Global Horizon
TRAINING CENTER

Training Course:
Advanced Seismic Attribute Analysis for Reservoir Characterization

22 - 26 June 2026
Paris (France)

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Advanced Seismic Attribute Analysis for Reservoir Characterization

Training Course code: EN236392 From: 22 - 26 June 2026 Venue: Paris (France) - Training Course Fees: 6825 Euro

Introduction

Three-dimensional 3D seismic attributes have become essential tools for advanced reservoir characterization, enabling geoscientists to extract quantitative and qualitative information beyond conventional seismic interpretation. Proper use of seismic attributes enhances the understanding of reservoir geometry, heterogeneity, stratigraphic features, and fluid distribution, thereby reducing subsurface uncertainty and improving exploration and development decisions.

This training program, designed and delivered by Global Horizon Training Center, provides a structured and applied understanding of 3D seismic attributes and their role in reservoir characterization. The program integrates theoretical foundations with practical interpretation workflows, enabling participants to effectively apply seismic attributes in exploration, appraisal, and field development environments.

Program Objectives

By the end of this program, participants will be able to:

- Understand the principles and classification of 3D seismic attributes
- Select appropriate attributes for structural, stratigraphic, and reservoir analysis
- Interpret seismic attributes to identify reservoir architecture and heterogeneity
- Integrate seismic attributes with well, petrophysical, and geological data
- Support reservoir characterization and development planning using attribute-driven insights
- Reduce uncertainty in subsurface models and reservoir predictions

Target Audience

This program is designed for:

- Seismic Interpreters and Geophysicists
- Exploration and Development Geologists
- Reservoir Engineers involved in subsurface modeling

- Subsurface and Asset Team Members
- Petroleum Geoscientists working with 3D seismic data
- Technical professionals involved in reservoir characterization studies

Outline

Day 1: Fundamentals of 3D Seismic and Attribute Analysis

- Overview of 3D seismic data and interpretation objectives
- Seismic wavelet, resolution, and bandwidth considerations
- Introduction to seismic attributes and their evolution
- Attribute classification: amplitude, phase, frequency, and geometric attributes
- Data conditioning and quality control for attribute analysis
- Common pitfalls and limitations of seismic attributes

Day 2: Structural and Geometric Seismic Attributes

- Attributes for fault and fracture detection
- Coherence, variance, curvature, and edge detection attributes
- Structural interpretation using multi-attribute approaches
- Fault extraction and structural framework building
- Applications in faulted and fractured reservoirs
- Integration with structural geology concepts

Day 3: Stratigraphic and Depositional Attribute Analysis

- Attributes for stratigraphic interpretation
- Spectral decomposition and frequency-based attributes
- Channel, reef, and depositional feature identification
- Facies mapping using seismic attributes

- Linking seismic attributes to depositional environments
- Case examples of stratigraphic reservoir characterization

Day 4: Reservoir Properties and Attribute Integration

- Amplitude-based attributes and their reservoir significance
- Attribute sensitivity to lithology, porosity, and fluids
- Multi-attribute analysis and data-driven approaches
- Calibration with well logs and petrophysical data
- Incorporation of seismic attributes into reservoir models
- Managing uncertainty and attribute reliability

Day 5: Applied Case Studies and Integrated Workflows

- End-to-end seismic attribute workflow for reservoir characterization
- Case studies from clastic and carbonate reservoirs
- Lessons learned from attribute misinterpretation
- Best practices for interdisciplinary integration
- Practical guidelines for attribute selection and validation
- Program summary, key takeaways, and application roadmap.

Registration form on the Training Course: Advanced Seismic Attribute Analysis for Reservoir Characterization

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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