



**MERLIN ERD**

Extended Reach Drilling Engineers

## Trouble-Free High Angle & ERD Wells 3 Days Ops & Engineering Course

Summary

Day 1

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[www.MerlinERD.com](http://www.MerlinERD.com)

# Course Summary

## Who Should Attend?

Drilling professionals involved with high angle (>30 deg inc) drilling operations: Drilling Engineers, Superintendents, Supervisors & Senior Service personnel

## 2015 Open Seat Dates & Locations

Abu Dhabi      3 – 5 March  
Aberdeen, UK   12 – 14 May  
London, UK     22 - 24 September  
Aberdeen, UK   17 – 19 November

Contact us for dedicated client school dates.

“One of the best courses I have attended in my 25 year career”

David More  
Snr Drlg Supv, BP



## Course Objectives

✓ Reduce high angle and ERD projects' drilling risk, time and cost through teaching personnel techniques developed during the planning, drilling and review of some of the world's most demanding ERD and complex wells.

Teach delegates how to:

✓ Determine maximum drilling reach from existing rigs to fast track production  
✓ Set required rig specification to drill ERD prospects  
✓ Use latest techniques and technologies to reduce risk and lower minimum rig spec.

✓ Identify critical success factors to assure wellbore stability and efficient hole-cleaning on demanding wells

✓ Highlight the root cause, responsible for 80% of downhole problems in these high angle wells, and the steps to take to ensure that your project avoids them.

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# Typical Agenda - Day 1

<b>Definitions &amp; Achievements</b>	Definitions and latest Industry achievements in deviated, complex and ERD wells.
<b>High Angle Wells – What’s Different?</b>	What’s different about high angle & extended reach wells? The problems which commonly occur: why do these arise and how to avoid them.
<b>Subjectivity Exercise</b>	Interactive exercise demonstrating the importance of objective, specific instructions. Initiates group discussions & demonstrates required level of instructions and risks if not followed.
<b>Hole Cleaning</b>	How to deliver appropriate hole cleaning each time and every time, key indicators and contingencies
<b>ERD Well Planning</b>	Key considerations when designing a high angle/ERD well. How to prioritise tasks to reduce risk and capitalise on opportunities.
<b>Torque and Drag</b>	Explanation of T&D fundamentals, their impact in ERD wells and options to reduce.
<b>Rig Specifications</b>	How to determine minimum rig requirements for your well and necessary safety factors for success. Options to drill further without rig upgrades.

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# Typical Agenda - Day 2

<b>Tripping</b>	How to clean up a deviated hole. Fit for purpose tripping procedures and avoiding tight hole. Backreaming safely
<b>Hydraulics &amp; ECD Management</b>	ECDs, definition, affect on hole stability, what affects ECD's, mechanisms for controlling ECD's.
<b>Surge and Swab</b>	Why surge and swab effects are amplified in ERD wells. Techniques for managing cyclic loading.
<b>Connection Practices</b>	Outline of procedures for making safe connections in high angle wells. Techniques to avoid damage to the wellbore and prevent stuck pipe.
<b>Wellbore Monitoring</b>	How to interpret downhole conditions from surface measurements to provide objective repeatable indication of hole condition. Dynamic changes in cuttings, Torque & Drag and PWD. How to get early warning of approaching problems.
<b>Tripping Exercise</b>	Worked example reports and identify issues and solutions
<b>Wellbore Stability</b>	Causes of instability. Solutions for preventing and/or recovering from a wellbore stability problem.

