

Drilling Fluids

5 days
Overview

FLU-EN-P

LEVEL

Knowledge

PURPOSE

This course provides a comprehensive understanding of drilling fluids characteristics.

LEARNING OBJECTIVES

Upon completion of the course, participants will be able to:
acquire a thorough knowledge of drilling fluids and rheology,
learn how to choose the right equipment for solid removal,
learn how to communicate efficiently with a drilling fluid specialist.

WAYS AND MEANS

Exercises.
Application to a real case (project) for participants in the "Drilling & Completion Engineering" training course.

LEARNING ASSESSMENT

Quiz.

PREREQUISITES

Basic knowledge in drilling operations.

Agenda

FUNCTIONS OF DRILLING FLUIDS

0.5 d

PHYSICAL & CHEMICAL CHARACTERISTICS

1.5 d

Specific gravity.
Rheology.
Filtration.
Alkalinity.
Chloride.
Hardness.

TYPES OF FLUIDS

1 d

Water base mud.
Oil base mud.

SHALE INHIBITION

0.5 d

Types of shale.
Chemical and physical inhibition.

MECHANICAL & WASTE TREATMENT

0.75 d

Function.
Selection of equipment and layout.
Separation ranges.
Overall efficiency.
Waste treatment:
Solidification.
Reinjection.
Desorption.

TROUBLESHOOTING

Losses:
Detection.
Analysis and decision chart.
Treatment.
Hole cleaning:
Vertical well.
Deviated and horizontal wells.