

# EC1 PETROLEUM ECONOMICS AND RISK ANALYSIS

Mr. Anwar Omar

1950 €

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## COURSE OVERVIEW

The Petroleum Economics element of the course provides knowledge of the role of petroleum economics in decision making for both exploration and production ventures. It gives participants the skills to perform economic evaluations using a selection of indicators derived from discounted cash-flow forecast, to rank projects against alternatives, and investigate economic robustness. Learning is reinforced by working on a number of real issues such as managing a cash-flow crisis, manipulating asset portfolios and evaluating incremental projects.

The objectives of the Risk Analysis are achieved through the use of a case study taken from an offshore oil field development to identify, express and analyze technical and commercial uncertainties. This allows continuity between the various subjects covered. The course is run in a workshop form using personal computers.

## WHO SHOULD ATTEND

This course is designed for senior managers, negotiators, business developers, engineers and geologists working in oil and gas companies. It is also beneficial for scientists working with companies providing financial services to the oil and gas industry.

## COURSE CONTENT

### PETROLEUM ECONOMICS

#### • Introduction

- principles of economic analysis
- application of principles in decision making
- Tactical decisions:
- Should an expl well be drilled
- Should a project be developed
- development method
- capacity of facilities

- sales value for sale/acquisition of asset
- Is a field development economically viable

#### • Basic Concepts:

- time value of money
- discounting/compounding
- cash flow analysis
- discount rate & WACC
- Hurdle rate
- Economic/Profitability

- **Economic Indicators:**
  - Payout
  - Max Exposure
  - Profit-to-Investment Ratio
  - ROR
  - NPV
  - DPIR
- **Exploration Economics**
  - Expected Monetary Value (EMV)
  - Basic Statistics & Probability
  - Prospect appraisal
- Expected monetary value (EMV)
  - Decision Tree analysis
- **Incremental economics**
  - Typical incremental projects during the field life cycle
  - Evaluating incremental projects
- **International E&P Agreements**
  - History
  - State
  - IOC
  - Concession Agreements
  - Tax/Roy Agreements
  - PSC
  - Risk/Technical Service Agreements
  - Agreements in various countries:
  - Sudan- Egypt-Libya-Algeria-Gabon-SA-UK
- **Case Studies – Comparative Analysis of 2 Fiscal Regimes**

## THE LECTURER



**Mr Anwar Omar**

Mr Anwar Omar is a Cum Laude Oxford graduate in Petroleum Economist and has been employed by PetroSA, the National Oil Company of South Africa for more than 2 decades.

At PetroSA Mr Omar has been involved on the International Business Development front as International Business Development Manager and Regional Manager and have extensive experience on the commercial challenges relating to decision-making on investment opportunities in the upstream arena. Additionally, Mr Omar is an expert on comparative Upstream Fiscal Terms having evaluated numerous upstream opportunities in various countries. Mr Omar also delivered courses in Petroleum Economics and Risk Analysis to audiences in several international locations. The Petroleum Economics module also forms part of the University of Western Cape MSc Program which Mr Omar presents annually.

Mr Omar graduated Cum Laude in Petroleum Economics at Oxford University and holds a Masters degree in Business Administration (MBA) from the University of Stellenbosch in South Africa.