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# Course: Oil & Gas Economics & Risk Evaluation

Code	City	hotel	Start	End	price	Language - Hours
148	Al Khobar	Hotel Meeting	2027-01-17	2027-01-21	12950 SR	En - 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



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- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

**Program Timings: 9:00 AM to 2:00 PM**

**The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**