin Field Exercise 7, Volumetric Calculations
- Subsurface development planning
- Robin Field Exercise 8, Static and dynamic models

DAY 5

- Field Operations and Development
- Well Design: Geological input
- Robin Field Exercise 9, Surface Development Options, Project Planning
- Basic project economics and financial performance indicators
- Robin Field Exercise 10, Economics; Determining project economics and sensitivities using an Excel economics spreadsheet.
- Course review and round-up