

# ECONOMICS AND RISK ANALYSIS OF UPSTREAM PROJECTS

E-070

## OBJECTIVES

To provide participants with an in-depth understanding of the tools used in economic analysis and decision making tools within the upstream industry.

Upon completion of the course, participants will be able to:

- carry out investment profitability studies including all aspects of complex fiscal terms, inflation, and financing,
- analyze the economic results and carry out sensitivity analysis,
- take into account the specific dimension of risk in exploration for oil and gas,
- develop advanced computer models for the study of oil and gas development projects.

## COURSE CONTENT

### ECONOMIC AND CONTRACTUAL FRAMEWORK OF E&P 0.5 day

Various phases of exploration-production  
Technical cost, evolution of the economic environment  
Petroleum exploration and production contracts  
Concessions, production sharing contracts, service contracts  
Sharing of the economic rent, economic flexibility in petroleum contracts  
Economic clauses

### INVESTMENT PROFITABILITY STUDIES 1 day

Financing of oil and gas projects, cost of capital and discount rate  
Review of economic criteria for investment project evaluations  
Global profitability of invested capital  
Specific method for exploration-production: shadow interest  
Introduction to risk analysis, risk and discount rate, sensitivity analysis, Spider and Tornado diagrams  
Case study: Economic study of an oil field development project

### RISK ANALYSIS OF E&P PROJECTS 2.5 days

Probability of success, analysis of economic risk in oil exploration  
Evaluation of exploration projects and decision trees  
Farm in/Farm out  
Risked and unrisked economics  
Case study: Economic study of an oil project including Min, Mode and Max scenarios  
Evaluation of development projects  
Economic risk associated with a marginal development  
Decision trees and subjective probabilities, decision theory

### ASSET MANAGEMENT 1 day

Components and determinants of asset valuation at various stages of maturity: exploration and appraisal, development, production  
Review of methodologies and processes, probabilistic analysis  
Asset aggregation and portfolio optimization, tools of choice for comparing expected results and budget efficiencies  
Conclusions, what works and what doesn't  
Contribution of risk analysis and management to successful exploration

#### ▲ Who should attend?

Engineers, economists and project managers who need to extend their understanding of the specific methods used to evaluate exploration-production projects.

#### ▲ Duration

**5 days**

#### ▲ Sessions in English

**June 14-18, 2010**  
Rueil-Malmaison (Paris)

**French session: F-070**

#### ▲ Registration

Fees: **€ 2,320**

Contact:  
eco.rueil@ifptraining.com  
Fax: (+33) 1 47 52 71 09

#### ▲ Course Coordinator

**Mohamed Lyes  
DJENAOU**

Ref. **EG / ERA**