

## Mitigating Bias, Blindness, and Illusion in E&P Decision Making

### Course Description

Decisions in E&P ventures are affected by Bias, Blindness, and Illusion (BBI) which permeate our analyses, interpretations and decisions. This two-day course examines the influence of these cognitive pitfalls and presents techniques that can be used to mitigate their impact. *Bias* refers to errors in thinking whereby interpretations and judgments are drawn in an illogical fashion. *Blindness* is the condition where we fail to see an unexpected event in plain sight. *Illusion* refers to misleading beliefs based on a false impression of reality. All three can lead to poor decisions regarding which work to undertake, what issues to focus on, and whether to forge ahead or walk away from a project.

This course begins by examining the types of BBI that affect us. Awareness exercises, videos, examples, and mitigation exercises help illustrate how these manifest themselves and how we can lessen their impact. We then address their role in the oil and gas industry by presenting case studies that show their impact on decision-making and asking course participants to identify what types of cognitive errors contributed to project outcomes. This is followed by a real-world exercise using project data to give participants practice in addressing and mitigating BBI in their technical work. The course concludes by presenting a mitigation 'toolkit' that can be applied to project work.

### Course Outline

1. Introduction
2. Bias
  - a. Anchoring, Availability, Confirmation, Framing, Information, and Overconfidence
  - b. Motivational Bias
3. Blindness and Illusion
  - a. Perceptual Blindness
  - b. Illusions of Knowledge, Potential, and Objectivity
4. Case Studies (a relevant subset of these will be presented)
  - a. Plio-Pleistocene Sandstone (Exploration Well)
  - b. Pliocene Sandstone (Exploration 'Drill or Drop')
  - c. Jurassic Sandstone (Exploration License Round)
  - d. Cretaceous Shale (Field Appraisal)
  - e. Cambrian Sandstone (Field Appraisal)
5. Real-World Exercise (a relevant exercise will be presented)
  - a. Triassic sandstone, structural play (Exploration Well)
  - b. Fractured carbonate, waterflood potential (Field Appraisal)
  - c. Shale reservoir (Field Appraisal)
6. Mitigation 'Toolkit'

### Who Should Attend

Geoscientists, Engineers, Economists, Managers, and anyone else who wants to understand the impact of these cognitive errors and how to lessen their influence