

INTRODUCTION TO PETROLEUM GEOLOGY

21 - 23 Sep 2015 | Yangon, Myanmar

After completing this course, participants will have a broad understanding of the basics of petroleum geology and its application in oil and gas exploration. This knowledge will enable them to function better in their respective organisations.



WHO SHOULD ATTEND?

This is an entry-level course intended for petroleum industry staff and related government organisations in need of basic petroleum geological training, including engineering, geophysical, technical support, and commercial staff. Basic level geology knowledge is required to follow the course fruitfully.



TRAINER'S PROFILE : DR. JAN DE COO

Dr. Jan de Co is a seasoned professional with more than 37 years' experience in the global petroleum industry.

He earned a PhD in geology from Leiden University in The Netherlands, after which he was appointed lecturer at the National University of Malaysia in Kuala Lumpur, to teach historical geology, sedimentology and computer applications in geology. In 1977 Dr. De Co joined Shell International Petroleum, where he worked in various roles in the field of exploration geology based in Tunisia, Malaysia, Nigeria, Russia, Kazakhstan and China. During his employment at Shell, he was instrumental in numerous significant oil discoveries and the development of major industry projects.

At the end of 1999, Dr. De Co left Shell and worked as an independent petroleum geologist in Morocco and Suriname. In 2005 he joined a consultancy agency in The Netherlands to work for numerous clients around the world. During this period he developed a new niche market for the application of geothermal energy in The Netherlands, which since then has taken off with great success. In 2010, Dr. De Co joined Petronas Carigali in Kuala Lumpur, Malaysia, in the role of custodian international exploration and staff competency development. After leaving Petronas Carigali in 2013, he worked intermittently as petroleum geological advisor for various international clients.

Dr. De Co is an active member of various international professional societies, amongst which AAPG (American Association of Petroleum Geologists), EAGE (European Association of Geoscientists and Engineers) and KNGMG (Royal Geological and Mining Society of The Netherlands).

About Event

A 3-day introductory course that will explain the principal elements of petroleum geology as follows:

- **History of petroleum exploration and the context of petroleum geology**
The search for hydrocarbons through the ages and the relationship of petroleum geology to other sciences.
- **Physical and chemical properties of oil and gas**
The chemistry and natural characteristics of oil and gas.
- **Exploration methods**
Geophysical prospecting techniques, geological evaluation, petrophysics and drilling.
- **The subsurface environment**
The influence of temperature, pressure and fluid dynamics.
- **Generation and migration of petroleum**
Organic matter, kerogene, maturation, migration and the petroleum system.
- **The reservoir**
Porosity, permeability, diagenesis, rock types and reserve estimations.
- **Traps and seals**
Trap types, seals and cap rocks.
- **Sedimentary basins and petroleum systems**
Basin types and their formation in relation to the occurrence of oil and gas.
- **Non-conventional petroleum resources**
Tar sands, oil shales, coal bed methane and shale gas.

FEE	1 PAX	3 PAX OR MORE
Per Person	USD 3095.00	USD 2895.00
Early bird discount - Pay Online with Credit Card by 28th Feb to SAVE USD 300.00 per person		



FOR ENQUIRIES

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COURSE AGENDA

DAY 1

HSE briefing, introduction and housekeeping issues

Session 1: History of petroleum exploration and the context of petroleum geology

- How and why did oil become the preferred energy source.
- Who were the initial explorers.
- What changed the balance of power between IOCs and NOCs?
- What are the implications of recent developments in unconventional oil and gas production?
- Petroleum geology vis-à-vis chemistry, biology, physics, astronomy and mathematics.

Session 2: Physical and chemical properties of oil and gas

- Hydrocarbon gas
- Non-hydrocarbon gas (CO₂, H₂S, N₂)
- Gas hydrates
- Oil chemistry
- Crude oil classification

Session 3: Exploration methods

- Geophysical prospecting techniques, geological evaluation, petrophysics and drilling.
- Aerial photography and satellite imagery
- Potential field methods (gravity and magnetics)
- Reflection Seismic and seismic interpretation
- Geological mapping and modelling
- Petrophysics
- Evaluation of drilling data

DAY 2

Session 4: The subsurface environment

- Water
- Temperature
- Pressure
- Fluid dynamics

Session 5: Generation and migration of petroleum

- Organic matter
- Kerosene
- Maturation of organic matter
- Migration of oil and gas
- The petroleum system

Session 6: The petroleum reservoir

- Porosity
- Permeability
- Diagenesis of sedimentary rocks
- Rock types
- Reserve estimations

DAY 3

Session 7: Traps and seals

- Trap types
- Seals
- Cap rocks

Session 8: Sedimentary basins and petroleum systems

- Basin types
- Basin formation in relation to the occurrence of oil and gas

Session 9: Non-conventional petroleum resources

- Tar sands
- Oil shales
- Coal bed methane
- Shale gas

Various exercises will be included during some sessions, to enhance the learning experience.



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