

The 5-Day Drilling Optimization Operations Program



Table of Contents:

- Introduction
- Objectives
- Who should attend?
- Course Outline



1st floor, Incubator Building, Masdar
City, Abu Dhabi, UAE



00971-2-6452630



00971-50-6652671



info@btsconsultant.com



www.btsconsultant.com

Introduction:

This course is designed to address how to optimize drilling performance from all aspects of the drilling process. The course will address bit performance diagnostics, technical limits, and the way that a real time data analysis can reveal drilling performance shortcomings and safety issues.

Objectives:

By the end of this course delegates will be able to:

- Identify causes of poor drilling performance
- Understand the main drilling dynamic behaviors, and how to dissipate them and avoid them.
- Determine best possible drilling performance for any given lithology
- Determine drilling efficiency in real time and
- Interpret real time data for possible bit malfunctions

Who should attend?

Drilling Engineers, Senior Drilling Engineers, Drilling Supervisors, Workover Engineers, Petroleum Engineers, Completion Engineers, Tool Pushers, Reservoir and Senior Reservoir Engineers, Geologists, Production Engineers & Technologists, Wellsite Engineers, Lifting Personnel, Maintenance Engineers, Foremen, Industry Personnel

A cluster of overlapping light blue circles with a hand-drawn, brush-stroke-like texture, located in the bottom right corner of the slide.

Course Outline:

Drilling Mechanics

- Definitions
- Drilling efficiency
- Bingham Evaluation
- Symptoms of poor drilling performance
- ROP models

- The factors that affect drilling rate
 - Drilling fluids effects
 - Drill solids type and concentration
 - Weight on bit
 - RPM
 - Others


Drilling Dynamics

- Definitions and introduction to drilling vibration
- Causes, prevention, and cure of axial, rotational, and whirl vibration
- Case studies
- Real time diagnosis using downhole and surface measurements
- Real-time diagnosis from bits wear pattern
- Guidelines and best practices

Bit Performance Optimization

- Types of bits and selection
 - PDC bit selection and performance
 - Time to pull a bit
 - Mechanical specific energy
- The “d” exponent
 - Drill off tests interpretations and practical guidelines
 - Bit performance diagnostics in real time
 - Drill off test analysis with different levels of hydraulic

System Optimization

- Drilling fluid
 - Solids control
 - Drilling window
 - Wellbore stability
 - Hydraulics
 - Minimum circulation rate
 - Drill string
- 

Other Topics in Drilling Optimization

- Limitations to drilling optimization
- Pore pressure
- Maximum cuttings load (for a given ROP)
- Technical limit drilling

Course summary