GLOBAL EXPERTS INSTITUTE FOR TRAINING.
ISO 9001-2008 TRAINING PROVISION CERTIFIED

Optimization Of Heavy Oil Production Using Artificial Lift System

Schedule Dates:

Start Date	End Date	Place
18 Feb 2024	22 Feb 2024	Dubai

Program Introduction:

Welcome to the course on "Optimization of Heavy Oil Production Using Artificial Lift Systems." In the ever-evolving landscape of the Oil and Gas industry, the efficient extraction of heavy oil reserves has become a critical endeavor. Heavy oil reservoirs pose unique challenges due to their high viscosity and complex characteristics, making the implementation of artificial lift systems an indispensable part of the production process.

This course has been meticulously crafted to provide you with an in-depth understanding of the intricacies surrounding the optimization of heavy oil production through the strategic use of artificial lift systems. Whether you are a seasoned professional seeking to enhance your expertise or someone new to the field, this course will equip you with the knowledge, tools, and practical insights needed to excel in heavy oil production operations.

Program Objective:

- ✓ Gain a comprehensive understanding of heavy oil production, its challenges, and the critical role played by artificial lift systems in enhancing production efficiency.
- ✓ Become proficient in the selection, design, installation, and maintenance of various artificial lift systems used in heavy oil reservoirs.
- ✓ Develop the skills to effectively analyze reservoir and fluid properties specific to heavy oil, enabling informed decision-making in artificial lift system implementation.
- ✓ Master optimization strategies for maximizing production rates, minimizing operational costs, and ensuring the longevity of artificial lift systems.
- ✓ Acquire knowledge of safety and environmental considerations, adhering to health, safety, and environmental (HSE) regulations in heavy oil production.
- ✓ Explore real-world case studies and best practices, enabling participants to apply their learnings to practical scenarios and problem-solving.

- ✓ Stay up-to-date with emerging technologies and future trends in heavy oil production and artificial lift systems, preparing them for the evolving industry landscape.

Who should attend?

- Production Engineers: Professionals responsible for optimizing production rates and improving operational efficiency in heavy oil reservoirs.
- Reservoir Engineers: Those involved in reservoir management, characterization, and modeling for heavy oil production.
- Facility Managers: Individuals overseeing the design, installation, and maintenance of production facilities in heavy oil fields.
- Project Managers: Professionals leading heavy oil production projects who need a comprehensive understanding of artificial lift systems.
- Petroleum Engineers: Engineers involved in the planning, design, and implementation of artificial lift systems.
- Health, Safety, and Environmental (HSE) Personnel: Experts responsible for ensuring regulatory compliance and sustainable practices in heavy oil production.
- Technicians and Field Operators: Personnel involved in the day-to-day operations and maintenance of artificial lift systems.
- Anyone seeking to enhance their knowledge and expertise in heavy oil production and artificial lift systems, whether they are newcomers to the field or experienced professionals looking to broaden their skill set.

Program Outlines

Day One

Understanding Inflow and Outflow Dynamics in Heavy Oil Production

- Examining Heavy Oil Reservoir Performance: A Comprehensive Overview of Wellbore and Reservoir Dynamics
- Analysis of Pressure Loss in the Wellbore
- Evaluating Well Productivity and the Role of Productivity Index
- Exploring Inflow and Outflow Relationships in Heavy Oil Reservoirs

Day Two

Artificial Lift Technology and Its Application

- Overview of Various Artificial Lift Technologies: Including Sucker Rod Pump Design, Hydraulic Pump Design, Jet Pump, Gas Lift, and Electric Submersible Pump (ESP)
- Application of Artificial Lift Technology and Recognizing Its Limitations
- Methods for Screening and Selecting the Appropriate Artificial Lift System

Day Three

Sucker Rod Pumping Strategies for Heavy Oil

- Understanding the Core Principles of Sucker Rod Pumping
- Analyzing the Limitations and Advantages of Sucker Rod Pumping Systems
- Exploring the Components and Design Considerations of Sucker Rod Pumps
- Troubleshooting Common Issues in Sucker Rod Pump Systems

Day Four

Progressing Cavity Pump (PCP) Systems for Cold Heavy Oil Production

- Delving into the Concept of Progressing Cavity Pump (PCP) Systems
- Assessing the Limitations and Advantages of PCP Systems
- Best Practices for the Installation and Maintenance of PCP Pumps
- Troubleshooting Techniques for PCP Pumps
- Exploring Innovative Technologies in PCP Pumping

Day Five

Electric Submersible Pump (ESP) Systems

- Understanding the Fundamentals of Electric Submersible Pump (ESP) Systems
- Analyzing ESP Equipment and Accessories
- ESP System Design: Including Pump Performance Curves, Pump Intake Curves, Typical Problems, Installation Best Practices, and Troubleshooting
- Principles for Proper Sizing of ESP Systems, Covering Pump, Motor, and Cable
- Emphasizing the Significance of Matching Well Productivity with Pump Performance

Training Methodology:

- Slide presentations
- Interactive discussion
- Simulations and Gamification
- Online Video material

Cost Quotation in Kuwaiti Dinars

The total cost includes:

- Instructor(s) expenses
- Training materials
- Certification
- Lunch buffet

Total Cost: 1350 KD per Participant

(One Thousand Three Hundred Fifty Kuwaiti Dinar)