Hydrocarbon Production and Asset Management Training Course

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4100 € (Per Person)

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Course Introduction / Overview:

In the complex and ever-evolving field of petroleum engineering, optimizing production operations from the wellhead to the final export point is crucial for maximizing recovery and profitability. This training course from BIG BEN Training Center provides a comprehensive framework for understanding and enhancing the entire production lifecycle. We will explore the principles of production system analysis and optimization, integrating the latest technologies and best practices. Drawing upon insights from leading experts like Dr. Norman Hyne, author of "Nontechnical Guide to Petroleum Geology, Exploration, Drilling & Production," we will cover the foundational concepts of reservoir dynamics and fluid behavior. The course goes beyond theory, focusing on practical application through case studies, interactive discussions, and real-world problem-solving. It is designed to equip professionals with the skills to effectively diagnose, troubleshoot, and optimize production systems, ensuring operational efficiency and strategic asset management. Participants will learn to leverage data analytics and digital tools to make informed decisions that improve production rates, reduce downtime, and enhance the overall value of their hydrocarbon assets. The curriculum is built to address the full spectrum of challenges, from well integrity and artificial lift optimization to processing facility bottlenecks and export logistics. By mastering these concepts, participants will be prepared to drive significant improvements in their organizations' operational performance.

Target Audience / This training course is suitable for:

- Drilling and production engineers.
- Petroleum and reservoir engineers.
- Field and operations managers.
- Asset and production optimization specialists.
- Technical and non-technical staff working in oil and gas production.
- Professionals in hydrocarbon processing and logistics.
- Government agency personnel involved in natural resource management.

Target Sectors and Industries:

- Oil and gas exploration and production.
- Midstream oil and gas.
- Petrochemicals and refining.
- Oilfield services and equipment manufacturing.
- Energy consulting.
- Government agencies and regulatory bodies.

Target Organizations Departments:

- Production operations.
- Reservoir engineering.
- Asset management.
- Technical services.
- Field operations and maintenance.
- Corporate planning and strategy.
- Health, safety, and environment (HSE).

Course Offerings:

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

- Master the core principles of oil and gas production optimization.
- Analyze and evaluate production system performance from wellhead to export.
- Troubleshoot common production challenges such as liquid loading and flow assurance issues.
- Apply advanced techniques for artificial lift and well intervention.
- Optimize surface facility operations include separation, treatment, and compression.
- Implement digital oilfield technologies for real-time monitoring and data-driven decision making.
- Develop and execute a comprehensive production asset management strategy.
- Enhance operational efficiency and maximize hydrocarbon recovery.

Course Methodology:

This training course uses a highly interactive and practical methodology to ensure a deep understanding of hydrocarbon production and asset management. Participants will engage in dynamic case studies that simulate real-world production scenarios, from troubleshooting well performance to optimizing facility throughput. We will facilitate group discussions to encourage collaborative problem-solving and the exchange of diverse perspectives, reflecting the multi-disciplinary nature of production operations. The course incorporates interactive workshops where participants will apply theoretical knowledge to solve complex optimization problems using industry-standard tools and models. We believe in learning by doing, so the curriculum is structured around practical exercises that build skills in production data analysis, performance diagnostics, and system modeling. BIG BEN Training Center's approach is designed to foster a rich learning environment that combines expert instruction with peer-to-peer learning. Our trainers will provide continuous feedback, guiding participants through the process of developing effective strategies for enhancing asset value and operational efficiency. The methodology focuses on developing a holistic understanding of the production system, ensuring participants can seamlessly transition from the classroom to applying their new skills in their professional roles.

Course Agenda (Course Units):

Unit One: Fundamentals of Production Systems and Well Performance

- Well completion and flow analysis.
- Reservoir inflow and outflow performance.
- Artificial lift methods and selection.
- Well, integrity and diagnostics.
- Production monitoring and surveillance.
- Liquid loading and sand control management.
- Enhancing productivity through intervention strategies.

Unit Two: Surface Facility Optimization

- Separation and treating systems.
- Gas compression and dehydration.
- Pumping and fluid transfer systems.
- Flow assurance management.
- Pigging and pipeline integrity.
- Utility systems and power generation.
- Troubleshooting surface facility bottlenecks.

Unit Three: Asset Management and Production Strategy

- Hydrocarbon accounting and allocation.
- Data analytics for production optimization.
- Digital oilfield technologies and real-time operations.
- Predictive maintenance and asset reliability.
- Economic analysis of production assets.
- Decline curve analysis and reserve estimation.
- Developing a long-term production strategy.

Unit Four: Advanced Optimization Techniques

- Model-based optimization.
- Real-time production optimization.
- Integrated asset modeling.
- Complex system diagnostics.
- Gas lift allocation and optimization.
- Water and gas injection optimization.
- Field-wide surveillance and control systems.

Unit Five: HSE and Operational Excellence

- Operational safety and risk management.
- Environmental compliance and reporting.
- Process safety management.
- Emergency response planning.
- Continuous improvement in production operations.
- Benchmarking operational performance.
- Creating a culture of operational excellence.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

To what extent can the integration of artificial intelligence and machine learning transform traditional production optimization models into predictive and self-correcting systems?

What unique qualities does this course offer compared to other courses?

This training course stands out by providing a uniquely integrated and comprehensive perspective on hydrocarbon production optimization. Unlike many programs that focus on isolated topics, this course connects every stage of the production value chain, from the wellhead to the point of export. The curriculum is meticulously designed to bridge the gap between theoretical knowledge and practical application, equipping participants with a holistic understanding of the entire production system. We prioritize hands-on learning through advanced case studies and interactive workshops, allowing participants to work with real-world scenarios and develop a diagnostic mindset for solving complex problems. A key feature is the strong emphasis on asset management and the use of modern data analytics and digital technologies. Participants will not only learn how to optimize current operations but also how to create a strategic framework for long-term asset value. The course content is continuously updated to reflect the latest industry trends and technological advancements, ensuring that the knowledge gained is relevant and forward-looking. This forward-thinking approach, combined with the practical skills developed, makes this a standout course for any professional seeking to enhance their career in production operations.