





# **Course: Drilling Fluids & Cementing**

Code	City	hotel	Start	End	price	Hours
757 M	luscat (Oman)	Hotel Meeting Room	2024-06-02	2024-06-06	3950 €	25

#### **Course Objectives**

- Be aware with the whole drilling operations briefly, well profiles & all used related services used in the well.
- Be aware with the drilling fluids & cementing programs based on the available well drilling programs details.
- Be aware with the design, preparing, testing & treating the DRLG Fluids while drilling the whole well sections specially the pay zone to prevent the complications due to pay zone damage, skin factor, hole cleaning .....
- Be aware with the mud properties & testing procedures @ rig site.
- Evaluate the mud problems while drilling the whole well specifically the pay zone section & how the skin factor can be controlled while drilling.
- Be aware with all differences, advantages, disadvantages & handling issues for both OBM & WBM different mud systems.
- Be aware with the design, preparing, testing & performing the cementing jobs for the whole well sections specially the pay zone to prevent the complications due to pay zone damage, skin factor, liner problems .....
- Evaluate the cement behind casing quality specially in the pay zone & the needed remedial actions in any failure's cases.
- Know a detailed idea about the completion fluid properties, problems, types, filtration, treatment ways .....
- Be aware with all cementing calculations.
- Be aware with all cementing chemicals, equipment & accessories.
- Be aware with all cementing lab test & all cement job types.
- Be aware with the cement evaluation jobs (CBL-VDL-USIT).

#### Who Should Attend?

This course is intended for drilling engineers, senior drilling engineers, operations engineers, well testing engineers & operators, senior operations engineers, completion engineers, reservoir engineers, production engineers, day well site supervisors, night well site supervisors, contractors' stuff & all supporting staff needing to gain an understanding of the principles and practices relevant to the drilling fluids & cementing activities.

#### **Training Methodology**

- This interactive online training course includes the following training methodologies as a percentage of the total tuition hours
- 25% Lectures
- 30% Workshops & Work Presentations
- 20% Case Studies & Practical Exercises
- 25% Videos, Animation & General Discussions



#### **Course Program**

## Day 1

## • Drilling Well Services (Brief)

- Drilling & WO Rigs.
- Drilling Bits.
- BHA & Down Hole Tools.
- $\circ\,$  Drilling Fluids (OBM & WBM) in more details than others.
- $\circ~$  Casing & Cementing in more details than others.
- Well Head Services.
- Surveys & Logging (Open Hole & Cased Hole).
- Cold Cutter & Hot Welding.

## • Safety Alerts

## • Cont. Drilling Well Services (Brief)

- Fishing Tools & Operations.
- Directions Drilling.
- $\circ~$  Cut Core (Convectional & Oriented).
- $\circ~$  Clean Out Scraper Runs & Completion Fluid Displacement.
- $\circ\,$  Liner & Production CSG.
- $\circ\,$  Well Testing.
- $\circ\,$  Well Completions.

# Day 2

#### • Drilling Fluids "MUD"

- Introduction
- Drilling Fluids Functions
- $\circ~$  Main Differences between OBM & WBM.
- OBM Treatment.
- Different Mud Systems.
- Mud Chemicals.
- Cont. Drilling Fluids "Mud"
  - Mud Properties.
  - Drilling Fluids Program Preparations.
  - $\circ~$  Mud Measurements & All Related Devices.
  - $\circ~$  General Drilling Problems in relation with the mud.
  - Mud Losses & Fluid Invasion.
  - LCM's & Cement Plugs Losses Treatment.

#### Day 3

• Cont. Drilling Fluids "Mud"



- Kicks & Well Control Issues.
- Kill Sheet Calculations.
- Stuck Pipe & Long OH Exposure Time Effect.
- Hole Cleaning & Mud Contaminations.

# • DRLG Fluids & Skin Factor Relationship while drilling operations

- Cementing
  - $\circ$  Introduction
  - Casing Design Brief ( (Sizes, Hole Sections, Properties, Setting Depths, Accessories, Running procedures, CSG Problems). )
  - Cementing Functions.

# Day 4

## • Cont. Cementing

- Dry Cement Classes.
- Cementing Chemicals & Functions.
- Cementing Equipment, Tools, Accessories, Specifications, Setup, Rigging Up Procedures, related problems ...).
- HSE Alerts

# • Cont. Cementing

- Cement Unit Components.
- $\circ~$  Cementing Program & Lab Test Preparations.
- Cementing Jobs Types (On Fly & Batch Mixed).
- Liner Cement Job Procedures & All Related Problems with solutions.

# Day 5

# • Cementing Quality Evaluation & its importance while the well life.

- $\circ\,$  CBL.
- VDL.
- USIT
- CSG Punch & CMT Squeeze Jobs.
- ST CMT Plugs (OH & CH).
- Whip Stock Techniques.
- Different real CH logs & problems evaluation



The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

- Theoretical Lectures:
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- Scientific Assessment:
  - $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.
- Brainstorming and Interaction:
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- Practical Cases:
  - $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ\,$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.