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Appraisal Well Planning and Drill Stem Test Design Training Course

28 February – 4 March 2027
Muscat

Appraisal Well Planning and Drill Stem Test Design Training Course

Ref: 2969_112579 **Date:** 28 February – 4 March 2027 **Location:** Muscat **Fees:** 6500 GBP

Appraisal well planning and drill stem test design is a 1-week training course for well engineers and petroleum engineers who must plan an appraisal well around its subsurface questions and then test it to answer them, producing an appraisal well plan and test outline. Appraisal results decide whether a discovery moves to development, so each well must deliver reservoir evidence. Jupiter Prime Training delivers this appraisal well planning and drill stem test design course.

Why Appraisal Well Planning and Drill Stem Test Design Matters Now

Appraisal budgets are tighter, and partners expect fewer wells to remove more uncertainty about volumes, deliverability and fluid type. Subsurface teams want cores, logs, samples and pressure data, while drilling teams must keep the well safe and on schedule, so the two sets of needs compete directly for scarce rig time. A well planned with its test in mind returns representative fluid samples and clear pressure build-ups; one planned without it can leave a discovery undecided and force an extra well.

Who Gains Most from Appraisal Well Planning and Drill Stem Test Design

- Engineers who turn appraisal objectives into a well trajectory and casing scheme
- Engineers who check drilling execution against the appraisal well plan
- Petroleum engineers who define flow periods, rates and shut-in durations
- Engineers who specify downhole test string tools and surface test equipment
- Engineers who plan fluid sampling and pressure data capture

Asset appraisal groups gain most when their well engineers and reservoir engineers attend together.

Appraisal Well Planning and Drill Stem Test Design Capabilities

Participants trace each appraisal question to a well feature or test period.

- Translate subsurface uncertainties into appraisal well objectives — appraisal decision board
- Design a trajectory and casing scheme that keeps the target zone testable — well engineer
- Specify drilling execution checks for coring, logging and pressure points — rig supervisor
- Calculate flow and shut-in periods for the expected radius of investigation — reservoir engineer
- Select test string tools and surface equipment for the expected fluids — test engineer
- Build a data capture schedule for samples, gauges and flaring limits — environmental adviser

Key Appraisal Well Planning and Drill Stem Test Design Terms

- Appraisal well — a well drilled after a discovery to measure reservoir extent and deliverability before development.
- Drill stem test — a temporary completion run on a test string to flow and shut in a zone and record pressures.
- Build-up period — the shut-in time when bottom-hole pressure recovers and reveals permeability.
- Radius of investigation — the approximate distance into the reservoir that a test's pressure response has sampled.
- Representative sample — a reservoir fluid sample taken under conditions that preserve its original composition.
- Test string — the tubing, packer, valves and gauges that isolate and monitor a test zone.

Appraisal Well Planning and Drill Stem Test Design Day by Day

Day 1: Appraisal Questions and Well Objectives

- Discovery Uncertainty Register — Volumes, Contacts and Fluid Type to Resolve
- Value of Information Screening — Which Data Justify Rig Time
- Appraisal Well Objectives Sheet — Linking Each Objective to a Measurement
- Target Selection on Structure Maps — Location for Contacts
- Data Acquisition Wish List — Cores, Logs, Pressures and Samples

Day 2: Trajectory and Casing Scheme

- Trajectory Options for Appraisal Targets — Vertical, Deviated or Sidetrack Choice
- Pore Pressure Prediction for Undrilled Sections — Mud Weight Window
- Casing Scheme for a Testable Zone — Liner or Full String Decision
- Contingency Strings and Hole Size Plan — Room for Unexpected Pressures
- Coring Point and Logging Run Placement — Section Lengths and Rig Days

Day 3: Drilling Execution Checks

- Formation Pressure Tests While Drilling — Confirming Gradients Before Casing
- Core Handling and Preservation Steps — Protecting Rock and Fluid Evidence
- Wireline Formation Testing Stations — Pressure Profile and Fluid Contacts
- Cement Bond Confirmation Before Testing — Isolation of the Test Interval
- Go or No-Go Criteria for Testing — Hole Condition and Safety Readiness

Day 4: Drill Stem Test Design

- Flow and Shut-In Sequence Design — Clean-Up, Main Flow and Build-Up
- Expected Pressure Response Forecast — Gauge Range and Resolution Choice
- Downhole Tester Valves and Packer Selection — Zone Isolation and Control
- Surface Test Package Sizing — Separator, Burner and Storage Capacity
- Bottom-Hole and Surface Sampling Plan — Fluid Characterisation

Day 5: Practising the Appraisal Well Plan and Test Outline

- Objectives to Operations Matrix — Tracing Each Question to a Well Activity
- Integrated Well and Test Schedule — Rig Days to Abandonment
- Risk and Contingency Table — Lost Circulation, Stuck Pipe and Failed Tests
- Flaring and Emissions Limits Check — Allowed Flow Duration and Volumes
- Appraisal Well Plan and Test Outline — Finalised for Partner Approval

Applying Appraisal Well Planning and Drill Stem Test Design After the Course

- Lead an objectives-to-operations review of the next appraisal well.
- Run a test design check with reservoir engineers comparing planned build-up periods with forecast response.

Appraisal Well Planning and Drill Stem Test Design Questions FAQ

What is appraisal well planning and drill stem test design and why does it matter now?

It is the joint planning of an appraisal well and its flow test so both answer the discovery's open questions. It matters now because budgets allow fewer appraisal wells, and each must return reliable reservoir evidence.

Which roles gain most from appraisal well planning and drill stem test design?

Well engineers and petroleum engineers gain most. You benefit if you set trajectories, define test periods or plan sampling for appraisal wells.

How does appraisal well planning and drill stem test design differ from a drilling fundamentals course?

It plans the well around appraisal questions and its test. A drilling fundamentals course covers general well design; this one links trajectory, casing and test periods to the evidence a development decision needs.

What do you bring back from appraisal well planning and drill stem test design?

You bring back an outline that ties appraisal objectives to well design, drilling checks, test periods, sampling and contingencies.

Appraisal Well Planning and Drill Stem Test Design: The Way Forward

The appraisal well plan and test outline first informs the partner decision to approve rig time and the test package. Well engineers, reservoir engineers and test supervisors use it to keep drilling and testing aimed at the same questions. After the first well, revisit how the measured build-up compared with the forecast.