Stuck Pipe Prevention & Fishing

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Introduction:

It is estimated that approximately US$ 2 billion are wasted annually on stuck pipe. Furthermore it is believed that 80 – 85% of these stuck pipe incidents are preventable. The course focuses on the key mechanisms with which pipe becomes stuck and how the sticking mechanisms can be prevented through proper planning and operational procedures.

The candidates will study issues related to identifying the sticking mechanisms, prevention measures and what to do to get free.Typically, Fishing is the last chance for the operator to recover the stuck BHA / fish from the hole. In many cases work pressure is considerable, since fishing is a high cost operation and because governments often demand that nuclear sources for example are recovered. Thus, it is vital that Fishing is a success. And yet there is an estimated 85% failure rate. The course also focuses on how fishing can be a success at first time. The course will illustrate proven procedures and methodologies.

Objectives:

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

- Understand how drill pipe become stuck & what they can do to prevent the situation from occurring.
- What the driller should do regarding his “First Actions” upon becoming stuck.
- Fully understand the contents of the Driller’s Stuck Pipe Prevention Handbook.
- How to fish successfully the first time – i.e. what information, tools, techniques, practices and procedures are required.

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

Course Outline:

Stuck Pipe Prevention

- Stuck Pipe Definition
- Statistics
- Most Common Causes of Stuck Pipe

Hole Pack-Off & Bridging

- Definition
- Main Causes
- Indicators
- First Response
- Prevention

Differential Sticking

- Definition, Explanation – How It Happens
- Dynamic Filter Cake, Pressure – Time Effect
- Freeing Differentially Stuck Pipe
- Prevention, Multiple Problems, Avoidance

Formation & Wellbore Geometry Related Problems

- Rock Type Effects
- Wellbore Geometry Considerations
- Formation & Wellbore Geometry Effects Combined

Stuck Pipe Prevention & Hole Cleaning

- Associated Problems, Successful Hole Cleaning
- Flow Regime, Other Key Considerations, Hole Cleaning Charts

Tools, Equipment & Systems

- Drilling Fluids, Silicate Mud, New Pressure Tools
- Jars & Accelerators, Freeing Worksheet

Operational Optimization

- Prevention of Stuck Pipe During Routine Operations
- Preventing Drill String Failure
- Secondary Freeing Procedures

Stuck Pipe Prevention: First & Preventative Actions

- Solids Induced Pack-Off
- Differential Sticking
- Mechanical & Wellbore Geometry

Fishing: Introduction & Overview

Assessing the Situation

- Downhole Conditions
- Determining Where the String is Stuck

Downhole Operations

- Upper String Recovery
- Lower String (Fish) Recovery
- Junk, Lost Side-Wall Sample Bullets
- Freeing Stuck Logging Tools & Stuck Wireline

Fishing: Downhole Operations

- Jacker Fishing
- Stuck Casing
- Casing Milling Guidelines
- Milling – General
- Fishing Practices Summary

Inventory Fishing Coiled Tubing Teamwork