

# BHA Design Optimization

## 3 days (4-6 June 2019) - Pau

### Training content

#### 1 – Who should attend this training?

Drilling engineers and supervisors or drilling & well optimization engineers who aim at improving their knowledge on BHA design.

#### 2 – Objectives for attendees

- Enable you to challenge a BHA proposal from a Service Company
- Perfect your understanding about steering equipment how to combine it with drilling bits, and wellbore tortuosity
- Reinforce your knowledge in BHA Mechanics by using advanced technologies and real case studies (most sessions strongly rely on the use of DrillScan's proprietary Software)
- Acquire a solid theoretical background in BHA/rock/borehole interaction
- Get the keys to enhance a BHA design through analysis of possible failures
- Gain the know-how to capitalize experience through post-analysis process, and optimize BHA design accordingly for next wells

#### 3 - Programme

##### Day 1:

<b>Directional</b>	08:30	10:30	<b>Drilling Bits &amp; Directional BHAs</b> (Bits, Rotary, Motor and RSS BHAs)
	10:45	12:00	<b>BHA 3D Modelling</b> (Bit & BHA Modelling, Bit/Rock/BHA/Well interaction)
	13:30	15:00	<b>Directional sensitivity analysis</b> (Case studies and User Exercises)
	15:15	17:00	<b>Introduction to PDC bit design</b>

Social network dinner

##### Day 2:

<b>Mechanical &amp; Vibrations</b>	08:30	10:30	<b>Torque &amp; Drag: BHA mechanical Analysis &amp; Jar placement</b>
	10:45	12:00	<b>Drilling Dynamics and Drilling dysfunctions</b>
	13:30	15:00	<b>Vibration Modal Analysis</b> (WellScan module, User exercises)
	15:15	17:00	<b>MSE and Real-time analysis</b>

##### Day 3:

<b>Post-analysis &amp; Optimization</b>	08:30	10:30	<b>Local doglegs</b>
	10:45	12:00	<b>Directional Post-Analysis</b>
	13:30	15:00	<b>BHA optimization process &amp; technical wrap-up</b>
	15:15	17:00	<b>Evaluations</b>

#### 4 - Software

The attendees will be provided with a free version of DrillScan well engineering software during the training and for 15 days after the training.

The attendees need to bring their own laptop during the training.