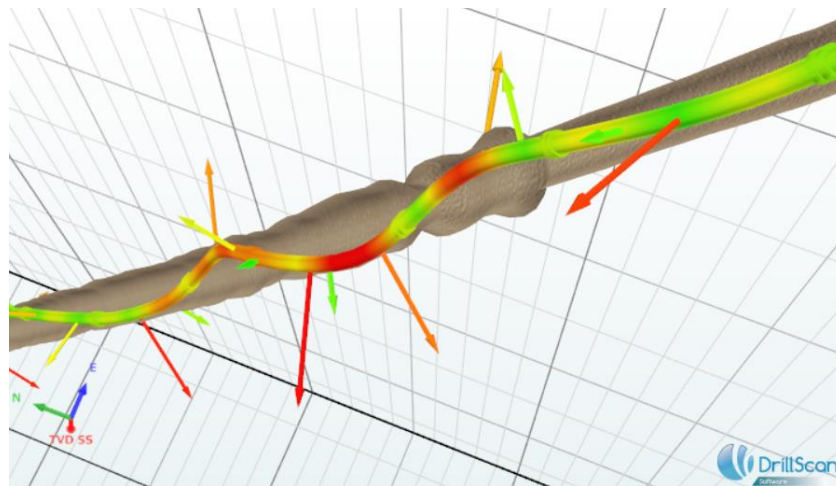


Master Class - 2 days Directional Drilling & Drillstring Mechanics

09 / 10 October 2018
Pau (France)



Objectives

After attending this training, the engineer will be able to:

- Describe the main components used in directional drilling bottom-hole assemblies (BHA)
- Understand how to model BHA behavior and rock interaction to predict directional performance
- Determine the impact of drilling parameters on drilling performance, to understand risks and anticipate potential problems
- Perform local dog leg analysis to enable trajectory re-construction and tortuosity assessment to assure successful casing/liner/completion deployment
- Explain the theoretical background to torque and drag modelling
- Understand causes and consequences for performance of sinusoidal and helical buckling in the drill string
- Anticipate potential lock-up situations and optimize landing string design
- Understand the mechanical limits while running in hole in complex wells
- Predict the degree of casing wear generated by drilling operations
- Identify how casing centralization can be improved to ensure proper cementation without compromising the ability to reach total depth
- Perform advanced simulations using the WellScan software

Each participant will have the possibility to use DrillScan Software during 15 days after the training.

Target Audience

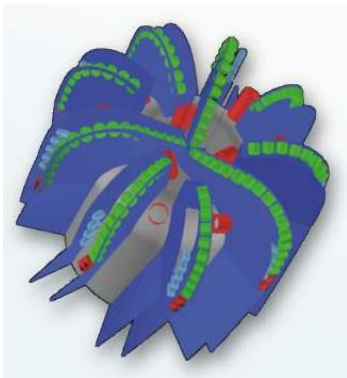
This course is designed for drilling and completion engineers (supervisors and managers as well) with 3 - 10 years' practical experience of well design and drilling/completion operations.

The course will be held in English and the participants will be required to bring a lap top computer.

