

**DRL003** 

# DRILLING OPTIMIZATION AND WELL PLANNING

# COURSE DESCRIPTION

This course is designed to cover the topics of drilling optimization and well planning process. It puts all the pieces together for an integrated systems view of well planning and construction. Technical concepts are reviewed, and specific design steps and tools are used for the key planning processes of casing design, drilling fluid, hydraulics, bit selection/ running conditions, and cementing program. Case studies are analyzed and worked as team projects, and participants are encouraged to bring case studies to class. Participants leave the course with a thorough understanding of the entire well planning implementation and analysis process, and specific design steps, processes, and checklists

The intent is that participants in this class should satisfy some of the requirements for Well Engineering, Drilling Fluid Engineering and Well Construction Engineering.

## **COURSE GOAL**

To enhance the participants' knowledge, skills, and ability necessary to identify, apply and implement drilling optimization techniques.

## **COURSE OBJECTIVES**

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

- Understand the well planning process.
- Identify the factors influence of drilling optimization.
- Have a thorough understanding of well control and performance monitoring.

## WHO SHOULD ATTEND

- Drilling Managers and Superintendents
- Drilling Engineers
- Intervention, Completion and Production Engineers
- Reservoir and Geology Engineers
- Field Maintenance Supervisors and Operators
- Service Companies and Equipment Manufacturing Engineers
- Safety Engineers and Personnel

#### **COURSE DURATION**

5 Working Days



#### **COURSE OUTLINES**

- Introduction to planning and optimization
- Well Planning Overview
- Factors influence of drilling optimization
  - Optimization of drilling equipment
  - Optimization of drilling programs
  - Drilling operation obstacles
  - Drilling hazard analysis
  - Stuck
  - Blow out
  - Lost circulation
  - Analysis and poisoning gas handling
  - Environment influences in drilling operation
- Well Control and Performance Monitoring
  - Identification of Key Performance Indicators (KPI)
  - Common KPI
  - Benchmarking
  - Technical limits and quantum change in limits

