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OF KNOWLEDGE

## Principles and Application of Conventional Logging

TRAIN



## Course Overview:

Conventional logging, also known as wireline logging, is a widely used technique in subsurface exploration and reservoir characterization

It involves measuring various physical properties of rocks and fluids within a wellbore using specialized tools lowered into the hole

This comprehensive 5-day professional training course will provide you with a thorough understanding of the principles, techniques, and applications of conventional logging

## Course Objectives:

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

- Understand the fundamental principles of conventional logging and its role in subsurface evaluation
- Identify and classify different types of conventional logging tools and their measurements
- Interpret conventional logging data to determine formation properties, fluid content, and potential hydrocarbon zones
- Integrate conventional logging data with other geophysical and geological datasets for comprehensive subsurface analysis
- Apply conventional logging techniques to solve real-world subsurface exploration and reservoir characterization challenges

## Course Agenda:

### Day 1: Introduction to Conventional Logging

- Delve into the history, principles, and importance of conventional logging in subsurface exploration
- Explore the different types of conventional logging tools and their physical measurements
- Discuss the factors affecting conventional logging data quality and interpretation
- Understand the relationship between conventional logging measurements and subsurface properties

### Day 2: Resistivity Logging

- Understand the principles of resistivity logging and its application in formation evaluation
- Analyze resistivity logging data to determine formation resistivity, porosity, and fluid salinity
- Identify hydrocarbon zones and evaluate reservoir potential using resistivity logs
- Discuss the limitations and challenges of resistivity logging in complex geological settings

### Day 3: Porosity Logging

- Explore the principles and techniques of porosity logging using different methods, such as neutron logging, density logging, and sonic logging
- Interpret porosity logs to determine formation porosity, pore size, and pore distribution
- Evaluate reservoir porosity and permeability using porosity logging data
- Discuss the advantages and limitations of different porosity logging methods

### Day 4: Fluid Content Estimation

- Understand the principles of fluid content estimation using conventional logging tools
- Apply resistivity, porosity, and saturation logs to estimate fluid saturation and hydrocarbon presence
- Identify and characterize different types of fluids, such as water, oil, and gas, using logging data
- Discuss the challenges and uncertainties in fluid content estimation using conventional logging methods

### Day 5: Integrating Conventional Logging with Other Data

- Integrate conventional logging data with other geophysical and geological datasets for comprehensive subsurface evaluation
- Utilize conventional logs to refine seismic interpretations and improve reservoir characterization
- Apply conventional logging data to guide well placement, production strategies, and reservoir monitoring
- Discuss the future trends and advancements in conventional logging technology and applications

## 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 conventional logging services and data interpretation capabilities
- Students and professionals interested in pursuing a career in conventional logging and subsurface interpretation

Course Benefits:

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