

ADVANCED OPERATIONAL TECHNIQUES FOR OIL & GAS OPERATORS

PRD034

COURSE DESCRIPTION

The course is designed to provide comprehensive information's to all aspects of the well performance analysis, production system and facility components, artificial lifting systems and production enhancement techniques. The course will be conducted as lecturers and attendees will be actively encouraged to participate. The course content will be fully illustrated with actual data of well completion and operations' cases to aid understanding and help to overcome any difficult problems. Comprehensive course notes will be provided, which will form a valuable source of reference afterwards.

COURSE OBJECTIVES

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

- Understand the production system component
- Understand produced fluids properties
- Understand well completion
- Supervise production operations
- Understand well testing types and operations
- Deal with well's problem to improve well's performance

WHO SHOULD ATTEND

- Production supervisor and operators.
- Production operators
- Production engineers
- Field maintenance supervisors and operators.
- Safety engineers
- Production technologist

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Well Production System

- Oil & gas life cycle
- Production system overview
- Reservoir drive mechanisms
- Produced fluids properties
- Well completion design
- Oil and gas wells' performance
- System nodal analysis
- Tubing selection
- Well testing theory

2. Well Productivity and Well Head Parameters

- Well head component
- Gas wells performance
- Oil wells performance
- Choke performance and wells' optimization
- Static flowing pressure temperature surveys' operation and analysis
- How to improve wells' performance
- WHP changes
- Well head charts and monitoring systems
- Subsurface safety valves
- Function and integrity testing
- Barrier principles and barrier envelope
- Risk management
- Flow line protection (pressure)

3. Production Facility Operations

- Production facility operations
- Oil & gas Separator
- Water handling
- Gas treatment
- Storage tanks
- Oil & Gas pipe lines
- Controlling the process
- Separator operating pressures
- Pigging operations

4. Artificial Lifting Systems

- Why do we need lifting?
- Selection of artificial lifting systems
- Gas lift technology
- Gas lift down hole equipment
- Electrical submersible pump
- ESP surface and down hole equipment
- ESP troubleshooting
- Sucker rod systems
- Hydraulic pumping system

5. Production and Flow Assurance problems' Solving

- Hydrates
- Organic and inorganic scales
- Heavy oil operations
- Emulsion problems
- Sustained annulus pressure
- Water loading problem mitigation
- Sand control systems (rig and rig less operations)
- Case History
- Table discussion for production problems' solving.

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