



## Basic Drilling Technology - BDT

### COURSE

#### About the Course

This basic drilling technology course addresses the technology used to drill wells from a fundamental view point. Equipment and procedures involved with drilling oil and gas wells are described for those who are interested in understanding the drilling process regardless of academic background. During the first day, the overall drilling process is presented along with definitions and descriptions of drilling equipment. This provides the vocabulary to understand the drilling process. During the remainder of the week, the various components and procedures are discussed in greater detail with explanations of the basic science concepts which guide these processes. Subjects include descriptions of drill bits, directional drilling, drilling fluids, solids control, cementing, casing, well bore stability, well control, measurement-while-drilling techniques, stuck pipe, lost circulation, and well bore hydraulics. Some technology enhancements are included to improve understanding of drilling operations for all participants, with or without a science background. A discussion of clay mineralogy helps understand well bore instability and drilling fluids. A discussion of pressure and pressure effects helps explain many of the procedures and problems associated with drilling wells. Rocks behave differently under pressure and understanding this behavior helps in understanding drilling performance.

Some discussions of the art and science of drilling include mathematical explanations for those involved with the engineering aspects of drilling operations; however, the concepts and intent of these mathematical equations will also be explained in simple terms. After all various components and procedures are discussed, the information contained in morning reports is explained and used as a summary of the course content.

This course is also available on-demand in an online, blended format.

*"Course was tailored to the classes' needs and not just delivered from a syllabus. This is an excellent way to give people what they need to develop a basic understanding of the drilling industry. Reinforced my basics very well and identified my weak areas where I need improvement."* - Drilling Supervisor, Canada

*"The instructor made learning the different sections of the drilling site to be very interesting. It was very important to understand the importance of each and how they effect drilling."* - Procurement Associate, United States

#### Target Audience

Petroleum and production engineers, completion engineers, geoscientists, managers, technical supervisors, service and support personnel, entry level drilling engineers, drilling operations personnel, drilling office support staff.

## You Will Learn

- About drilling equipment and how it is used
- Drilling terminology and abbreviations
- Keys to planning a successful well
- Common drilling problems and how to avoid them
- How to read a morning report
- Technology behind information in a morning report

## Course Content

- The overall drilling process and equipment
- The language of drillers - understanding their terminology
- Understanding the abbreviations and acronyms associated with drilling
- Rig equipment and types
- Types of drill bits
- MWD
- Drill strings
- Drilled solids management
- Mud tank arrangements
- Drilling fluid properties
- Well control
- Cementing
- Casing design
- Hole problems (stuck pipe, lost circulation)
- Well control
- Directional drilling operations and tools
- Safety

## Product Details

Categories: [Upstream](#)

Disciplines: [Well Construction/Drilling](#)

Levels: [Basic](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [James Bobo](#) [Mark Hackler](#) [PetroSkills Specialist](#)

