

# Exploration Prospect Appraisal and Economics

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## Business context:

E&P professionals should be aware of the uncertainty in their prediction of the volumes of oil and gas in a structure, which is best expressed by a probabilistic statement: the expectation curve. A further awareness is needed of project economics in oilfield development. This course will present the participants with a wider view, from translating prospect evaluations into probabilities of hydrocarbon volumes and into the monetary value of a wider prospect area, as well as the basics of development economics.

## Who should attend:

Explorationists involved in prospect generation, team leaders, exploration managers, petroleum engineers involved in economic evaluation.

## Course content:

- The position of prospect appraisal and petroleum economics in the context of the E&P decision process.
- A recapitulation of descriptive statistics and of probability theory. Definition of relevant distributions.
- Estimation and parameterisation of variables for prospect appraisal, including their uncertainties
- Elementary Reservoir Engineering principles and reserve definitions
- Quantification of world-wide exploration experience
- Principles of Bayesian statistics, and its application prospect appraisal
- Basic economics, different fiscal systems and Petroleum Contracts
- Development project economics and sensitivities to internal and external factors
- Decision analysis
- Exploration economics based on Expected Monetary Value
- Scenario development

## Learning, methods and tools:

The course uses an alternation between lecturing, paper and computer exercises. Hand-out material will comprise a text and copies of presented slides.