RISK MANAGEMENT IN PETROLEUM EXPLORATION

29 Sep - 1 Oct 2015 | Jakarta, Indonesia

A 3-day advanced course that will instruct how to underpin the decision-making process of drilling exploration wells. Sound business decisions must be based on a thorough assessment of the drilling prospect's risks and of the expected resource volume. Proper risk and volume assessments are the essential links between subsurface evaluation and the business aspect in the petroleum industry.





TRAINER'S PROFILE: **DR. JAN DE COO**

Dr. Jan de Coo 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 Coo 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 Coo 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 Coo 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 Coo 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).

Course Objectives

After completing this course, participants will have an understanding of the risk and volume assessment basics. The course results will allow participants to produce meaningful assessments of drilling prospects they will be involved in. They will be able to understand and constructively challenge risk and volume assessments by colleagues, partners, or competitors, e.g. in a data room, or during negotiations.

The following topics will be covered:

- The principles of risk and volumes assessment. How to translate geological understanding into acceptable numbers and ranges.
- The distinction between risk and uncertainty.
- Some statistical principles, such as the explanation of distribution curves, understanding of expectation curves, how to properly manage risked volumes, what are conditional probabilities and dependencies.
- Uncertainty of trap, reservoir, seal and charge, illustrated by examples.
- Guidelines and exercises for estimating risks reasonably and consistently.
- Calculating volume ranges for prospects and for prospect portfolios; how to aggregate prospect volumes for a meaningful representation of prospect portfolios as input for commercial evaluations and management presentations.
- Incorporation of geophysical evidence in improved risk assessments.

WHO SHOULD ATTEND?

This course is designed for hydrocarbon exploration staff, with previous work experience. It is also beneficial for prospect portfolio analysts, new business developers and their management, including geologically oriented staff from financial institutions and regulatory government agencies. It may be instructive for staff from disciplines working closely with exploration staff, such as reservoir engineers, petrophysicists and geophysicists.

FEE	1 PAX	3 PAX OR MORE
Per Person	USD 3095.00	USD 2795.00

Early bird discount - Pay Online with Credit Card by 28th Feb to SAVE USD 300.00 per person

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FOR ENQUIRIES

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COURSE AGENDA

DAY 1

HSE briefing, introduction and housekeeping issues

Session 1: Introduction

- The casino analogue
- Exploration tasks and risk analysis
- Risk analysis and petroleum exploration
- · Definitions of reserves

Session 2: Geological estimates under uncertainty

- Risk versus uncertainty and estimating magnitude of geological uncertainty
- · The value of information

DAY 2

Session 3: Risk analysis of exploration prospects

- Estimating prospect reserves and its parameters
- Generation of the prospect-reserves distribution
- Economic translation of the prospect-reserves distribution
- Probability of Success (POS)
- The Expected Value concept (EV)

Session 4: Economic analysis of exploration ventures

- · Time value of money and discount rates
- The concept of Net Present Value (NPV), Internal
- Rate of Return (IRR), and Return on Investment
- Exploration cash flows and discounted cash-flow analysis

DAY 3

<u>Session 5:</u> Exploration play-risk analysis and economic assessment

- · Plays and petroleum systems
- Risk analysis of prospects and plays
- Common Risk Segment (CRS) mapping
- Play-Based Exploration (PBE)

Session 6: Management of exploration projects

- · Dealing with risk and risk aversion
- Common business conventions for mitigating risk
- Prospect and play portfolios
- Principles of exploration portfolio management
- Managing exploration plays



