Project Risk, Uncertainty and Decision Analysis for Conventional Reservoirs

WHO SHOULD ATTEND: Engineers, Planners, Commercial team members and Geoscientists who are charged with creating value beyond an exploration discovery or for conventional reservoir development projects

The premise for this course is that sound estimation of key engineering, geotechnical, and economic parameters is essential for maximizing profitability of oil and gas field development and operations.

Traditional deterministic methods call for the ongoing study of key parameters to get ever closer to "The Answer." Probabilistic methods, on the other hand, recognize that most parameters have some amount of uncertainty, even through the development phase. Accordingly, this course deals with estimation under uncertainty through probabilistic estimation. We focus on identifying the key manageable parameters; thereby, helping professionals become proficient estimators and communicators of the main drivers of project value for more responsible characterization and valuation.

Focus areas covered:

1) **Fundamental Concepts of Dealing with Uncertainty** which begins with applying Statistics as a language for understanding and communicating uncertainty, followed by instruction in dealing with uncertainty through better estimating practices.

2) **Petroleum EUR and Production Forecasting** which are cornerstones to project economic valuation.

3) **Economic Valuation and Value of Information assessments**, which are central to all decisions we make in our projects. Included are fundamental concepts of identifying key drivers of economic uncertainty. Decision tree concepts, incorporating Bayesian techniques are covered with several practical examples.

The course (1) uses realistic games and exercises to illustrate principles and mechanics of good estimating; (2) illustrates analytical procedures used to identify, quantify and manage the uncertainty and risk associated with modern petroleum field development and production; and (3) identifies the flaws and unintended consequences of many procedures currently used for estimating field production.

The outline below illustrates why this is the course to help increase the probability of achieving "stretch" reserve and production targets.

Course Outline

Day 1: Introduction, Probability, Distributions and Dependency, Dealing with Uncertainty, Decision Trees - Introduction

Day 2: Petroleum EUR Uncertainty, Chance of Project and Geological Success, Production Forecasting

Day 3: Economic Valuation and Aggregation, Value of Information -Perfect and Imperfect, Performance Tracking

Rose & Associates LLP.
7660 Woodway Drive, Suite 590 • Houston, TX 77063
T 713.528.8422 • F 713.528.8428
Email: LisaWard@RoseAssoc.com
www.roseassoc.com