

Understanding Advanced Drilling Techniques

Aims

The course is intended for industry professionals who wish to expand their knowledge of the following Advanced Drilling Techniques (ADT):

- coil tubing drilling (CTD)
- managed pressure drilling (MPD)
- underbalanced drilling (UBD)
- through-tubing rotary drilling (TTRD)

This independent course explains how these technologies can help overcome drilling issues and maximise potential economic returns. Participants gain a unique insight through the practical integration of theory and actual drilling data, reinforced by the extensive use of real case studies from throughout the world.

Benefits

You will gain an appreciation of:

- advanced drilling techniques
- where they are applicable
- how to select the right technique and the right candidate

You will learn about:

- well design
- HSE issues
- completion philosophies
- downhole equipment issues
- surface equipment design



Who should attend?

Well engineers, reservoir engineers, production and completion engineers and other industry professionals eager to enhance their practical understanding of advanced drilling techniques afforded by this course.

Duration

- 3 days

Course Instructors

Melanie Vonthethoff is Asia Pacific Senior Regional ADT Engineer with Senergy. She has extensive ADT operations experience spanning well planning and execution from numerous projects in Australia, Indonesia, Malaysia, New Zealand, the North Sea and Norway. Melanie is also a published SPE author.

Joy Oyovwevotu is a Principal ADT Engineer with Senergy. He joined Shell Nigeria as a drilling engineering trainee in 1991 and has since held various onshore and offshore drilling engineering positions spanning well planning and execution. In 2001, Joy joined LEADING Edge Advantage (LEA) as a Senior Drilling Engineer and has worked extensively on field rejuvenation projects based on the application of ADT with special emphasis on Through Tubing Rotary Drilling including the industry's first subsea TTRD project.

The workflows used in these projects, from candidate selection and feasibility through to planning and execution, provide the framework for the principal course modules.

Topics

Coil tubing drilling

- ☉ advantages and limitations

Coil tubing drilling equipment

- ☉ surface equipment
- ☉ downhole equipment

Fluid design

- ☉ fluid properties
- ☉ fluid selection criteria

Underbalanced/managed pressure drilling

- ☉ advantages and limitations

Reservoir issues

- ☉ formation damage and skin
- ☉ wellbore stability

Fluid selection

- ☉ UBD / MPD fluid systems
- ☉ UBD / MPD gas systems

Downhole equipment

- ☉ BHA systems
- ☉ deployment systems

Surface equipment

- ☉ gas systems
- ☉ well control equipment
- ☉ surface separation equipment

Through-tubing rotary drilling

- ☉ advantages and limitations

Candidate selection

- ☉ reservoir target selection
- ☉ current well status
- ☉ well planning

Engineering and modelling

- ☉ tubing forces
- ☉ casing wear
- ☉ wellhead load
- ☉ cuttings transport
- ☉ cementing

Drill string

- ☉ design
- ☉ drill string components
- ☉ BHA selection

Surface equipment

- ☉ fluid handling
- ☉ pipe handling
- ☉ derrick issues

Well control

- ☉ BOP requirements
- ☉ kick detection systems
- ☉ kick tolerance
- ☉ well kill techniques

Sidetracking

- ☉ fundamentals
- ☉ whipstock design

Completions

- ☉ philosophy

HSE issues

- ☉ risk management
- ☉ safety issues
- ☉ environmental considerations

Case studies

- ☉ subsea TTRD
- ☉ onshore CT UBD
- ☉ platform based CT MPD

To book this course, please contact **Sarah McPhee** - Training Co-ordinator

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