JUPITER PRIME
Consulting • Training • Advisory
جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Fracture Treatment Pumping and Execution Training Course

9 – 13 August 2027
Singapore

Fracture Treatment Pumping and Execution Training Course

Ref: 2447_92469 **Date:** 9 – 13 August 2027 **Location:** Singapore **Fees:** 9300 GBP

Fracture Treatment Pumping and Execution is a 1-week training course for completion and stimulation engineers, frac supervisors and field service leads, who build a fracture treatment execution plan for a real well. Operators now expect every stage to be pumped to design with fewer screen-outs, tighter water budgets and safer high-pressure operations. This course from Jupiter Prime Training links the design office to the pumping spread on location.

Why Fracture Treatment Pumping and Execution Matters Now

Three forces shape stimulation work today: more stages per well in tight and unconventional reservoirs, pressure on fresh water use and chemical disclosure, and a field workforce that must make fast decisions from live pressure data. Good execution places proppant where the reservoir needs it; poor execution brings screen-outs, wasted chemicals and lost production. The course rests on the rock mechanics, fluid mechanics and pressure-transient methods used across the stimulation industry, applied to decisions made before and during the job.

Who Gains Most from Fracture Treatment Pumping and Execution

- Engineers who prepare treatment designs and stage pumping schedules
- Field supervisors who direct the pumping spread and call stage changes
- Specialists who sample fluids and proppant and sign off delivered quality
- Engineers who interpret injection tests on location
- Operator representatives who approve treating pressure limits and stop-work calls

Asset teams gain most when the design engineer, the operator's company representative and the service crew lead attend together.

Fracture Treatment Pumping and Execution Capabilities

Participants move from rock and fluid inputs to a stage they can pump and adjust.

- Calculate pad volume, slurry stages and flush from leak-off and closure data — treatment approval
- Specify fluid systems and proppant grades for temperature and stress — procurement of chemicals and sand
- Assess mini-frac decline plots to confirm closure — redesign of the main treatment
- Apply real-time pressure signatures to decide on rate cuts or early flush — field supervisors
- Design an on-location QC sampling routine — service company and operator sign-off
- Build a stage-by-stage execution plan with abort criteria — well site leadership

Key Fracture Treatment Pumping and Execution Terms

- Closure Stress — the minimum pressure at which an opened fracture closes on its proppant, controlling width and proppant crushing.
- Pad — the proppant-free fluid pumped first to open the fracture and cover leak-off before slurry arrives.
- Screen-Out — a sudden pressure rise when proppant bridges in the fracture or perforations and stops further placement.
- Mini-Frac — a small injection test pumped before the main treatment to measure breakdown, closure and leak-off.
- Net Pressure — treating pressure above closure stress, used to judge fracture growth and height containment.
- Fracture Conductivity — the product of propped width and proppant permeability that sets how easily fluids reach the well.

Fracture Treatment Pumping and Execution Day by Day

Day 1: Rock Mechanics Inputs for the Treatment

- Closure Stress Profiles — Selecting Perforated Intervals and Stage Spacing
- Young's Modulus and Poisson's Ratio Logs — Predicting Fracture Width
- Leak-Off Coefficient Estimates — Sizing Pad Volume and Fluid Efficiency
- Stress Contrast Across Barriers — Containing Height Growth Within Pay
- Wellbore Integrity Checks — Setting Maximum Allowable Treating Pressure

Day 2: Fluid and Proppant Selection

- Slickwater, Linear Gel and Crosslinked Systems — Matching Viscosity to Transport
- Breaker and Additive Loading Charts — Protecting Retained Conductivity
- Proppant Mesh, Strength and Crush Ratings — Sustaining Long-Term Conductivity
- Fluid Compatibility Testing with Formation Water — Avoiding Scale and Emulsions
- Water Sourcing and Flowback Reuse — Balancing Supply Against Chemistry Limits

Day 3: Pump Schedule Design

- Pad-to-Slurry Ratio Tables — Achieving Target Propped Length
- Proppant Ramp Stages and Concentrations — Reducing Screen-Out Exposure
- Hydraulic Horsepower and Rate Calculations — Specifying the Pumping Spread
- Friction Pressure in Tubulars and Perforations — Forecasting Surface Treating Pressure
- Flush Volume and Overdisplacement Rules — Keeping Proppant Across the Perforations

Day 4: Mini-Frac and Real-Time Pressure Control

- Step-Rate and Injection Tests — Confirming Breakdown and Extension Pressure
- G-Function and Pressure Decline Plots — Reading Closure and Leak-Off Mechanism
- Net Pressure Matching — Redesigning the Main Treatment on Location
- Live Treating Pressure Signatures — Spotting Near-Wellbore Tortuosity and Screen-Out
- Stop-Work and Abort Criteria — Protecting Crew, Iron and the Wellbore

Day 5: Practising the Fracture Treatment Execution Plan

- Pre-Job Safety Meeting and Pressure Test Sequence — Releasing the Spread
- On-Location Fluid and Proppant QC Sampling — Verifying Delivered Quality
- Rig-Up Layout for Pumps, Blenders and Treating Iron — Exclusion Zones
- Post-Job Pressure and Volume Reconciliation — Feeding the Next Stage Design
- Fracture Treatment Execution Plan — Peer Challenge and Final Sign-Off

Applying Fracture Treatment Pumping and Execution After the Course

- Run a mini-frac decline review on the next well and adjust the pad-to-slurry ratio before the main job
- Introduce a stage QC checklist that links fluid and proppant samples to live treating pressure records

Fracture Treatment Pumping and Execution Questions FAQ

What is Fracture Treatment Pumping and Execution and why does it matter now?

It is the discipline of turning a fracture design into stages pumped safely and to plan. It matters now because wells carry more stages, water budgets are tighter and each screen-out costs time, chemicals and production.

Which roles gain most from Fracture Treatment Pumping and Execution training?

Completion and stimulation engineers, frac supervisors, field QC specialists and operator company representatives gain most. These roles approve designs, run the spread and decide when to cut rate, flush early or stop.

How does Fracture Treatment Pumping and Execution differ from fracture modelling or candidate screening?

This course centres on the job itself: schedules, fluids, proppant, live pressure and on-location quality checks. Courses on reservoir modelling or on choosing which wells to stimulate sit before this point and do not cover pumping decisions or abort criteria in depth.

What do you bring back from Fracture Treatment Pumping and Execution training?

You bring back a stage-by-stage execution plan for one of your wells, with pressure limits, QC points and abort criteria. You also read mini-frac decline plots and live treating charts with more confidence.

Fracture Treatment Pumping and Execution: The Way Forward

The fracture treatment execution plan sets the first decision on location: whether the mini-frac result supports the designed pad and proppant ramp. Engineers, supervisors and QC staff use it to run each stage and record deviations. After the first well, revisit the abort criteria and friction estimates against real treating pressure.