

Fundamentals of Hydrocarbon Exploration

Consultant / Trainer

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The **Petrogenium** (in collaboration with EPTS) **Fundamentals of Hydrocarbon Exploration** course participants gain a solid understanding of the geological processes that lead to oil and gas formation, along with practical knowledge of the key tools and techniques used in petroleum exploration. The course equips them with the fundamental skills needed to contribute effectively to exploration activities in oil and gas companies or government petroleum organizations.



Participants

This **Petrogenium**. course is applicable for Geologists and geophysicists working in the oil & gas business and in related government organizations.



Learning Objectives

At the end of the course the participants will have a good general understanding of the basics of oil and gas exploration.

Each topic is introduced by a lecture, and learning is re-enforced by practical exercises (on paper). Hand-out material in paper and/or electronic format will be provided. On request, special emphasis can be given to the local geological setting.

economics

Course content

- Overview of world-wide oil & gas occurrences:
- Formation of sedimentary basins.
- Play concepts and petroleum systems.
- Fundamentals of seismic acquisition, processing & Interpretation
- Key aspects of reservoirs (clastics & carbonates), seals, & source rocks.
- Volumes, risk & uncertainty, exploration economics
- Hydrocarbon generation & migration
- Oil and gas prospect mapping
- Basin prospectivity assessment

Programme

DAY 1

Focus on basins & screening tools

1. Introduction: the exploration work flow & Global distribution of oil & gas
2. Exercise: testing the geological knowledge
3. Basin formation & type
4. Exercise: basin type and structural style
5. Non seismic methods
6. Exercise: using surface geochemistry
7. Interpreting basin stratigraphy
8. Exercises: stratigraphy and prospectivity

DAY 2

Focus on seismic, logs, source & clastics

1. The seismic method
2. Exercise: interpretation of seismic data 1
3. Source rocks
4. Exercise: interpreting source rock data
5. Siliciclastic reservoirs
6. Exercise: Interpretation of seismic data 2
7. Geology from wireline logs
8. Exercise: well correlation

DAY 3

Focus on carbonates, traps & facies

1. Carbonate reservoirs
2. Exercise: Trapping geometries
3. Exercise: interpretation of seismic data

DAY 3 continued

4. Seal
5. Exercise: clay smear potential
6. Facies mapping
7. Exercise: facies map construction

DAY 4

Focus on kitchen & prospect

1. Burial history reconstruction
2. Exercise: create burial history
3. Generation & migration of hydrocarbons
4. Exercise: effective drainage area construction
5. Kitchen mapping
6. Exercise: maturity data and kitchen map
7. Prospect mapping
8. Exercise: Assess prospect risk & uncertainty

DAY 5

Focus on plays, prospects, and volumes

1. Plays and petroleum systems
2. Exercise: play maps
3. Volumetrics, risk & uncertainties
4. Exercise: calculate volumetrics in prospect
5. Exploration economics
6. Exercise: data integration
7. Wrap-up & evaluation

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/>

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