GLOBAL
Business
Minds

Production Logging: Mastering Techniques and Interpretation for Optimizing Well Performance and Reservoir Management

TRAIN

Course Overview:
Production logging is an essential tool in oil and gas production, providing invaluable insights into the flow dynamics and performance of wells
This comprehensive 5-day professional training course will provide a thorough understanding of production logging principles, tools, techniques, and interpretation methods for optimizing well performance and reservoir management

Course Objectives:
By the end of this course, participants will be able to:
1
Grasp the fundamental principles of production logging and its importance in reservoir evaluation and well optimization
2
Identify the different types of production logging tools and their applications
3
Understand the physics and mechanics of production logging measurements, such as flow rate, pressure, temperature, and fluid holdup
4
Apply production logging techniques to evaluate well performance, identify flow anomalies, and optimize production strategies
5
Interpret production log data to determine fluid properties, flow distribution, and reservoir characteristics
6
Integrate production logging findings with other reservoir data sources to make informed decisions about well stimulation, production optimization, and reservoir management
7
Utilize production logging software tools to efficiently analyze and interpret production logging data
Course Agenda:
Day 1: Introduction to Production Logging and Well Performance Optimization
• Delve into the history and evolution of production logging and its role in well performance evaluation
• Explore the regulatory framework and operational standards governing production logging practices
• Discuss the economic significance of production logging in maximizing production and enhancing reservoir recovery
• Analyze the factors influencing well performance and the role of production logging in identifying and addressing flow problems
Day 2: Production Logging Tools and Measurement Principles
• Identify the different types of production logging tools, including flowmeters, pressure gauges, temperature logs, fluid holdup logs, and tracer logs
• Understand the physics and mechanics of production logging measurements, such as differential pressure, acoustic impedance, capacitance, and neutron scattering
• Discuss the limitations and advantages of various production logging tools
• Apply production logging tools to evaluate well performance, identify flow anomalies, and optimize production strategies
Day 3: Production Log Interpretation Techniques and Data Analysis
• Interpret flowmeter logs to determine flow rate, fluid velocity, and flow profiles
• Analyze pressure logs to evaluate wellbore pressure distribution, identify pressure drops, and assess reservoir pressure conditions
• Utilize temperature logs to identify fluid interfaces, evaluate wellbore integrity, and assess formation heating

• Interpret fluid holdup logs to determine fluid distribution, identify fluid channeling, and assess reservoir heterogeneities

Day 4: Case Studies and Advanced Production Logging Applications

• Analyze real-world case studies of successful production logging interpretation and problem diagnosis

• Discuss advanced production logging applications, such as multiphase flow evaluation, horizontal well logging, and unconventional reservoir evaluation

• Explore emerging trends in production logging technologies, such as real-time data acquisition and interpretation, and data-driven decision-making

Day 5: Production Logging Software Tools and Hands-on Interpretation

• Utilize production logging software tools to efficiently analyze and interpret production logging data

• Gain hands-on experience in interpreting production logs and identifying potential flow problems

• Network with other professionals from diverse backgrounds within the oil and gas industry to share knowledge and experiences in production logging interpretation

Who Should Attend:

• Petroleum engineers, reservoir engineers, and production engineers involved in well performance evaluation, reservoir management, and production optimization

• Field supervisors, wellsite engineers, and production operators responsible for overseeing well performance monitoring and production optimization

• Production logging equipment manufacturers and service company personnel engaged in production logging design, implementation, and interpretation technologies

Course Benefits:

• Develop a comprehensive understanding of production logging principles, tools, techniques, and interpretation methods

• Gain hands-on experience in production log interpretation, identifying flow problems, and optimizing well performance

• Enhance your ability to evaluate reservoir performance, make informed decisions about well stimulation and production optimization, and maximize hydrocarbon recovery

• Stay updated on the latest advancements in production logging technologies and interpretation methodologies

• Network with other professionals from diverse backgrounds within the oil and gas industry to share knowledge and experiences in production logging interpretation and reservoir management