Directional, Horizontal and Sidetrack Drilling

27 - 31 Aug 2017, Dubai - UAE

This course is Designed, Developed, and will be Delivered under ISO Quality Standards
WHY CHOOSE THIS TRAINING COURSE?

This training course will increase the participants’ understanding of the operations carried out by directional drillers and how directional and horizontal wells are planned and optimized. The basic applications and techniques for multilateral wells will be covered and participants will receive instructions on planning and evaluating horizontal wells based on the objectives of the horizontal well, and how to perform the proper planning for directional and horizontal well. In addition, this PetroKnowledge training course will cover how to predict wellbore path based on historical data and determine the requirements to hit the target, and help solve related problems.

This training course will feature:

• How to identify candidate wells for horizontal drilling, design horizontal and multilateral well profiles
• Understanding single and double build curve
• Calculating torque and drag
• Understanding kick off methods, compile a drilling and completion program and estimate wellbore stability mud weights

WHAT ARE THE GOALS?

By the end of this training course, participants will be able to:

• Interpret TVD, polar, rectangular coordinates, dogleg severity and the problems associated with it
• Interpret torque and drag and what factors affect those in the drilling process
• Understand main concepts associated to well path planning
• Recommend suitable measures to mitigate operational issues related to directional and horizontal drilling
• Understand main concepts associated to well construction of multilateral wells

WHO IS THIS TRAINING COURSE FOR?

This training course is suitable to a wide range of professionals but will greatly benefit:

• Drilling engineer
• Completion engineers
• Completion Supervisors
• Drilling managers
• Drilling technical support personnel

HOW WILL THIS TRAINING COURSE BE PRESENTED?

This PetroKnowledge training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The daily workshops will be highly interactive and participative.
DAILY AGENDA

Day One: Directional Profiles and Other Applications of Directional Drilling
- Directional Drilling Fundamentals and short history
- Applications and Limitations
- History and applications of Extended Reach Drilling
- Directional Well profiles (2D, 3D, designer wells)
- Survey calculation methods: Tangential, Balanced Tangential,
- Average Angle, Radius of curvature, Minimum Curvature
- Survey calculation exercises

Day Two: Dogleg, Torque and Drag Calculations
- Factors that affect torque and drag
- Friction Coefficient
- Directional Profile
- String Weight
- Directional Drill String Design
- Conventional directional well
- High Angle or Horizontal Well
- Problems & Case history

Day Three: Planning Directional and Horizontal Wells including Extended Reach Wells (ERD)
- Determining directional well plan
- Planning directional well with single equation
- Planning Horizontal Wells
- Planning ERD

Day Four: Hole Cleaning Practices in Deviated and Horizontal Wells
- Hole Cleaning Problems Associated With Inclination
- Annular Velocity
- Flow Regime And Viscosity
- Drill Pipe Rotation And Reciprocation
- Multi-lateral wells concepts and application
- Horizontal and Multilateral Drilling Technology
  - Methods & applications
  - Levels of multilateral wells
  - How to perform a multi-lateral well
- New technologies application (Rotary Steerable, Thin Wall motors etc.)

Day Five: Completion for Horizontal and Multi-lateral Wells
- The difference of production between horizontal and vertical
- Difference of production between horizontal and ERD
- Difference of production between horizontal and multi-lateral
**COURSE DATES, VENUES AND FEES**

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
<th>Fee</th>
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<tbody>
<tr>
<td>27 - 31 Aug 2017</td>
<td>Dubai</td>
<td>$4,500</td>
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This fee is inclusive of Documentation, Lunch and Refreshments.

Please use BLOCK CAPITALS to fill in this form. It is important that you read carefully through all information before starting to complete the form.

**REGISTRATION DETAILS**

Family Name: ___________________________________________

First Name (Mr./Ms.): ____________________________________

Position: ________________________________________________

Company: _______________________________________________

Mailing Address: ________________________________________

Telephone:____________________ Mobile: __________________

Fax: _______________________ Email: _____________________

**AUTHORISATION**

Authorised By: _________________________________________

Position: ______________________________________________

Company: _______________________________________________

Mailing Address: ________________________________________

Telephone:____________________ Mobile: __________________

Fax: _______________________ Email: _____________________

**BOOKING TERMS & CONDITIONS**

**Booking**

- Bookings for courses can be made via our website (petroknowledge.com) or by contacting our Registration Desk on +971 2 5577389 or at reg@petroknowledge.com
- For on-line bookings, please select the course that you require and click on the “Register Now” button, following the instructions step by step
- Upon receipt of booking in order, enrolment on the respective training course will be confirmed by Registration Team with all necessary documentation

**Invoicing and Payment**

- Our fees include course presentation, relevant materials, physical & digital documentation, lunch and refreshments served during entire training. Accommodation charges are not included in the course fees
- Course fees are payable upon booking unless a valid, authorized Purchase Order is provided and accepted
- Invoices will be sent via email/courier to the ID/name and address provided
- We prefer to have the fees payment in our account before the start of training course. However, if your company has a different payment policy, the same should inform us in advance
- The currency of fees is in US Dollars (USD). Payments can be made in USD or UAE local currency AED (Arab Emirates Dirhams) either by Bank Transfer or by Credit Card. Our Bank Account details will be provided on the Invoice
- Please note that we do accept payment by cash, in USD or AED, only for the last minute bookings

**Cancellation of Courses**

- It may be necessary for PetroKnowledge to amend or cancel any course, course times, instructors, dates or published fees due to unforeseen circumstances and we reserve the right for such changes
- Any amendments will be advised before the course start date and any bookings already paid in full will not be subject to increased fees

**Cancellation by Client**

- Once you have completed your booking, received your confirmation of enrolment and a dated payment Invoice, you are deemed to have a contract with PetroKnowledge. You reserve the right to cancel this contract given the below terms
- All cancellations must be received in writing at reg@petroknowledge.com and info@petroknowledge.com at least 14 days prior to the training
- After the cancellation period has expired, consideration may be given, on a case to case basis, if a registered delegate nominates a substitute on the same course, shifts to next session of the course or moves to a new course
- For a cancellation request made on or before the statutory 14 day cancellation period, a refund may be given or a credit note issued which can be used against future course fees
- A 25% administration fee (of the total course fee at the time of booking) will be charged for any cancellations made outside of the statutory cancellation period

**Attendance Certificate**

- The daily course schedule should be accurately followed to ensure undeterred implementation of our training
- All delegates, who participated in their course throughout, will receive the Certificate of Completion on the last day
- Please report any foreseeable absences to a PetroKnowledge representative or to your sponsors directly
- An absence of three (3) or more sessions of the course will invalidate your eligibility for the Certificate of Completion