



Drilbert Engineering Inc.
70 E. Evangeline Oaks Circle
The Woodlands, TX 77384

“Technical Training for the drilling industry”

Advanced Drilling and Completion Fluids Course

Program Objectives

This 5-day course aims to provide students with the knowledge to understand and maintain Drilling and Completion Fluids systems. Students will learn; how fluids impact the well bore and target reservoir, the skills to evaluate a fluids check sheet in order to make an informed decision on fluid condition at the surface and at down hole conditions, the effect that base fluids and additives have on fluid properties with varying conditions, the importance of trend analysis, and a fundamental understanding of fluid properties and the effects of contaminants as they pertain to pressures, hole cleaning, wellbore stability, and formation damage.

Upon completion of the training, students will have a broader understanding of Drilling & Completion Fluids and should be able to; design fluids system for a particular well or project, evaluate a fluids check sheet to determine the condition of the fluid and actions to take if needed, evaluate drilling and completion fluids in terms of function and quality, evaluate the cost benefits of a selected fluid and the corresponding solids control and filtration equipment.

Attendees reinforce their learned skills with several in-class exercises.

Course Prerequisites

Students should have basic understanding of Drilling and Completion Fluids function and properties.

This course is designed for field supervisors, drilling engineers, workover over engineers, and well planners. It is suited for individuals who are involved in well planning, drilling and workover operations on day-to-day basis, with some practical drilling and completion background.

Students should bring a calculator and be prepared for homework.

Course Outline

Day 1

- Pre assessment
- Fluids Overview
- Functions of Drilling Fluids
- Types of Drilling Fluids

Day 2

- Drilling Fluids Properties / measurements
- Drilling Fluids Additives
- Controlling Fluid Properties
- Drilling Fluid Selection

Day 3

- Clay chemistry and rheology
- Water based drilling fluids
- Polymers

- Oil based drilling fluids
- Effects of contaminants
- Engineering calculations

Day 4

- Solids Control
- Optimization & maintenance of solids control equipment
- Mud Related Hole Problems
- Drilling fluid Trend analysis

Day 5

- Completion Fluids overview
- Fluid Displacements
 - Transition - Drilling to Completion
 - Displacement Chemicals
- Fluids Post – Assessment

