ARTIFICIAL LIFT
ESP TROUBLESHOOTING

PRD046

COURSE DESCRIPTION

The course will help the participant to perform their work properly for the artificial lift and ESP regarding the use of equipment, electrical submersible and sucker rod pumps, and investigating the whole associated systems with the well operating systems.

COURSE GOAL

To enhance the participants' knowledge, skills, and attitudes necessary to understand the artificial-lift methods and troubleshooting of ESP.

COURSE OBJECTIVES

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

- Evaluate the current production system of a well for efficiency.
- Recognize and correct problems with equipment and operating procedures.
- Design the most effective system for a producing well.
- Learn about electrical submersible pumps and sucker rod pumps lift system applications, design, installation, optimization & troubleshooting.

WHO SHOULD ATTEND

- Supervisors.
- Production engineers.
- S. Operators.
- Operators.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Introduction.

2. Artificial lift
   - Well and Reservoir Inflow Performance.
   - Vertical Flow Performance.
   - Outflow Performance & Multiphase Flow.

- Outflow Performance Prediction.

- Deliverability vs Injection-Depth.

- Water cut Effect.

- Wellhead Pressure.

- Artificial Lift Methods.

3. Electrical submersible pumps principle

- Operation principle and performance.

- Surface and Subsurface Equipments.

- Advantage & Limitations.

- Continuous Flow Unloading Sequence.

4. Sucker rod pumps

- Operation and characteristics of sucker rod

- Equipments

- Mandrel

- Running tools

- Pulling tools

- Design and Installation

- Operation and Optimization

5. Monitor lift performance

- Conduct well test and optimize artificial lifting on production wells.

- Well software model for production wells using Prosper.

- Evaluate gas lift problems and remediation.

- Perform design for gas lift valve arrangement on newly drilled wells.

- Well performance.

- Troubleshooting.