HSE in Work over & Drilling Operations

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Introduction:

Every day, the Oil and Gas exploration companies work hard to explore for and produce hydrocarbons on which we depend on in a way that protects the health and safety of the oil workers and the communities in which these companies operate.

They focus their expertise and energies on keeping the operations safe and reliable while minimizing effect on the environment. With Competent Health and Safety Personnel who drives this force, the Oil and Gas Exploration Industries will continue to be a safe place to workers. The conventional oil and gas well industry calls for highly specialized safety services. As the technologies for onshore and offshore drilling, completion and production evolve, so does the demand for expert health, safety and environment monitoring. HSE has the people and the equipment to safeguard workers, assets, and the environment, and ensure compliance with all applicable government, industry, and corporate standards and codes of practice. HSE services are handled by seasoned professionals with decades of international experience.

The course provides training in the understanding and interpretation of HSE Regulations related to drilling and wells. The course focuses on a number of key elements including the design of drilling facilities, well construction, drilling operations and maintenance. The course explains how drilling and completion operations are planned and executed to meet all HSE objectives, maximize well productivity, and cater for future work over and intervention needs. HSE concepts and methods are presented together with down-hole equipment, tools and their selection criteria.

Objectives:

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

- Apply the latest HSE protective measures in drilling operations, well completion, well stimulation, work over and intervention
- Recognize tubing pressure losses of different rock & fluid properties and corrosion/erosion potential
- Correctly set and operate casings, tubing's and well head equipment
- Identify and consider wellbore, casing, tubing and packer issues on vertical, horizontal, and multilateral completions
- Discuss well integrity and HSE risks associated with perforation of oil and gas wells, including fishing, stimulation, fracturing, well testing and wire-line operations

Who should attend?

Drilling Engineers, Senior Drilling Engineers, Drilling Supervisors, Drilling Superintendents, Petroleum Engineers, Completion Engineers, Tool Pushers, Reservoir and Senior Reservoir Engineers, Geologists, Production and Completion Engineers, Foremen, Work over Engineers, Petroleum Engineers, Completion Engineers, Tool Pushers, Reservoir and Senior Industry Personnel, Lifting Personnel, Maintenance Engineers, Technologists, Mud Engineers, Well Site Supervisors, Drilling Contractors, Drilling Supervisors, Completion Engineers, Completion Supervisors, Drilling Managers, Drilling Technical Support Personnel, Trainee Drillers, Rig Engineers, Industry Personnel, Completion engineers, Production staff, Petroleum engineers,

Other technical staff that need an understanding and an appreciation of HSE aspects of well drilling, completion, work-over and well intervention, Roustabouts, Roughnecks, Derrick men, Assistant Drillers and leading drilling personnel offshore, Employees and managers in drilling service Companies, Management of drilling rigs and drilling installations, Engineering personnel for design and modification of drilling facilities, Safety Delegates, Safety Coaches Professionals

Course Outline:

Packer and Tubing Movement, Completion Materials

- Completion running
- Setting packers
- Tubing accessories
- Subsurface safety and flow control valves

Casing and Tubing Hangers

- Surface and subsea Wellheads
- Surface and subsea X-Trees
- Flow lines, chokes, controls and valves

Well Control Techniques

- Blowout preventers (BOPs)
- Special wire line tools and operations
- Well stimulation and nitrogen lifting

Safe Practices (Onshore and Offshore)

- Well work over and Intervention
- Perforation methods and equipment
- Well perforating and logging
- Fracturing
- Well testing and well integrity
- PVT data
- Understanding well test theory
- Types of well tests
- Well test sites
- Well testing devices and techniques
- Well test policies and procedures
- Flaring

Introduction to Reservoir Properties

- Well production constraints
- Basis for project decisions

Planning Essentials Prior to Drilling

- Plan of development (PoD)
- Environmental master plan (EMP)
- Safety
- Economics
- Single and dual completion design (packers, nipples, tubing, down hole safety valves (DHSVs), blast joints, flow couplings, seal assemblies, expansion joints, sliding sleeves)

Wellbore Tubing-Casing Configuration, Completion Procedures

- Well completion fluids
- Well control
- Perforation zone damage prevention
- Work over and intervention considerations
- Artificial lift requirements

Completion Variations

- Oil and gas wells
- Multiple completions
- Injection wells
- Horizontal completion

Conductors, Casing and Tubing: Different Reservoir Types

- Completion health safety & environmental (HS&E) aspects
- Casing / tubing handling and care
- Running casing and tubing

Estimation of Pressure Losses in Tubing for Different Rock and Fluid Properties, Tubing Torque and Pressure Testing and Tubing Dimensions

- Drill rig systems and components
- Mud logging
- Pumps and accessories
- Sand control
- Lifting equipment
- Wellhead and X-Tree care