EXPLORATION, EVALUATION AND DEVELOPMENT OF UNCONVENTIONAL HYDROCARBONS

Course Description

This course provides the strategies, tactics, and tools necessary to effectively quantify and value oil and gas resources in unconventional targets. The premise is that a sound estimate of key geoscience, engineering, and economics parameters is essential to maximize profitability. Probabilistic techniques and a staged approach are emphasized to quantify the range of possible outcomes and make good decisions about which projects to invest in and how to spend capital wisely.

Course/Workshop Outline

Day 1

    a. Defining an Unconventional Play
    b. Useful Screening Criteria
    c. Building an Unconventional Play Map
    d. Yet-to-Find Methods and Reality Checks
    e. Estimating In-Place Volumes

Day 2

    f. Estimating Play Chance
    g. Mapping, Ranking, and Identifying Sweet Spots
    h. Probability, Distributions, and Correlations
    i. Estimating the Range of the Average
    j. Quantifying Uncertainty and Mitigating Bias

Day 3

    k. Aggregation and Its Derivative Products
    l. Quantifying the Value of Information Work Processes
    m. Discipline Workflows
    n. Economics and the Single Well Cashflow Model
    o. Estimating Resources and Reserves

Day 4

    p. Applying a Staged Approach (using Decision Trees and Stage Gates)
    q. Introduction to ProjectRA (a fully-probabilistic cash flow tool)
    r. Case Study Posters (evaluated by Teams)
        i. Shale gas, liquids-rich shales, carbonates, sandstones

Who Should Attend

This course is aimed at geoscientists, engineers, members of commercial teams, business analysts, and managers in charge of creating value from their unconventional resources.