# Play-Based Assessment of Unconventional Opportunities

Course Description

This 4-day course focuses on the assessment of unconventional plays and the identification of initial well locations within them. The course is centered around a seven-stage exercise in a shale play where participants 1) build maps to spatially quantify in-place oil/gas resource density per square mile, 2) identify target acreage by overlaying maps with components affecting producibility, and 3) estimate play chance, establish value for candidate blocks, and formulate an entry strategy. The goal is to expose participants to all the key concepts and steps in the unconventional play-based assessment process, and then apply these to a real-life competitive bidding situation.

Course Outline

1. Introduction and Objectives
2. What is an Unconventional Play?
3. Screening Opportunities
4. Probability and Distributions
5. Building an Unconventional Play Map
6. Volume Components and Tank Volume Calculations
7. Yet-to-Find Methods
8. Exercise--Part 1: Mapping of the Play Fairway and Estimating In-Place Richness per Square Mile
9. Volumetric Calculations Including Map Uncertainty
10. Exercise--Part 2: Deriving Volume Inputs with Uncertainty from Maps (Codell SS example)
11. Aggregated Well Results Yet-to-Find Method
12. Fluid Flow and Predicting EUR from Production Data
13. Exercise--Part 3: Cash Flow Analysis and Validation of Minimum Recovery Efficiencies for Profitability
14. Spatial Variability and Mapping of Factors Affecting Producibility
15. Exercise--Part 4: Mapping Elements Controlling Producibility, Surface Issues, & Ranking of Blocks
16. PlayPen© Mapping Software Demonstration
17. Treatment of Chance
18. Exercise--Part 5: Play Chance Estimation
19. Estimating Resources
20. Play Entry Lease Acquisition Strategies
21. Exercise--Part 6: Establishing Block Values & Bids; Competitive Lease Sale; Testing Play Chance
22. Post Lease Acquisition Strategies
23. Exercise--Part 7: Choosing Initial Drilling Locations; Determining Block Values ; Skill Score Awards
24. Unconventional Rapid Assessment (URA©) Software Demonstration
25. Analysis of Case Study Posters: Eagle Ford Shale, Marcellus Shale, Lance Formation, Bakken Formation
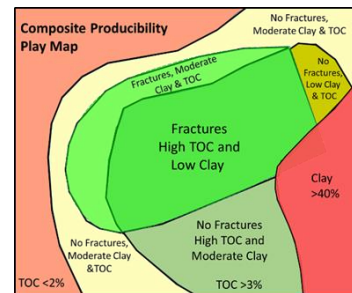
Who Should Attend?

This course is intended for geoscientists, petrophysicists, engineers, and managers who are focused on exploring and appraising low permeability shales, carbonates, and sandstones.

Recipients of Training