Well Intervention & Pressure Control (IWCF) – Level 2

Table of Contents:

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

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 suitable for personnel involved in drilling / workover completions who are preparing to attend a well control school for the first time. This course must be taken prior to attending the IWCF Well Intervention course levels three & four. The course will raise the awareness of the negative impact and effect of a well control incident.

Also, it will provide the required comprehensive knowledge and skills to carry out well intervention operations. This course is designed in conjunction with IWCF requirements & covers the principles of well control and pressure control equipment during well completions, intervention and servicing operations. The course is also suitable for personnel who are unfamiliar with drilling and workover completions and would like a technical introduction to well intervention. The course provides an introductory understanding of pressure control methods related to well servicing methods and equipment.

The course will feature:

- Introduction of well completion methods
- Reasons for well intervention
- Methods of well servicing (wireline/coil tubing/snubbing)
- Understanding fluids and pressure

Objectives:

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

- Understand and apply Principles and Procedures (P&P)
- Apply theory regarding Completion Operations Well Control
- Understand practices and equipment surrounding Coiled Tubing
- Understand practices and equipment surrounding Hydraulic Workover (Snubbing).
- Understand practices and equipment surrounding Wireline Operations
- Understand the impact and consequences of a blowout
- Know the safety barrier principles
- Understand the behavior of a producing well
- Learn the various tool used during well interventions and work-overs
- Be aware of the methods used to control well pressure
- Learn procedures and equipment used in wireline, coiled tubing, snubbing, work-over

Who should attend?

All personnel concerned with well intervention operations (wire-line, coiled tubing, snubbing, work-over) involved in operations linked to the detection of a kick: engineers, supervisors and operators who have to supervise or carry out well intervention operations

Course Outline:

Completion Operations

- Overview
- Introduction to well control
- Introduction to barriers
- Risk management
- Circulating system
- Testing
- Influx characteristics and behavior
- Shut-in procedures
- Well control methods
- Contingency planning

Basic Principles & Well Fundamentals

- Type of well effluents (heavy oil, oil, gas)
- Hydrostatic and hydrodynamic pressures
- Specific gravities, densities, pressure gradient
- Over-balance / under-balance
- Pore pressure, frac pressure

Pressure Control Applied To Completion & Well Intervention

- Safety barriers, pressure tests
- Well calculation (pressure, volume, kill fluid, pumping time, balancing the pressure at the depth of the circulating device, etc.)
- Shut in procedures
- Kill methods (direct or reverse circulation, bull heading, lubricate and bleed, etc.)
- Specific problems linked to producing wells (losses, plugging, migration, hydrates, H2S and CO2, etc.)

Completion Equipment

- Different types of completion
- Blow Out Preventers
- Downhole equipment (packers, safety valves), nipples, side pocket mandrels, tubing (sizes, grades and connections), Xmas tree, etc.
- Completion equipment
- Annulus pressure monitoring

Different Types of Intervention with Their Respective Equipment

Wire Line Intervention

- Safety barriers and specific equipment
- Rigging up and pressure tests surface pressure control equipment
- Slick line: specific equipment (BOP, lubricator, stuffing box, cable cutter valve, etc.)
- Braided line, e-line: specific equipment (twin BOP, grease injection system, pack-off system, tool-trap, tool-catcher, etc.)

Coiled Tubing Operations

- Coiled Tubing Equipment WCA
- Rigging up WCD
- Testing WCE
- Barrier principles WCF
- Shut-in procedures Barriers and specific equipment (strippers, BOP, etc.)
- Rigging up and pressure tests surface pressure control equipment

Snubbing Operations

- Pressure Control Equipment
- Rigging — up procedure
- Testing
- Barrier principles
- Shut-in procedures

- Critical Operating procedures Barriers and specific equipment (strippers, annular BOP, stripping rams, safety rams, etc.)
- Rigging up and pressure tests surface pressure control equipment.

Wireline Operations

- Pressure Control Equipment
- Rigging-Up
- Testing
- Barrier principles
- Contingency Procedures
- Critical Operating Procedures