



ABERDEEN DRILLING SCHOOL

Introduction to Drilling

OVERVIEW

The 1-day Introduction to Drilling course aims to provide non-drilling personnel with a comprehensive overview of the terminology and vocabulary of the drilling process.

DESIGNED FOR

This course is designed for non-technical personnel such as those from finance, HR, supply chain, marketing and technical personnel from non-drilling disciplines such as production operations, facilities management and QHSE.

COURSE DELIVERY

This course is delivered over 1 day through a series of interactive lectures, videos and examples to explain and describe the different drilling processes.

CERTIFICATION

Successful completion of the course will result in an Aberdeen Drilling School certificate which is valid for life and does not need to be repeated or renewed.

ENTRY REQUIREMENTS

There are no formal pre-requisites for this level of training.

LEARNING OUTCOMES

At the end of this course participants will be able to:

- Explain how rock, trap, seal and source combine to create a reservoir.
- Identify the major components of the rotary drilling rig.
- Describe what is meant by the circulating system.
- Explain why casing and cement is used to support the wellbore.
- Describe the methods of drilling directional and horizontal wells.
- List the major components within a basic well completion.



INDICATIVE COURSE CONTENT

The course covers the following modules:

Introduction – the day begins with a short introduction to provide context to the drilling industry by looking at the supply – demand conditions and the impact this is having on drilling technology developments and drilling environments such as deepwater and Arctic drilling.

Essentials of geology – a review of the properties that define a good reservoir, the reservoir rock, trap, seal and source. The basic principles of the rock cycle are explained.

Rig type and rig selection – the different types of drilling rig are described and explained from land rigs to the generation drill ships. Rig selection criteria are briefly reviewed.

Functions and components of a rotary drilling rig – the primary functions of a rotary drilling rig (to provide mechanical and hydraulic energy and hoisting) are explained through a description of the major items of rig equipment and how they are used to drill a well.

Drilling fluids and circulating system – the importance of drilling fluid in maintaining wellbore stability and safety are discussed along with a description of the rig equipment used in circulating drilling fluid around the system.

Casing and Cement – the functions of casing and cement are reviewed and the essential primary cementing process described.

Directional drilling – the importance of directional drilling in field productivity is discussed with a description of the methods of drilling a directional and horizontal well using steerable motors and rotary steerable systems in conjunction with LWD.

Completions and production – having drilled through the reservoir the well is made ready to produce hydrocarbons. This session describes the essential components in a completion and the methods used to maintain production through wellbore interventions.