

AI-Enhanced Reservoir Characterization: Unlocking Hidden Potential in Tight Formations

COURSE OVERVIEW

This course is designed to bridge advanced data-driven techniques with traditional subsurface analysis for improved reservoir understanding. The course content explores how artificial intelligence, machine learning and predictive analytics can transform the interpretation of geological, geophysical, petrophysical and production data to unravel the complexities of tight reservoirs. Participants will gain insights into practical workflows, tools and case studies that demonstrate how AI can enhance reservoir characterization, reduce uncertainties and unlock hidden potential in challenging formations.

WHO SHOULD ATTEND?

This course is tailored for geoscientists, reservoir engineers, data scientists and energy professionals who are engaged in exploration, appraisal and development of unconventional and tight reservoirs. It is also highly beneficial for technical decision makers and managers seeking to understand the value of AI integration in reservoir studies and to foster collaboration between domain experts and data specialists.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Develop an understanding of how AI complements conventional reservoir characterization methods.
- Apply machine learning and data-driven techniques to improve reservoir quality and heterogeneity assessments.
- Integrate multi-disciplinary data sets (geological, geophysical, petrophysical, and production) using AI workflows.
- Identify opportunities for enhanced recovery and optimized reservoir management in tight formations.
- Critically evaluate case studies and lessons learned from real-world applications.
- Design AI-assisted models to predict reservoir behavior and support data-driven decision-making.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- AI techniques for analyzing core and seismic data to improve reservoir models.
- How machine learning predicts key reservoir properties like porosity and permeability.
- Methods to identify sedimentary features and improve fluid flow understanding.
- Using AI for high-resolution, multi-scale characterization of tight formations.
- Enhancing reservoir simulation accuracy by integrating diverse data sources.
- Practical AI workflows that unlock untapped reserves and optimize production strategies.

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