

DRILLING PRINCIPLES AND PRACTICES **DRL002**

COURSE DESCRIPTION

The course is designed to provide a fundamental information's to all aspects of the well drilling, rig components, cement operations and completion operations including well control items. 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 drilling 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 GOAL

To enhance the participants' knowledge, skills, and ability necessary to understand the principles and best practices of drilling operations.

COURSE OBJECTIVES

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

- Have good understanding of rigs type and components.
- Have fully understanding of the drilling operations.
- Be familiar of cementing operations.
- Have The ability to supervise well control operations.
- Have good understanding of drilling problems.
- Have a fully understanding of the completion operations.

WHO SHOULD ATTEND

- Drilling engineers
- Drilling supervisor
- Drilling operators
- Production engineers
- Field maintenance supervisors and operators.
- Safety engineers
- Petroleum and reservoir engineers
- Production technologist
- Reservoir engineers

COURSE DURATION

5 Working Days

COURSE OUTLINES

Day One

- Well reservoir and well exploration
- Important definitions
- Pore pressure
- Hydrostatic pressure calculations
- Drilling process overview
- Rigs & rig equipment
- Drilling string components & design

Day Two

- Formation Integrity Tests
- Functions Of Casing
- Types of Casing
- Factors Influencing Casing Design
- Cement Manufacture & Chemistry
- Cementing Additives
- Cementing Mechanics
- Displacement Theory
- Cementing Calculations

Day Three

- Cement Evaluation Tools
- Casing corrosion logs
- Drilling Fluid Selection: data Requirements
- Drilling Fluid Types
- Drilling Mud Properties
- Bit Selection Guidelines
- Open hole logging overview

Day Four

- Rig BOP
- Causes of Kicks
- Kill Methods
- Flanges
- Hole problems

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- Stuck pipe
- Lost circulation.
- Restriction in the drilling string

Day Five

- Production casing / Liners
- Perforation operations
- Completion selection
- Completion equipment
- Workover operations
- Sand control completion

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