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# Typical Agenda - Day 3

<b>Casing and Cementing</b>	Key risks installing casing in ERD and high angle wells. Latest techniques to get tubulars predictably to depth. Cementing issues for high angle wells.
<b>Casing Wear</b>	Which well designs are susceptible and how to tell. How to monitor, options to mitigate and how to solve
<b>Trajectory Planning</b>	Different trajectory options and their implication on the overall well design. Why trajectory options have fewer opportunities to reduce loads than perceived. Easy optimisation gains.
<b>Vibration</b>	Causes of downhole vibration, effects vibration have on BHA components and the drillstring. Tips to avoid failures.
<b>Bit and BHA selection</b>	BHA strategy, its criticality in reducing risk and how it affects other design issues. Bit selection for high angle wells
<b>Surveying</b>	Review of surveying tools, practices, uncertainties and its effect on target design.
<b>Example Well Designs</b>	Example of a well design for an ERD well
<b>Survey/Closing Remarks</b>	Review material taught over course, answer questions & receive Course Feedback

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## What do I receive?

- ✓ 3 days expert instruction from industry leaders
- ✓ Hard copy course manual and handbook
- ✓ 2 coffee breaks and 1 delegate lunch per day
- ✓ Networking opportunities & shared experience
- ✓ Access to exclusive alumni LinkedIn group
- ✓ Course certificate

## Who will be my trainer?

As the leading independent ERD experts, our personnel have been involved in many of the most challenging ERD projects in the world. Our trainers are picked from this talent pool and have a wealth of experience and up to date material to share with you. We monitor every course to ensure high customer satisfaction levels and also keep delegate numbers to the optimum level.



“a well balanced course with a good mix of information, offset examples and war stories”

Mike Snowie, Drlg Supt., Talisman Sinopec

## What Will I Learn?

- ✓ How to determine the maximum reach from existing infrastructure
- ✓ Planning aspects key to delivering trouble free high angle, ERD and complex wells
- ✓ How to identify the minimum equipment specification for specific ERD projects
- ✓ Causes of 80% of the problems in high angle wells
- ✓ Critical techniques to avoid these problems
- ✓ What other operators are doing around the world to assure success
- ✓ The latest tools and techniques delivering world record ERD projects around the world
- ✓ Key actions that will reduce NPT and tool failures.

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# Booking Your Place

## Online

Visit our training page at [www.MerlinERD.com](http://www.MerlinERD.com)

## Phone

Give us a call on +44 (0) 1738 627922

## Email

E-mail our training team on [Pam.Conway@MerlinERD.com](mailto:Pam.Conway@MerlinERD.com)

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**Please read our Terms and Conditions carefully:**

## **OPEN SEAT TRAINING COURSES**

### **Payment**

All fees are due and payable upon enrolment in the course and are exclusive of applicable taxes. Place is only secured upon payment or approved Purchase Order. Payment is accepted via credit card or Paypal via our website, by bank transfer or by Company Purchase Order and invoice. Payment must be completed before commencement of the applicable course.

### **Cancellations by Participant**

We recognize that business demands on participants can change and therefore plans to attend one of our courses may alter, often at short notice. To that end, if you are unable to attend the course you are booked on, you may transfer your booking to another person at no cost, as long as you notify us of the name change before the course begins.

If you are unable to attend and cannot or do not wish to transfer the booking to someone else, we may accept the fee paid as payment towards a place on a future course that takes place within 12 months of the originally-booked event, on condition that we are notified in writing of your intentions at least 4 weeks prior to the originally booked event. Bookings can only be transferred once.

If you are unable to attend, and cannot transfer your place to another person or to another event or it is less than 4 weeks until the course date, then your booking is deemed non-refundable.

No refund will be made for non-attendance on the course (including transferred bookings).

### **Cancellations by Merlin ERD Ltd**

We reserve the right to cancel or reschedule training courses if necessary and will notify participants at least 4 weeks prior to course start date in this case. We also reserve the right to alter trainer(s) and/or training location(s) if necessary. If the course is cancelled by Merlin ERD, delegates have the option to receive a full refund or to be enrolled in another course (the cost of the original course will be applied to the cost of the replacement course). Merlin ERD Ltd is unable to reimburse any other costs that may have been incurred, including flights, accommodation etc.

**Our Client School Cancellation Policy is available on request.**

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