

## Unconventional Resource Assessment and Valuation (URAV)

### Course Description

This 4 to 5 day course provides the strategies, tactics, and tools needed to effectively assess and value oil and gas resource plays. The premise is that sound estimating of key geoscience, engineering, and economic parameters is essential for maximizing 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 wisely spend capital.

The course culminates with a realistic, full-day capstone exercise in which integrated teams quantify the potential of a shale play by conducting a series of steps:

- a. Map key reservoir characteristics and identify the target play segment
- b. Quantify porosity and saturations, estimate the range of STOOIP
- c. Select completion types and corresponding type curves
- d. Determine the number of pilot and demonstration wells and their chance of success
- e. Calculate success case NPVs and EVs, determine which leases to bid on
- f. Submit bids, identify winners, and simulate the drilling of wells

### Course Outline

1. Introduction
2. Work Processes and Deliverables
3. Probability, Distributions and Dependencies
4. Estimating Under Uncertainty
5. Estimating In-Place Volumes
6. Determining Chance of Success
7. Aggregation Principles
8. Quantifying Production Forecast Uncertainty
9. Estimating Resources and Reserves
10. Decision Trees and the Value of Information
11. Making Better Decisions with Limited Data
12. Decision Stage Assessment
13. Utopia Shale Capstone Exercise

### Who Should Attend

This course is intended for geoscientists, engineers, commercial team members, business analysts, and managers charged with creating value from their unconventional resources.

### Recipients of Training

Courses have been recently held at Devon, Chevron, Southwestern Energy, Oxy, Pioneer, Parsley Energy, Progress Energy, Raisa Energy, Repsol, and Wexpro, among others. Open-enrollment courses have been held in Brisbane, Calgary, Denver, Houston, Midland, and Pittsburgh.