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OF KNOWLEDGE

## Reservoir's Static Modeling

TRAIN



## Introduction

Reservoir's static modeling is the process of building a digital representation of a subsurface reservoir, including its geometry, geology, and petrophysical properties

This model provides a framework for understanding the reservoir's potential for hydrocarbon production  
This comprehensive 5-day professional training course will equip you with the essential knowledge and skills to effectively construct and utilize reservoir static models for various exploration and production purposes

## Course Objectives

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

- Understand the fundamental principles of reservoir static modeling and its role in reservoir evaluation
- Apply various techniques for defining reservoir geometry, including seismic interpretation, well log correlation, and geologic constraints
- Utilize various methods for characterizing reservoir geology, including facies modeling, geostatistical analysis, and geologic modeling software
- Determine petrophysical properties, such as porosity, permeability, and fluid saturation, for reservoir modeling
- Integrate reservoir static models with other geological and geophysical data for comprehensive subsurface interpretation

## Course Agenda

### Day 1: Introduction to Reservoir Static Modeling

- Explore the history, principles, and applications of reservoir static modeling in reservoir evaluation
- Understand the different types of reservoir static models and their suitability for various scenarios
- Review the data requirements and limitations of reservoir static modeling

### Day 2: Seismic Interpretation for Reservoir Geometry

- Delve into the principles of seismic interpretation and its role in defining reservoir geometry
- Utilize seismic attributes, horizon mapping, and fault interpretation techniques to delineate reservoir boundaries
- Apply seismic interpretation to identify structural features, such as anticlines and synclines, that may impact reservoir distribution

### Day 3: Well Log Correlation and Geologic Modeling

- Explore the principles of well log correlation and its application in reservoir static modeling
- Correlate well logs to identify stratigraphic units, facies transitions, and reservoir boundaries
- Utilize geologic modeling software to construct 3D geologic models that represent reservoir architecture

#### Day 4: Petrophysical Property Estimation

- Understand the importance of petrophysical properties, such as porosity, permeability, and fluid saturation, in reservoir modeling
- Utilize various methods to estimate petrophysical properties from core samples, well logs, and seismic data
- Apply petrophysical property distributions to create a realistic representation of reservoir heterogeneity

#### Day 5: Integration and Applications of Reservoir Static Models

- Discuss the integration of reservoir static models with other geological and geophysical data for comprehensive subsurface interpretation
- Utilize reservoir static models to predict fluid distribution, evaluate reservoir potential, and identify exploration targets
- Apply reservoir static models to optimize well placement strategies and enhance hydrocarbon recovery

#### Who Should Attend

This course is designed for:

- Aspiring and experienced geoscientists seeking to enhance their understanding of reservoir static modeling and its applications in subsurface evaluation
- Reservoir engineers involved in reservoir modeling, well placement, and production optimization
- Petroleum geologists working on geological modeling, facies analysis, and reservoir characterization
- Geophysicists utilizing seismic data and well log interpretation for reservoir modeling and subsurface interpretation

#### Course Benefits

- Develop a comprehensive understanding of reservoir static modeling principles, techniques, and applications
- Gain hands-on experience in building and utilizing reservoir static models using industry-standard software
- Enhance your ability to integrate reservoir static models with other subsurface data for improved reservoir characterization
- Apply reservoir static modeling knowledge to address real-world challenges in various geological settings, including hydrocarbon exploration, reservoir development, and environmental assessment

- Stay updated on the latest advancements and techniques in reservoir static modeling methodologies and subsurface interpretation