Day 1

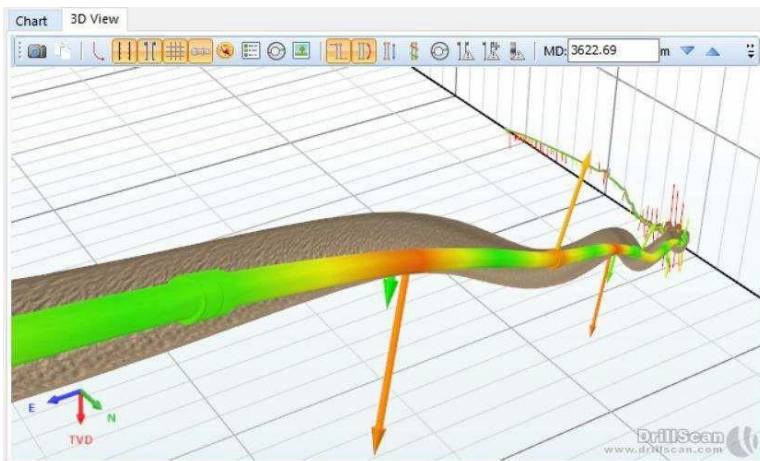
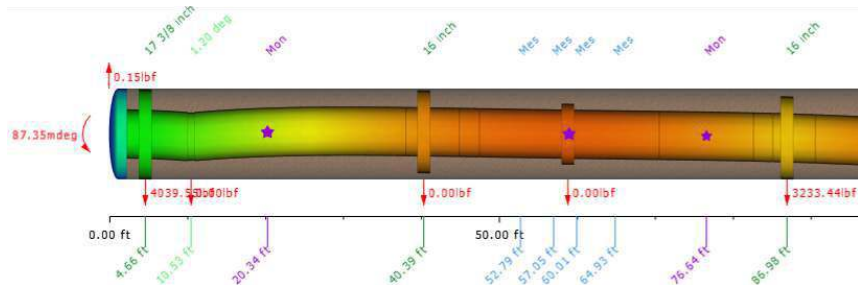
	From	To	Topic
Directional Drilling	08:00	10:00	Description of Directional Drilling BHAs: Drill bits, Rotary / RSS / Steerable motor BHAs
	10:15	12:00	Introduction to BHA Modelling: Bit & BHA Modelling, Bit/Rock/BHA/Well interaction
	12:00	13:00	<i>Lunch</i>
	13:00	15:00	Directional Sensitivity Analysis: RSS & Motor BHA case studies and User exercises
	15:15	17:00	Local Dogleg Analysis: Trajectory reconstruction, Tortuosity assessment. Case studies

Evening Social network restaurant



How to choose a PDC bit?

Why BHA design is so important?

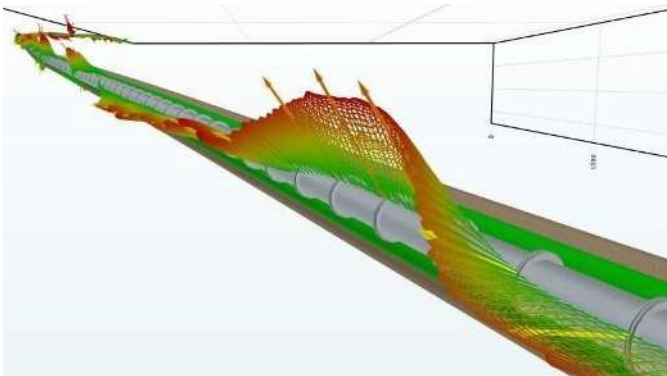
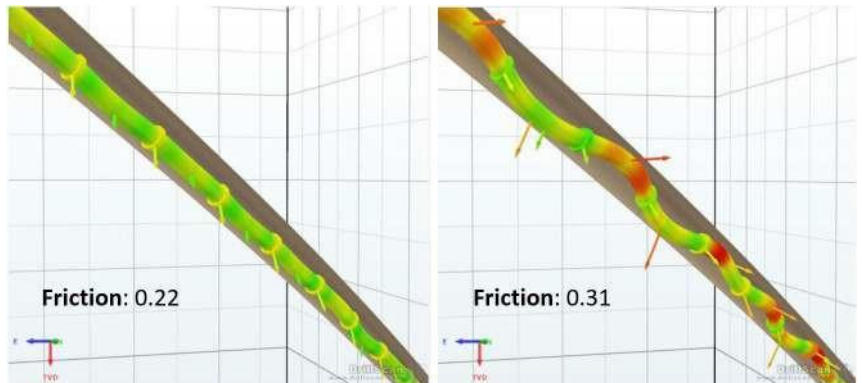


Need to assess the impact of hole tortuosity?

Day 2

	From	To	Topic
Drillstring Mechanics	08:00	10:00	Theoretical Background: Torque & Drag models, Pipe/Fluid/Borehole interactions
	10:15	12:00	Torque & Drag & Buckling: Buckling, Weight transfer, Reaching ERD limits, Friction reduction tools, RIH operations in complex wells, Friction factor calibration, Use of mud-logging data
	12:00	13:00	<i>Lunch</i>
	13:00	15:00	Casing Standoff: Bow-spring centralisers, Centralization program optimization
	15:15	17:00	Casing Wear: Wear models, Mitigation measures, Wear measurement challenges

How to predict the consequences of buckling?



Need to assess casing wear severity?

How many centralizers will ensure sufficient standoff?

