



HARNESS THE POWER
OF KNOWLEDGE

Introduction to Seismic Interpretation

TRAIN



Course Overview:

Seismic interpretation is a critical step in subsurface exploration and reservoir characterization. This course is designed to provide non-geophysicists with a fundamental understanding of seismic interpretation principles and techniques, enabling them to effectively utilize seismic data for their professional needs.

Course Objectives:

By the end of this course, you will be able to:

- Comprehend the basic principles of seismic reflection and data acquisition
- Understand the concepts of seismic wave propagation, reflection, and refraction
- Identify and interpret key seismic features, such as faults, folds, and unconformities
- Gain insights into subsurface structure and properties using seismic data
- Apply seismic interpretation techniques to real-world seismic data

Course Agenda:

Day 1: Introduction to Seismic Exploration and Interpretation

- Delve into the history and importance of seismic exploration in subsurface exploration
- Explore the principles of seismic reflection and data acquisition
- Discuss the role of seismic interpretation in reservoir characterization and hydrocarbon exploration

Day 2: Seismic Data Acquisition and Processing

- Understand the seismic survey process, including source types, receiver arrays, and data recording
- Explore the principles of seismic data processing, including noise reduction, filtering, and stacking
- Discuss the impact of seismic data quality on interpretation results

Day 3: Seismic Wave Propagation and Reflection

- Delve into the physics of seismic wave propagation, including reflection, refraction, and wave attenuation
- Understand the concept of seismic impedance and its relationship to subsurface properties
- Explore the factors affecting seismic reflection, such as lithology, porosity, and fluid content

Day 4: Seismic Interpretation Principles and Techniques

- Identify and interpret key seismic features, such as faults, folds, and unconformities
- Understand the principles of seismic stratigraphy and its application in subsurface mapping
- Explore the use of seismic amplitudes and AVO analysis in reservoir characterization

Day 5: Seismic Interpretation Applications and Case Studies

- Apply seismic interpretation techniques to real-world seismic data using industry-standard software tools
- Analyze real-world case studies demonstrating the successful application of seismic interpretation in hydrocarbon exploration and reservoir characterization
- Discuss the role of seismic interpretation in reservoir monitoring and geotechnical applications

Who Should Attend:

- Geoscientists and engineers involved in subsurface exploration and reservoir characterization
- Project managers and decision-makers responsible for seismic data evaluation and subsurface assessment
- Seismic contractors seeking to enhance their interpretation services and client communication
- Students and professionals interested in pursuing a career in seismic data interpretation and subsurface exploration

Course Benefits:

- Gain a fundamental understanding of seismic interpretation principles and techniques
- Enhance your ability to interpret seismic data and identify subsurface features
- Effectively utilize seismic data for subsurface evaluation and reservoir characterization
- Improve communication and collaboration with geophysicists in seismic interpretation projects
- Stay updated on the latest advancements and techniques in seismic interpretation