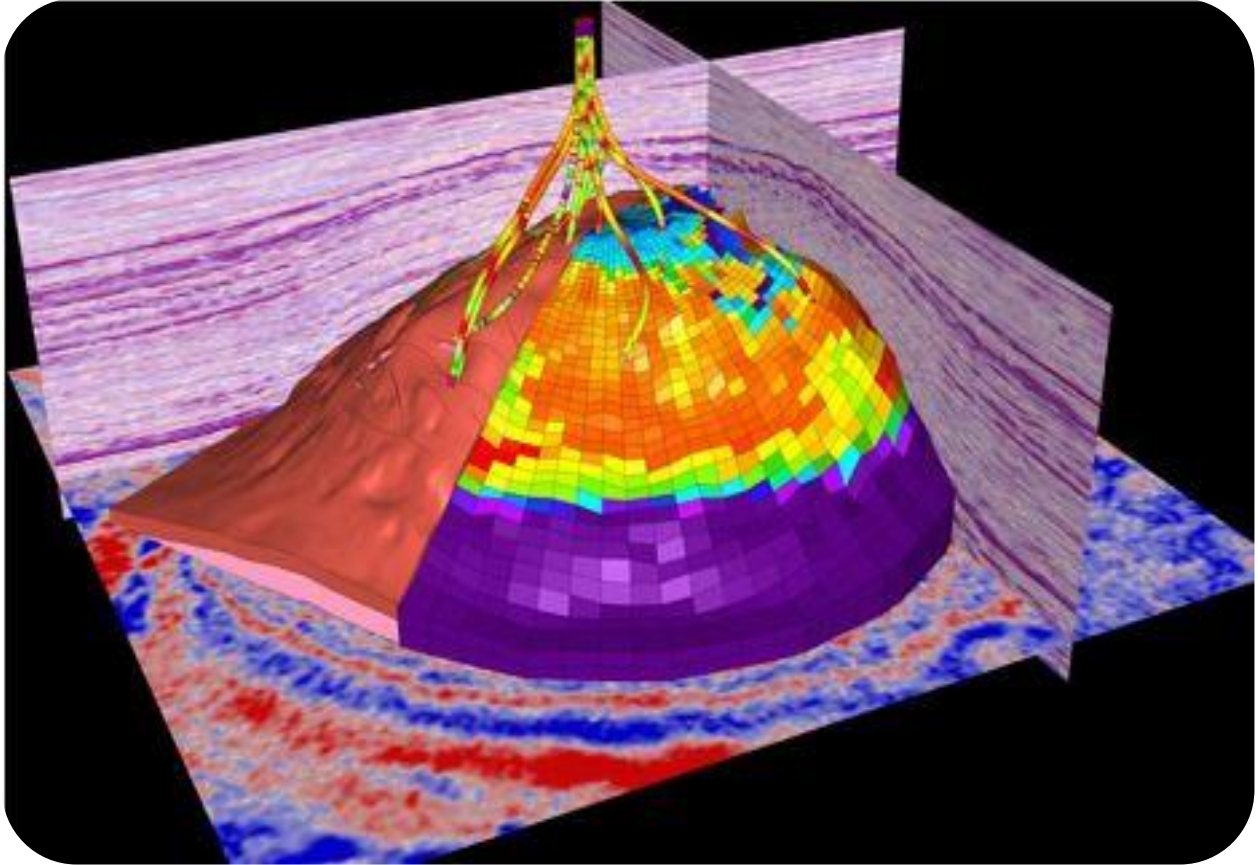




Seismic Inversion and Attributes

Course Introduction:

Seismic inversion and attributes play a crucial role in the field of geophysics, particularly in the exploration and production of natural resources like oil and gas. This course aims to provide participants with a comprehensive understanding of the principles, methodologies, and applications associated with seismic inversion and the extraction of seismic attributes.

Course Objectives:

Upon the successful completion of this course, each participant will be able to:-

- Understand the principles of seismic inversion and its applications.
 - Learn to analyze and extract seismic attributes for improved interpretation.
 - Gain practical experience with software tools used in seismic data analysis.
 - Explore advanced techniques and future developments in the field.
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Who Should Attend?

- Geophysicists and geologists
- Seismic data analysts
- Engineers and researchers in the oil and gas industry
- Professionals interested in geophysical methods

Course Outline:

Day 1: Introduction to Seismic Inversion

- **Morning Session:**
 - Overview of seismic data acquisition
 - Fundamentals of seismic wave propagation
 - Introduction to seismic inversion concepts
- **Afternoon Session:**
 - Types of seismic inversion (e.g., linear, non-linear)
 - Key terminology and definitions
 - Case studies illustrating inversion applications

Day 2: Seismic Attributes Fundamentals

- **Morning Session:**
 - Introduction to seismic attributes
 - Types of seismic attributes (amplitude, phase, frequency)

- Importance of attributes in interpretation
- **Afternoon Session:**
 - Attribute extraction methods

Day 3: Advanced Seismic Inversion Techniques

- **Morning Session:**
 - Model-based vs. data-driven inversion techniques
 - Bayesian inversion methods
 - Neural networks in seismic inversion
- **Afternoon Session:**
 - Group discussions on challenges and solutions

Day 4: Integrating Attributes with Inversion

- **Morning Session:**
 - How attributes enhance inversion results
 - Crossplotting attributes for better insights
 - Multi-attribute analysis techniques
- **Afternoon Session:**
 - Integrating attributes with inversion data
 - Evaluation of inversion results using attributes

Day 5: Applications and Future Trends

- **Morning Session:**
 - Real-world applications in exploration and production
 - Discussing the impact of machine learning on seismic analysis
- **Afternoon Session:**
 - Future trends in seismic inversion and attributes
 - Final project presentations by participants
 - Course wrap-up and feedback session

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques

- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course locations. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session