# Stuck Pipe Prevention and Fishing Operations: Jarring, Back-Off and Fishing Tools

12 – 16 July 2027
Barcelona - Eixample district four-star



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## Introduction:

Stuck pipe prevention and fishing operations decide whether a hole section ends on schedule or in days of lost rig time, abandoned bottom-hole assemblies and an unplanned sidetrack. Many incidents follow warning signs in torque, drag, pressure and cuttings that crews saw but did not act on. This Core Concept course trains drilling teams to read those signs, apply prevention practices, respond correctly in the first minutes after sticking, and run jarring, back-off and fishing work with sound economics. Participants build a Stuck Pipe Prevention Plan and Fishing Decision Tree for a case well.

## Course Objectives:

- Diagnose the sticking mechanism from string movement, circulation and trend data and select the matching freeing action
- Set hole cleaning, tripping and mud property practices that reduce pack-off, geometry and differential sticking risk for each hole section
- Position drilling jars in the BHA and operate them within safe load and cocking limits
- Calculate stuck depth, spotting fluid volume and soak time and plan free-point and back-off runs
- Select fishing tools and assemblies for parted pipe, junk and stuck string and brief the crew on the job sequence
- Compare the cost of continued fishing with a sidetrack and set a documented fishing time limit

## Target Audience:

- Engineers who write hole section programmes and stuck pipe contingencies for development and exploration wells
- Wellsite supervisors who approve tripping, circulating and freeing decisions on the rig floor
- Rig crew leads who run the drawworks, monitor overpull and set up jarring on shift
- Service company personnel who supply jars, fishing tools and free-point and back-off services
- Well site engineers who track torque, drag and hole cleaning trends in real time

## Course Outline:

### Day 1: Stuck Pipe Mechanisms and Early Warning Signs

- Stuck Pipe Classification: Differential Sticking, Pack-Off and Bridging, Wellbore Geometry
- Pack-Off Sources: Cuttings Beds, Reactive and Fractured Shale, Unconsolidated Sands
- Wellbore Geometry Sticking: Key Seats, Ledges, Micro Doglegs and Undergauge Hole
- Junk, Green Cement and Collapsed Casing as Sticking Causes
- Warning Sign Trend Sheet: Torque, Drag, Standpipe Pressure and Cavings at the Shakers

### Day 2: Prevention Practices: Hole Cleaning, Tripping and BHA Design

- Hole Cleaning Practice by Inclination: Flow Rate, Pipe Rotation and Sweep Selection
- Tripping Practice: Overpull Limits, Backreaming Rules and Wiper Trip Criteria
- Mud Property Targets for Sticking Control: Filter Cake Quality, Lubricity and Shale Inhibition
- BHA Design for Sticking Risk: Stabiliser Count, Spiral Drill Collars and Wall Contact Area
- Stuck Pipe Risk Register by Hole Section Using Offset Well Incidents

### Day 3: First Response When Stuck: Jarring, Spotting Fluids and Stuck Depth

- First Actions Checklist: Circulation Test, Up and Down Movement Test and Mechanism Diagnosis
- Stuck Depth Estimation from Pipe Stretch Measurement
- Jar Types and Operation: Hydraulic, Mechanical and Accelerator Tools
- Jar Placement Analysis: Neutral Point, Buckling Risk and Impact Force
- Spotting Fluid Selection, Volume Calculation and Soak Time for Differential Sticking

### Day 4: Free-Point, Back-Off and Fishing Tools and Techniques

- Free-Point Tool Run and String Shot Back-Off Procedure
- Fishing Assembly Design: Overshots, Spears, Bumper Subs and Fishing Jars
- Milling and Junk Recovery: Junk Mills, Junk Baskets and Fishing Magnets
- Washover Operations: Washpipe, Rotary Shoes and Washover Length Control
- Wireline Fishing Overview: Cable Guide Method, Cut-and-Strip and Rope Spears

### Day 5: Fishing Economics and the Case Well Decision Tree

- Fishing Economics Worksheet: Rig Spread Cost, Fish Value and Probability of Success
- Sidetrack Versus Continued Fishing: Decision Criteria and Kick-Off Plug Planning
- Case Well Review: Offset Stuck Pipe Incidents in a Deviated Development Well
- Case Work: Stuck Pipe Prevention Plan with Section Triggers and Crew Responsibilities
- Fishing Decision Tree Presentation and Peer Challenge

## Skills You Will Gain:

- Sticking Mechanism Diagnosis
- Torque and Drag Trend Reading
- Hole Cleaning Management
- Jar Placement Planning
- Spotting Fluid Design
- Free-Point and Back-Off Planning
- Fishing Tool Selection
- Sidetrack Decision Analysis

## Why Attend This Course:

- Return with a Stuck Pipe Prevention Plan and Fishing Decision Tree ready to attach to your next drilling programme
- Act with confidence in the first minutes after the string sticks, when the right move matters most
- Challenge fishing proposals from service companies using a clear cost and time limit
- Compare incident lessons with drilling teams working onshore, offshore, vertical and extended-reach wells

## Conclusion:

Most stuck pipe events can be traced to signals that were visible before the string stopped moving, and most costly fishing jobs to decisions taken without a time or cost limit. The week moves from sticking mechanisms and warning signs, through hole cleaning, tripping, mud and BHA practices, to first response, jarring and spotting fluids, then free-point, back-off and fishing tools. The final day turns fishing economics and sidetrack criteria into a Stuck Pipe Prevention Plan and Fishing Decision Tree for a case well.