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Petroleum Reserves Estimation and Uncertainty Analysis

COURSE OVERVIEW

This course provides an introduction to petroleum reserves estimation and the role of uncertainty analysis in upstream decision-making. Emphasis will be placed on integrating geological, engineering, and economic data to produce reliable reserves assessments while evaluating risks and uncertainties that impact project value and strategic planning. Participants will gain a solid understanding of reserves classification frameworks, estimation methods, probabilistic and deterministic approaches, as well as the regulatory and reporting standards that govern reserves disclosure.

WHO SHOULD ATTEND?

The course is designed for petroleum engineers, reservoir engineers, geoscientists, project managers, energy analysts, and professionals involved in reserves reporting and asset evaluation. It is also suitable for early-career professionals seeking to build expertise in reserves estimation, as well as decision-makers and financial analysts who rely on reserves data for investment, portfolio management, and regulatory compliance.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand petroleum resource definitions and classification frameworks based on SPE-PRMS.
- Apply industry-standard methods for estimating petroleum reserves using volumetric and material balance techniques.
- Utilize decline curve analysis and probabilistic approaches such as Monte Carlo simulations for reserves estimation.
- Analyse geological, technical, and economic factors affecting reserves estimates.
- Develop accurate and compliant reserves reports for audits and regulatory purposes.
- Assess and incorporate uncertainty and risk analysis into reserves estimation.
- Support investment and operational decisions with validated reserves data.
- Prepare for reserves audits and effectively defend estimation methodologies.

KEY COURSE HIGHLIGHTS

By the end of this course, participants will understand:

- Definitions and classifications of petroleum resources based on SPE-PRMS.
- Methods for estimating recoverable petroleum volumes using volumetric and decline curve techniques.
- How to apply material balance and reservoir simulation for reserves estimation.
- Incorporating risk and uncertainty analysis with probabilistic tools like Monte Carlo simulation.
- Preparing compliant reserves reports for regulatory and audit purposes.
- Using real-world examples to practice best reserves estimation techniques.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded