

# “ABC OF DRILLING” (ABCD)

**COURSE LEVEL:** FOUNDATION

**COURSE DURATION:** 3 days. Each day will be broken into three sessions of around 2 hours each. An hour of lunch break and two tea breaks of 15 mins each will be included in the schedule.

**INTRODUCTION:** The ABCD course is intended to give the participants a complete understanding of the processes involved in the drilling of oil and gas wells.

**MODE OF TRAINING:** This course will be run by WELL SCHOOL instructor. The instructor will teach via presentation slides. The slide pack along with sufficient attached notes will be provided to the participants in the form of a basic manual.

To reinforce the learning opportunities some videos and basic exercises will also be included. Sessions will be designed to accommodate ample time for Q&A and clearing of doubts. A quick quiz will be conducted each day to ensure attentiveness and focused participation.

**TARGET AUDIENCE:** ABCD course is meant for individuals who will be working closely with the drilling departments within their company. It may include petroleum engineers, entry level drilling engineers, production & completion engineers, geoscientists, Project Managers, Technical supervisors, support personnel from other disciplines like HSE, wellsite geology, logistics, Procurement & Contracts, HR, drilling operations personnel, drilling office support staff.

**PRE-REQUISITES:** None except being passionate about the O&G industry.

**ABOUT THE COURSE:** Participants will learn how drilling fits into the overall E&P lifecycle and its interaction with other domains. Participants will have a general overview of well delivery process from cradle to grave. Participants will also learn what information is required and available for the well construction group, including different risks involved in well construction, as well as the roles and responsibilities at the wellsite and office. The vocabulary to understand the drilling process will also be discussed on day one.

The different rig types and main equipment used in drilling will be discussed. Basic aspects of drilling engineering will be discussed. Subjects include discussions on drill bits, directional drilling & MWD, drilling fluids (mud), solids control equipment, cementing, casing, well bore stability, well control, and typical downhole problems like stuck pipe & lost circulation. Basic engineering aspects will be discussed but the underlying aim will be to limit the discussion to simple terms in view of the diverse audience background. Last day will include discussions on how to read and interpret a daily drilling report (DDR). Client’s actual daily reports can be included for discussions depending on client’s preferences.

## **COURSE STRUCTURE:**

### Day 1

- E&P Lifecycle
- WDP phases & risks
- Drilling interface with other departments

- Drilling team roles & responsibilities
- Know your Rig equipment
- G&G fundamentals for drilling
- Quiz, Q&A session

#### Day 2-

- AFE preparation & NPT concept
- Bit types & applications
- Directional drilling tools & techniques
- Surveying tools like MWD, Gyro
- Casing & Cementing basics
- Drilling fluids (mud) & solids control equipment
- Quiz, Q&A session

#### Day3

- Drilling monitoring process
- Downhole drilling risks
- Well control equipment
- HSE risks in drilling
- DDR interpretation
- Quiz, Q&A session
- Feedbacks