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Surface Well Test Equipment and Flowback Operations Training Course

25 – 29 October 2027
New York

Surface Well Test Equipment and Flowback Operations Training Course

Ref: 2186_80701 **Date:** 25 – 29 October 2027 **Location:** New York **Fees:** 9500 GBP

Surface Well Test Equipment and Flowback Operations is a 1-week training course for well test, production and completion engineers who rig up, run and sign off surface testing spreads, and it ends with a well test execution plan for a real or candidate well. Operators now flow wells to clean up and sample them under tighter flaring limits. Jupiter Prime Training delivers this course for crews who own the spread at the wellhead.

Why Surface Well Test Equipment and Flowback Operations Matters Now

Three pressures meet at the test spread. Exploration and appraisal wells must deliver representative fluid samples and stable rates before costly development decisions are taken. Unconventional and high-pressure completions push sand, debris and heavy flowback loads through chokes and separators built for cleaner flow. Operators also expect less flaring and fewer people near pressurised lines. A poorly sized or loosely barriered spread wastes rig time and spoils samples. The course rests on recognised pressure equipment and process safety practice applied to temporary installations.

Who Gains Most from Surface Well Test Equipment and Flowback Operations

- Engineers who specify the surface test package and its pressure rating for each well
- Supervisors who lead rig-up, pressure testing and handover of the spread
- Completion staff responsible for clean-up, sand management and flowback sequencing
- Production specialists who need trustworthy rates, gas-oil ratios and samples
- HSE advisers who assess barriers, flare radiation and exclusion zones around the spread

Well delivery groups gain most when test, wellsite and HSE staff attend together.

Surface Well Test Equipment and Flowback Operations Capabilities

Participants move from equipment data sheets to a sequenced flow period.

- Specify flowhead, choke manifold, heater and separator ratings — equipment selection by the test engineer
- Calculate separator capacity and flare radiation distances — layout approval by the wellsite supervisor
- Design a flowback sequence that controls sand and solids — completion handover
- Apply barrier and emergency shutdown logic to the temporary spread — permit and HSE sign-off
- Test meter readings and sample bottles against quality criteria — reservoir and production engineers
- Build a well test execution plan — asset leadership

Key Surface Well Test Equipment and Flowback Operations Terms

- Flowhead — the temporary valve assembly on top of the well that controls flow and isolates the well.
- Choke manifold — a set of fixed and adjustable chokes that reduce pressure and set the flow rate into the spread.
- Test separator — a vessel that splits well flow into gas, oil and water streams.
- Surface safety valve — a fail-safe valve that shuts the well in when the shutdown system trips.
- Flowback — the controlled return of completion fluids, solids and first reservoir fluids after a well is opened.
- Recombination sample — paired separator gas and liquid samples recombined at the measured gas-oil ratio.

Surface Well Test Equipment and Flowback Operations Day by Day

Day 1: Test Objectives and the Surface Spread

- Well Test Objectives Matrix — Choosing Clean-Up, Sampling or Deliverability Goals
- Surface Spread Layout Drawings — Placing Equipment Within Deck or Pad Limits
- Flowhead and Surface Safety Valve — Isolation and Wireline Access Decisions
- Pressure Rating and Sour Service Checks — Matching Equipment to Wellhead Conditions
- Interface With Downhole Test String — Agreeing Valve Control Responsibilities

Day 2: Sizing Chokes, Heaters and Separators

- Choke Manifold Sizing Charts — Setting Bean Steps for Each Flow Period
- Steam Exchanger and Indirect Heater Duty — Preventing Hydrates Downstream of Chokes
- Separator Retention Time Estimates — Confirming Gas and Liquid Handling Capacity
- Sand Filters and Desanders — Protecting Chokes During Early Flowback
- Surge Tanks and Transfer Pumps — Routing Liquids to Storage or Burners

Day 3: Flaring, Barriers and Emergency Shutdown

- Flare Boom and Burner Selection — Balancing Combustion Efficiency and Smoke
- Radiation and Dispersion Contours — Setting Exclusion Zones for Personnel
- Emergency Shutdown Panel Logic — Defining Trip Causes and Response Times
- Pressure Testing of Temporary Lines — Accepting the Spread Before Flow
- Bow-Tie Review of Flowback Hazards — Prioritising Barriers and Escalation Controls

Day 4: Metering, Sampling and Data Quality

- Orifice and Coriolis Metering — Choosing Rate Measurement for Each Stream
- Shrinkage and Gas-Oil Ratio Checks — Validating Separator Readings
- Bottomhole and Separator Sampling — Securing Representative Reservoir Fluid
- Real-Time Data Acquisition Systems — Flagging Unstable Rates and Drifting Gauges
- Test Report Structure — Presenting Results to Reservoir and Asset Teams

Day 5: Practising the Well Test Execution Plan

- Spread Selection Exercise — Applying Day 1 Ratings to a Case Well
- Flow Period Sequence Drill — Applying Day 2 Sizing to Clean-Up and Main Flow
- Simulated Shutdown Scenario — Applying Day 3 Barriers Under Time Pressure
- Sampling Hold Point Review — Applying Day 4 Quality Criteria Before Sign-Off
- Well Test Execution Plan — Completing Sequence, Hold Points and Contingencies

Applying Surface Well Test Equipment and Flowback Operations After the Course

- Lead a pre-job review of the next spread using sizing charts and radiation contours.
- Audit one recent flowback report against gas-oil ratio and sampling checks.

Surface Well Test Equipment and Flowback Operations Questions FAQ

What is surface well test equipment and flowback operations, and why does it matter now?

It is the selection, rig-up and running of the temporary spread that flows a well at surface. It matters now because appraisal decisions rely on clean samples while flaring limits tighten.

Which roles gain most from surface well test equipment and flowback operations training?

Test engineers, wellsite supervisors, completion staff, production specialists and HSE advisers gain most. Each owns part of the spread, from choke steps to barriers and samples.

How does a surface well test equipment and flowback operations course differ from pressure transient analysis training?

It focuses on the hardware and the flow sequence at surface rather than interpreting pressure build-up data. It covers how the spread produces reliable rates and samples safely.

What do you bring back from surface well test equipment and flowback operations training?

You bring back a well test execution plan for a case or real well. It sets ratings, flow periods, flare limits and sampling hold points for your crew.

Surface Well Test Equipment and Flowback Operations: The Way Forward

The well test execution plan first informs the choice of spread and the flow period sequence for the next appraisal or completion well. Test engineers, supervisors and HSE advisers use it at the pre-job meeting and at each hold point. After first use, compare its flare limits and sampling criteria with what the well produced and tighten the next sequence.