





Course: Oil & Gas Economics & Risk Evaluation

Code	City	hotel	Start	End	price	Hours
148	Manama (Bahrain)	Hotel Meeting Room	2024-11-10	2024-11-14	3450 €	25

Introduction

Economic evaluation in the oil and gas industry is an encompassing activity. It involves the bringing together of the principal technical and commercial dimensions of a project into a forecast of future performance, that allows different projects to be compared and ranked according to economic and/or other criteria. At its heart, economics is an organizing and quantification exercise. Increasingly, its boundaries are expanding to include a quantification of risk. Risk analysis is a rapidly growing discipline that can take many different forms. It is best understood and applied one step at a time – for professionals and for organizations.

Seminar Objectives

- Introduce the fundamentals of economic evaluation and of risk analysis in the oil and gas industry.
- Focus on basic, simple and pragmatic solutions.
- Build understanding, apply concepts, use software tools, increase sophistication one step at a time.
- Understand alternative approaches advantages and disadvantages.
- Use real life examples and situations.

Organizational Impact

• Develop a clear understanding of the role of economics and risk analysis in an organization.



- Put current economic evaluation/risk analysis practices of your organization into context.
- Choose and apply approaches that make sense to your organization.
- Make better business decisions with better decision tools.

Personal Impact

- Sharpen and modernize evaluation skills.
- Become conversant in the languages of economic evaluation and risk analysis.
- Understand fundamentals, learn to take a practical approach.
- Put economics and risk into perspective.

Who Should Attend

This seminar takes a building block approach to understanding what economic and risk analysis is about. It is designed to become as sophisticated as its participants are comfortable. It will initially be a refresher course for those who are economics professionals and provide a framework for those who are not. We will advance our understanding as a group – learning from real examples and from each other – and we will take a hands-on approach at every opportunity. This is a course for anyone who has an interest in this field.

Seminar Outline

DAY 1

Introductions

• Who we are, what we hope to accomplish



Economics 101

- What is economics, where does it fit in an oil & gas company, who are the economists, when do they become activated, why is their work important?
- Exploration versus development versus acquisitions & divestitures.
- The many faces of the economist economist as expert, organizer, innovator, motivator, communicator.
- The many facets of economics quantify, optimize, compare and combine projects.
- Beyond economics financing, financial impact.

The Economic Model

- The framework for economic analysis.
- It's about cash cash flow versus income, integrated financial statements, value creation.
- It's about the future point forward versus full-cycle evaluations.
- The fundamentals of cash flow projection revenues and costs.
- Modeling options software, styles, needs.

DAY 2

• Recap of Day 1

The Economic Model (cont'd)

- An example cashflow, economic indicators, graphics, analysis.
- In class assignment and presentations.
- Learning to be critical.

Introduction To Risk

- Exploration risk versus development risk reserves risk, cost/schedule risk.
- Risk versus uncertainty.



- Risk versus opportunity.
- Risk analysis versus sensitivity analysis.
- Quantitative versus qualitative.

Statistics 101

- About probability distributions.
- Basic statistical concepts mean, median, mode, skewness.
- About combining probability distributions Monte Carlo simulation, correlation, tendencies.
- Software tools Crystal Ball, @Risk, other.
- In class assignment and presentations.

DAY 3

Recap of Day 2

An Exploration Example

- Set the scene probability of geological success, reserves distribution, minimum commercial field size, truncation, probability of economic success.
- Simple 5-branch decision tree success case, risked results.
- What it all means.
- An alternative approach Monte Carlo simulation.
- Decision trees versus Monte Carlo two sides of the same coin.
- In class assignment and presentations.
- Getting more sophisticated a real world example.

DAY 4

• Recap of Day 3

A Development Example



- Set the scene.
- Different priorities at different stages optimizing decisions, costs and schedule.
- Optimizing decisions a real world example from sensitivity analysis to stochastic results.
- The importance of presentation making it simple.
- Where is the value?

DAY 5

Recap of Day 4

Cost Analysis

- What is it? Why is it important? Benefits and pitfalls.
- Basic concepts most likely estimates, deterministic totals, contingency and its dynamics.
- A real world example the long and short of it.

Other Concepts

- Value of Information, Real Options, RAROC, other.
- Keep on exploring and learning.

Recap

- Concepts, applications & implications.
- What it means for you and your organization



The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

• Theoretical Lectures:

We deliver knowledge through advanced presentations such as PowerPoint and visual materials,
including videos and short films.

• Scientific Assessment:

 $\circ\,$ We evaluate trainees skills before and after the course to ensure their progress.

• Brainstorming and Interaction:

 We encourage active participation through brainstorming sessions and applying concepts through role play.

• Practical Cases:

• We provide practical cases that align with the scientific content and the participants specific needs.

• Examinations:

o Tests are conducted at the end of the program to assess knowledge retention.

• Educational Materials:

• We provide both printed and digital scientific and practical materials to participants.

• Attendance and Final Result Reports:

• We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

• Professionals and Experts:

• The programs scientific content is prepared by the best professors and trainers in various fields.

• Professional Completion Certificate:

Participants receive a professional completion certificate issued by the Scandinavian Academy for
Training and Development in the Kingdom of Sweden, with the option for international authentication.

• Program Timings:

 Training programs are held from 10:00 AM to 2:00 PM and include coffee break sessions during lectures.