





# **Course: Drilling Fluids & Cementing**

Code	City	hotel	Start	End	price	Hours
757	Auckland (New Zealand)	Hotel Meeting Room	2024-08-19	2024-08-23	5950 €	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.
- o Drilling Bits.
- BHA & Down Hole Tools.
- o Drilling Fluids (OBM & WBM) in more details than others.
- Casing & Cementing in more details than others.
- Well Head Services.
- o Surveys & Logging (Open Hole & Cased Hole).
- Cold Cutter & Hot Welding.

# Safety Alerts

# • Cont. Drilling Well Services (Brief)

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

# Day 2

# • Drilling Fluids "MUD"

- Introduction
- Drilling Fluids Functions
- Main Differences between OBM & WBM.
- o OBM Treatment.
- o Different Mud Systems.
- Mud Chemicals.

# • Cont. Drilling Fluids "Mud"

- Mud Properties.
- $\circ\,$  Drilling Fluids Program Preparations.
- Mud Measurements & All Related Devices.
- 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.
  - $\circ\,$  Stuck Pipe & Long OH Exposure Time Effect.
  - Hole Cleaning & Mud Contaminations.
- DRLG Fluids & Skin Factor Relationship while drilling operations
- Cementing
  - Introduction
  - Casing Design Brief ( (Sizes, Hole Sections, Properties, Setting Depths, Accessories, Running procedures, CSG Problems).)
  - $\circ\,$  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.
  - 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.
  - o CBL.
  - VDL.
  - o 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:

• 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:

• We provide both printed and digital scientific and practical materials to participants.

# • Attendance and Final Result Reports:

• We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

#### • Professionals and Experts:

• The programs scientific content is prepared by the best professors and trainers in various fields.

# • Professional Completion Certificate:

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.