TRAINING TITLE

PRODUCTION LOGGING SPECIALIST: WELL PERFORMANCE & LOGGING TECHNIQUES

Training Duration

5 day

Training Venue and Dates

Ref. No. PE189	**Production Logging Specialist: Well Performance & Logging Techniques**	**5**	**06 – 10 Oct. 2025**	**$5,500**	**DUBAI, UAE**

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

The **Production Logging Specialist: Well Performance & Logging Techniques** course is designed to provide participants with a comprehensive understanding of well performance, focusing on the key aspects of logging techniques and how they are applied in the oil and gas industry. This course will provide professionals with the essential skills to evaluate well performance effectively, understand various logging tools, and interpret the results in order to optimize production.

In the oil and gas industry, understanding well performance and being able to accurately assess reservoir conditions is crucial for maximizing production and minimizing operational costs. The course will delve into the different types of logs used to evaluate well conditions, the technologies behind them, and how they can be applied in real-world scenarios.

TRAINING OBJECTIVES

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

- Understand well performance and its impact on production.
- Master various logging techniques and tools used in well performance evaluation.
- Interpret logging data to diagnose well conditions and issues.

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- Optimize well productivity using logging data for decision-making.
- Troubleshoot common well problems such as flow restrictions and mechanical failures.
- Integrate well performance data for comprehensive analysis.
- Stay informed on emerging technologies in well performance logging.

WHO SHOULD ATTEND?

- Production Engineers
- Reservoir Engineers
- Well Intervention Specialists
- Well Logging Technicians
- Petroleum Engineers
- Operations Managers
- Field Technicians
- Maintenance Engineer

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.
Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE PROGRAM:

Day 1: Introduction to Well Logging & Basic Well Performance

1. **Introduction to Well Logging**
    - Overview of well logging and its importance in the oil and gas industry.
    - Types of well logs (electrical, nuclear, acoustic, etc.).
    - Purpose and applications of well logging.
    - Historical evolution and technological advancements in logging techniques.

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2. **Well Log Data Acquisition**
    - Logging tools and equipment (wireline, LWD, slickline).
    - Data acquisition methods (continuous logging vs. discrete sampling).
3. **Basic Well Performance**
    - Overview of well performance parameters: production rates, pressure, temperature, and fluid composition.
    - Pressure and temperature profiling techniques.
    - Introduction to well productivity and decline curves.
4. **Interactive Workshop**
    - Hands-on session: Interpreting basic well logs and creating simple performance profiles.

Day 2: Formation Evaluation & Well Log Data Interpretation

1. **Formation Evaluation with Well Logs**
    - Understanding formation properties: porosity, permeability, resistivity, and fluid content.
    - Key well log types for formation evaluation (e.g., gamma ray, neutron porosity, density, resistivity).
    - Crossplotting and advanced techniques for interpreting well log data.
2. **Well Log Data Interpretation**
    - How to read and interpret different types of well logs.
    - Identifying hydrocarbon zones from well log data.
    - Understanding the interaction between different log data sets.
3. **Advanced Interpretation Techniques**
    - Advanced analysis of well logs: Using resistivity, porosity, and permeability for formation evaluation.
    - Application of the Archie Equation for saturation calculation.
    - Well integrity analysis using logging data.
4. **Case Study**
    - Real-world example of formation evaluation: Participants analyze a well's logs to determine potential hydrocarbon zones and production strategies.

Day 3: Advanced Logging Techniques & Data Integration

1. **Advanced Well Logging Techniques**
    - Introduction to advanced logging tools: acoustic imaging, borehole pressure and temperature gauges, and multiphase flow meters.
    - Understanding the benefits of logging while drilling (LWD) and real-time data collection.
    - Application of imaging tools for reservoir characterization.
2. **Downhole Pressure & Temperature Gauging**

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- Installation and use of pressure and temperature gauges in production wells.
- Techniques for interpreting downhole data in real time.

3. **Data Integration & Modeling**
   - Integrating well logs with production and reservoir data for holistic analysis.
   - Well simulation models: Predicting well behavior and optimizing production.
   - Use of well logging data in reservoir modeling and forecasting.
4. **Interactive Session**
   - Case study: Using advanced logging data to optimize well performance.
   - Group activity: Integrating data from different sources for a comprehensive analysis.

Day 4: Production Optimization & Enhanced Recovery Techniques

1. **Production Optimization Techniques**
   - Identifying and addressing production bottlenecks using logging data.
   - Methods for optimizing well flow: acidizing, fracturing, and artificial lift systems.
   - Monitoring and maintaining optimal production conditions.
2. **Well Performance Monitoring**
   - Using logs for real-time monitoring of well conditions.
   - Identifying early indicators of well failure or decline (e.g., production drop, pressure anomalies).
3. **Enhanced Oil Recovery (EOR)**
   - Overview of EOR techniques: water flooding, gas injection, thermal recovery.
   - Using well logs to evaluate the effectiveness of EOR methods.
   - Case study: Monitoring the success of an EOR project through logging data.
4. **Interactive Workshop**
   - Analyzing well data to design production optimization and EOR strategies for a simulated reservoir.

Day 5: Well Integrity, Safety, & Future of Logging Technologies

1. **Well Integrity and Maintenance**
   - Understanding wellbore integrity and how to assess it using well logging.
   - Identifying signs of damage or deterioration: leaks, corrosion, and casing failure.
   - Maintenance practices for ensuring well integrity.
2. **Safety Protocols in Logging Operations**
   - Ensuring safety during logging operations: personnel and equipment safety.
   - Standard operating procedures and emergency response.
   - Regulatory compliance and industry standards.
3. **The Future of Well Logging Technologies**

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- Emerging technologies in logging: Digital logging, fiber optics, and real-time monitoring.
- Impact of AI and machine learning in interpreting logging data.
- The role of automation and remote operations in well performance optimization.

4. **Course Wrap-Up & Certification**
   - Recap of key topics and discussions.
   - Final assessment (quiz or project presentation).
   - Certification of completion and next steps in professional development.
   - Q&A session with industry experts.

NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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