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COURSE BROCHURE

# Managed Pressure Drilling Operations Planning Training Course

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Registered in the United Kingdom and Saudi Arabia

# Managed Pressure Drilling Operations Planning Training Course

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Managed Pressure Drilling Operations Planning is a 1-week training course for drilling engineers and drilling supervisors who must deliver wells with a narrow window between pore pressure and fracture pressure, and it ends with a managed pressure drilling operations plan ready for peer challenge. Closed-loop circulation now decides whether depleted and fractured sections can be drilled without losses or influx. Jupiter Prime Training sets the method inside the wider well delivery decision.

## Why Managed Pressure Drilling Matters Now

Three forces shape the method today. Operators drill depleted reservoirs and fractured carbonates where the margin between losses and influx is very small. Rig contractors and service companies now share one pressurised circulating system, so their interface carries real risk. Asset owners and partners expect fewer nonproductive days and no well control events. A team that plans well reaches total depth on narrow-margin sections; poor planning turns a routine connection into a losses or kick event. The course rests on industry recommended practice for closed-loop drilling.

## Who Gains Most from Managed Pressure Drilling

- Engineers who set the pressure window for each hole section
- Supervisors who coordinate the choke operator during connections and trips
- Engineers who build the hydraulics model and density targets
- Specialists who own surface equipment layout and pressure ratings
- Well control staff who approve operating limits and influx response

A well delivery group gains most when its planning engineer, rig supervisor and hydraulics specialist attend together.

## Managed Pressure Drilling Capabilities

Participants turn backpressure, annular friction and influx detection into operating limits a rig crew follows on every connection.

- Assess candidate hole sections for closed-loop drilling against pore and fracture pressure data — well concept selection
- Calculate surface backpressure schedules for drilling, connections and tripping — choke operator instructions
- Specify rotating control device, choke manifold and flowmeter ratings — equipment procurement and rig-up
- Design an influx management envelope with clear escalation limits — well control handover decisions
- Weigh hydraulics model outputs against downhole pressure readings — real-time drilling adjustments
- Communicate operating limits and roles across operator and service crews — pre-spud readiness review

## Key Managed Pressure Drilling Terms

- Constant bottomhole pressure — holding downhole pressure steady by adding surface backpressure when pumps slow or stop.
- Rotating control device — a sealing element on top of the blowout preventer that closes the annulus around rotating pipe.
- Drilling choke manifold — an automated choke set that adjusts annular backpressure to hold downhole target.
- Equivalent circulating density — the effective mud weight felt downhole while circulating, including annular friction losses.
- Influx management envelope — a chart of surface pressure and influx volume showing when to drill on, circulate or shut in.
- Pressure window — the range between pore or collapse pressure and fracture pressure within which a section can be drilled.

## Managed Pressure Drilling Day by Day

## Day 1: Narrow Margins and the Case for Closed-Loop Drilling

- Pore Pressure and Fracture Gradient Profiles — Defining the Usable Window
- Losses, Kicks and Ballooning Histories — Choosing Sections for Closed-Loop Drilling
- Conventional Versus Pressurised Mud Returns — Comparing Risk on Each Section
- Constant Bottomhole Pressure, Mud Cap and Dual Gradient Variants — Matching Method to Well
- Offset Well Review Sheets — Screening Candidate Wells for Applicability

## Day 2: Surface Equipment and the Pressurised Circulating System

- Rotating Control Device Selection and Element Life — Sealing Pressure Ratings
- Automated Drilling Choke Manifolds — Response Speed and Redundancy Choices
- Coriolis Flowmeters and Return Flow Measurement — Early Detection Sensitivity
- Rig-Up Layout and Pressure Rating Hierarchy — Barrier Placement Around the Stack
- Equipment Function Tests and Commissioning Checks — Readiness Before Drilling Out

## Day 3: Hydraulics Modelling and Backpressure Schedules

- Annular Friction and Temperature Effects on Density — Setting Circulating Targets
- Steady-State and Transient Hydraulics Models — Predicting Downhole Pressure Changes
- Connection and Tripping Backpressure Tables — Holding Pressure When Pumps Stop
- Downhole Pressure While Drilling Readings — Calibrating the Model in Real Time
- Pressure Window Sensitivity Runs — Choosing Mud Weight and Flow Rate

## Day 4: Influx Management and Well Control Interfaces

- Influx Detection From Flow and Pressure Trends — Distinguishing Gas From Ballooning
- Influx Management Envelope Construction — Drill On, Circulate or Shut In
- Handover Criteria to Conventional Well Control — Roles at the Blowout Preventer
- Dynamic Formation Integrity and Pore Pressure Tests — Refining the Window
- Operator and Service Crew Responsibility Matrix — Clear Command During Events

## Day 5: Practising the Managed Pressure Drilling Operations Plan

- Section Screening Applied to a Narrow-Margin Case Well — Method Selection
- Equipment Specification Sheet for the Case Well — Ratings and Redundancy
- Backpressure Schedule and Hydraulics Check for the Case Well — Operating Limits
- Influx Response Drill on a Simulated Connection — Crew Decision Timing
- Managed Pressure Drilling Operations Plan — Peer Challenge and Final Sign-Off

## Applying Managed Pressure Drilling After the Course

- Lead an offset well review of the next narrow-margin section and rank it for closed-loop drilling.
- Walk the rig crew and choke operator through the backpressure schedule and influx envelope before spud.

## Managed Pressure Drilling Questions FAQ

### What is managed pressure drilling and why does it matter now?

Managed pressure drilling is a closed-loop method that controls downhole pressure with surface backpressure. It matters now because depleted and fractured sections leave so little margin that conventional mud weight alone causes losses or kicks.

### Which roles gain most from managed pressure drilling training?

Drilling engineers, rig supervisors and hydraulics specialists gain most from managed pressure drilling training. You plan, run or approve the pressure window and influx response.

## How does this managed pressure drilling course differ from a well control course?

This managed pressure drilling course plans deliberate pressure control while drilling ahead. A well control course trains shutting in and killing a well after a kick.

## What do you bring back from managed pressure drilling training?

You bring back a managed pressure drilling operations plan for a real or case well. It holds the screening, equipment, backpressure schedule and influx envelope for review before spud.

## Managed Pressure Drilling: The Way Forward

The managed pressure drilling operations plan first informs whether a narrow-margin section is drilled closed-loop or redesigned. Engineers use it to set limits and supervisors to brief crews. After the first well, revisit the influx envelope and backpressure tables against recorded downhole data, then tighten the window for the next section.