



HARNESS THE POWER
OF KNOWLEDGE

Analysis and Interpretation of Reservoir Logs

TRAIN



Course Overview:

Reservoir logs provide invaluable data for subsurface exploration and reservoir characterization

Effective analysis and interpretation of these logs are crucial for understanding formation properties, identifying potential hydrocarbon zones, and optimizing reservoir development strategies

This comprehensive 5-day professional training course will equip you with the essential knowledge and skills to effectively analyze and interpret reservoir logs for subsurface evaluation and reservoir management

Course Objectives:

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

1

Understand the principles of reservoir log acquisition and processing

2

Identify and classify different types of reservoir logs and their measurements

3

Apply petrophysical principles to interpret reservoir logs and determine formation properties, such as porosity, permeability, and fluid saturation

4

Integrate reservoir logs with other geological and geophysical datasets for comprehensive subsurface evaluation

5

Utilize reservoir log data to identify potential hydrocarbon zones, assess reservoir potential, and optimize well placement strategies

Course Agenda:

Day 1: Introduction to Reservoir Logs

- Delve into the history, importance, and applications of reservoir logs in subsurface exploration and reservoir characterization
- Explore the different types of reservoir logs and their physical measurements
- Discuss the factors affecting reservoir log data quality and interpretation
- Understand the relationship between reservoir log measurements and subsurface properties

Day 2: Petrophysical Principles in Log Interpretation

- Understand the fundamental principles of petrophysics and their application in reservoir log interpretation
- Apply petrophysical equations to determine porosity, permeability, and fluid saturation from log measurements
- Interpret resistivity, sonic, and density logs to evaluate formation properties and fluid content
- Discuss the limitations and challenges of petrophysical interpretations in complex geological settings

Day 3: Interpretation of Conventional Logs

- Analyze resistivity logs to identify formation boundaries, evaluate pore fluid salinity, and estimate hydrocarbon saturation
- Interpret sonic logs to determine formation porosity, pore size distribution, and acoustic impedance
- Apply density logs to assess formation porosity, lithology, and bulk density
- Integrate conventional logs to create a comprehensive subsurface model

Day 4: Interpretation of Special Logs

- Explore the principles and applications of special logs, such as neutron porosity logs, nuclear magnetic resonance (NMR) logs, and image logs
- Interpret neutron porosity logs to determine porosity, especially in formations with high salinity or complex lithology
- Analyze NMR logs to evaluate pore size distribution, fluid types, and permeability
- Apply image logs to identify fractures, vugs, and other geological features

Day 5: Integrated Reservoir Characterization and Applications

- Integrate reservoir logs with other geological and geophysical datasets for comprehensive reservoir characterization
- Utilize reservoir log data to identify potential hydrocarbon zones, assess reservoir potential, and optimize well placement strategies
- Apply reservoir log interpretations to guide reservoir development and production strategies
- Discuss the future trends and advancements in reservoir log interpretation and reservoir modeling

Who Should Attend:

- Geoscientists and engineers involved in subsurface exploration, reservoir characterization, and wellbore analysis
- Project managers and decision-makers responsible for subsurface evaluation and reservoir management
- Logging contractors seeking to enhance their reservoir log interpretation services and data analysis capabilities
- Students and professionals interested in pursuing a career in reservoir log interpretation and subsurface modeling

Course Benefits:

- Develop a comprehensive understanding of reservoir log acquisition, processing, and interpretation techniques
- Gain hands-on experience in analyzing and interpreting reservoir logs using industry-standard software tools
- Enhance your ability to identify subsurface features, evaluate reservoir potential, and interpret fluid content using reservoir logs
- Effectively utilize reservoir log data to improve subsurface characterization, guide well placement, and optimize reservoir management strategies
- Stay updated on the latest advancements and techniques in reservoir log interpretation, preparing for future trends in subsurface exploration and reservoir management