Basic Drilling, Completion & Work over Operations

Table of Contents:

BTS Training & Consultancy

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 specifically designed to give a technical overview of the science and art of drilling operations, completion practices and post-completion wellbore enhancement or remedial work over techniques (well intervention). Its purpose is to develop an understanding of the WHAT, WHY and HOW of each of these areas of engineering practice.

The candidates learn to visualize what happening down hole is, discover what can be accomplished and gain an appreciation for wellbore risks and the possibility of damage to the formation. How drilling and completion practices can alter reservoir interpretation and performance will be discussed. The candidates will become conversant with specific technical terminology and aware of practical applications, which should enhance communication and interaction between disciplines.

Objectives:

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

- How drilling, completing and reworking a well affects its ability to produce
- What can be done within open-hole and cased wells, as a part of reservoir management
  How drilling practices can damage or stimulate producing wells

Who should attend?

The course is directed to all technical, field, service, support and supervisory personnel desiring to gain an introductory overview of these topics and how they interrelate, cross-training of other technical disciplines such as reservoir and surface facility engineers plus geoscientists, anyone who interacts with drilling,

Completion or work over design engineers such as technical supervisors and technical service personnel. Reservoir Engineers will learn what can be done within open-hole and cased wells as they execute reservoir management. Drilling and completion personnel will learn how the producing reservoir can be damaged or stimulated by what they do.

Course Outline:

Overview of the Drilling Process

- Overall drilling practices
- Language of drilling
- Reservoir rock and fluid properties
- Rigs and rig equipment
- Drilling string components and design
- Bits

- Drilling fluids and hydraulics
- Rig operation
- MWD
- Well control
- Hole problems and stuck pipe
- Drilling risks

- Cores and coring
- Casing design and installation
- Primary cementing
- Directional, horizontal, multilateral and under-balanced drilling
- Wellhead and trees

Overview of the Completion Process

- Zonal isolation
- Tubing, packers and completion equipment
- Safety and flow control devices
- Open hole completions
- Basic completion types

- Perforating
- Open and cased hole logging
- Formation damage and treatment
- Completion fluids Multiple completions

Overview of Work over Techniques

- Stimulation application: surfactants, solvents, acidizing, fracturing and deep perforating
- Formation and sand control: creens, chemical consolidation, gravel packing, frac-pack, new and novel techniques
- Scale and corrosion
- Paraffin and asphaltenes
- Recompletions
- Reworks
- Sidetracking
- Deepening
- Coiled tubing