Petroleum Risk and Portfolio Management

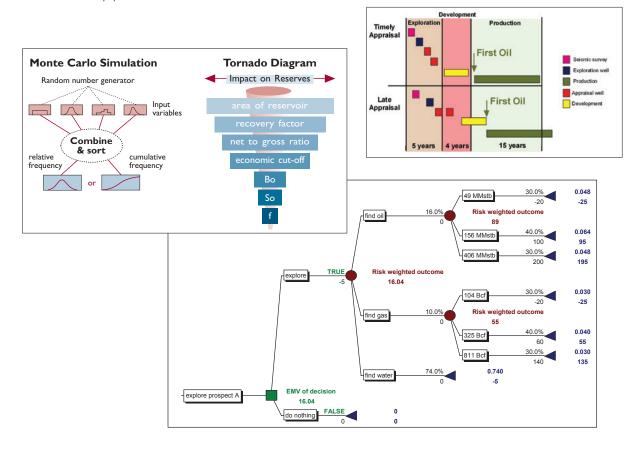
Designed for: The course is designed for staff working in geoscience, engineering, finance, or commercial departments of oil and gas companies, or companies which supply finance or services to the oil and gas industry. Duration (days) Skills Knowledge Awareness

The objective of the Petroleum Risk and Portfolio Management course is to provide practical advice and tools that can be used to identify, express, analyse and manage both technical and non-technical E&P risk and uncertainties.

Learning is reinforced by working on case studies to explore risk quantification and mitigation, risked production and cash-flow management, risk management through asset portfolio manipulation and the risking of incremental projects.

Monte Carlo modelling and Decision Tree analysis software will be employed throughout the course.

A number of company reports and portfolios will be used to develop practical skills.



Early Development E&P Overview Reservoir Wells Business & Risk Open Air Coaching Master Class





Petroleum Risk and Portfolio Management continued

Course Content:

Introduction

Brief review of economic and financial indicators (with an emphasis on risk management)

Defining risk and uncertainty

Identifying uncertainties in E&P businesses Expressing uncertainty and accounting for

data limitations

Combining uncertainties

- Dependant and independent variables
- Methods: Monte Carlo, Parametric and Three point distributions

Tools for quantifying risk

- · Sensitivity analysis
- · Decision three analysis
- Simulation (Monte Carlo)

Technical uncertainties and their management

- Exploration volume, portfolio and timing
- Appraisal and feasibility studies value of information and value of flexibility
- Development planning uncertainty reduction vs mitigation
- Production forecasting deterministic vs probabilistic methods

Non technical uncertainties and their management

- Market factors price, cost, exchange rate, inflation
- · Human factors political, fiscal, competitor, partner
- Portfolio Management
- Portfolio theory overview
- Utility theory influence on corporate behaviour
- Asset selection 'right sized' and core vs non core
- The portfolio 'efficient frontier' with respect to risk and value - is it valid for E&P?
- Impact of diversification on total portfolio risk
- Company behaviour as a function of portfolio size and spread P90 vs P50 companies.

Course Duration:

Duration is 3 days.

Courses available from this series:

Strategy & Performance Management
Petroleum Economics
Oil and Gas Business Decisions
Risk Analysis
Petroleum Economics and Risk Analysis
Oil and Gas Risk Management
E&P Business Simulation (Panacea)
Asset Trading Game

Petroleum Risk and Portfolio Management

Course Tutors



Mark Cook BSc, MBA

Main Series tutoring: Early Development, Business & Risk, Reservoir Engineering

Industry experience: 40 years, reservoir engineering, economics and risk analysis

Career background: Shell, TRACS (Director) and AGR (VP) Personal: Author, "Hydrocarbon Exploration and Production' (Elsevier 2008), 'Petroleum Economics and Risk Analysis' (Elsevier 2021), SPE distinguished lecturer on Risk Analysis



David Palmer BA (Hons) Economics

Main Series tutoring: Business & Risk

Industry experience: over 25 years, commercial, economics **Career background:** BP, Britoil, AGR and TRACS

Personal: Commercial Manager, Senior Business Analyst, Learning and Development Manager

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