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COURSE BROCHURE

Well Completion Design and Sand Control Selection Training Course

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Milan

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Registered in the United Kingdom and Saudi Arabia

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Well Completion Design and Sand Control Selection is a 1-week training course for completion, production and drilling engineers who turn reservoir data into an installed completion, and it ends with a sample-well completion basis of design. Every completion choice fixes how much a well can produce, how long it lasts and how costly later intervention becomes. This course is delivered by Jupiter Prime Training.

Why Well Completion Design and Sand Control Selection Matters Now

Operators are producing from weaker, deeper and more heterogeneous formations, while asset owners expect fewer workovers and longer equipment life. A well completed with the right tubing, packer and sand exclusion method keeps its inflow and its integrity for years; a poor choice brings sand erosion, early screen failure and expensive recompletion. The course rests on inflow performance relationship IPR and nodal analysis principles, well barrier philosophy and published sand control selection logic.

Who Gains Most from Well Completion Design and Sand Control Selection

- Engineers who specify lower completion hardware and screen types for new wells
- Engineers responsible for tubing strings, packers and safety valves in producing wells
- Drilling engineers who plan the reservoir section and drill-in fluid ahead of completion
- Production engineers who diagnose sand, scale and declining inflow in existing wells
- Well integrity specialists who verify barrier elements before handover

Asset teams sending completion, drilling and production engineers together gain most, sharing one design basis afterwards.

Well Completion Design and Sand Control Selection Capabilities

Participants turn formation and fluid data into a defended completion configuration.

- Calculate inflow performance and size production tubing against it — production forecast and lift timing
- Specify packer type, setting depth and tubing movement allowance — string integrity sign-off
- Assess formation sanding potential from rock strength and drawdown — sand exclusion decision
- Weigh standalone screens, gravel packs and frac packs against each other — reservoir and drilling teams
- Design a completion string sequence with barrier elements — well handover approval
- Communicate the completion basis of design to operations — intervention and workover planners

Key Well Completion Design and Sand Control Selection Terms

- Inflow Performance Relationship IPR — the curve linking flowing bottomhole pressure to reservoir delivery rate.
- Tubing Performance Curve — the pressure needed at the bottom of the tubing to lift a given rate to surface.
- Critical Drawdown — the pressure difference beyond which the formation begins to fail and produce sand.
- Gravel Pack — sized gravel placed between screen and formation to hold formation grains in place while allowing flow.
- Production Packer — a downhole seal isolating the annulus from produced fluids and anchoring the tubing string.
- Skin Factor — a dimensionless value describing extra pressure loss near the wellbore from damage or completion geometry.

Well Completion Design and Sand Control Selection Day by Day

Day 1: Reservoir Inputs to Completion Choice

- Completion Types and Configurations — Matching Open Hole or Cased Hole to Reservoir
- Formation Properties and Fluid Data — Setting the Completion Design Envelope
- Inflow Performance Relationship Methods — Forecasting Deliverability Across Well Life
- Skin and Formation Damage Sources — Choosing Drill-In and Completion Fluids
- Perforation Strategy and Shot Density — Balancing Inflow Against Tunnel Stability

Day 2: Tubing and Flow Performance

- Nodal Analysis of the Production System — Locating the Controlling Pressure Loss
- Tubing Size Selection — Trading Early Rate Against Late-Life Liquid Loading
- Erosional Velocity and Flow Regimes — Setting Safe Production Rate Limits
- Material Selection for Corrosive Fluids — Steel Grade Choice for Sour Service
- Artificial Lift Readiness — Reserving Space for Future Lift Equipment

Day 3: Packers, Loads and Barriers

- Production Packer Types — Permanent or Retrievable Choice for Each Well
- Tubing Movement and Stress Calculation — Length Change From Temperature and Pressure
- Tubing Load Cases and Safety Factors — Burst, Collapse and Axial Checks
- Subsurface Safety Valves and Nipples — Barrier Placement and Future Access
- Well Barrier Schematics — Demonstrating Two Barriers Before Handover

Day 4: Sand Control Selection

- Sanding Prediction From Rock Strength — Defining Critical Drawdown for Each Zone
- Particle Size Distribution Analysis — Sizing Screen Slots and Gravel
- Standalone Screens and Expandable Screens — Fit for Uniform or Variable Sands
- Gravel Pack and Frac Pack Placement — Selecting Method for Cased Hole Wells
- Sand Control Selection Matrix — Ranking Options by Risk and Productivity

Day 5: Practising the Sample-Well Completion Basis of Design

- Integrated Inflow and Tubing Model — Applying Day 1 and Day 2 Data
- Packer and String Load Verification — Applying Day 3 Calculations to the Sample Well
- Sand Exclusion Choice for the Sample Well — Applying the Day 4 Matrix
- Completion Running Sequence and Contingencies — Planning Installation and Recovery Steps
- Sample-Well Completion Basis of Design — Presenting the Configuration for Peer Challenge

Applying Well Completion Design and Sand Control Selection After the Course

- Rebuild one producing well's nodal model and test its tubing size against declining pressure.
- Run the sand control selection matrix on the next planned well before pre-drill review.

Well Completion Design and Sand Control Selection Questions FAQ

What is well completion design and sand control selection, and why does it matter now?

It is the engineering of the tubing, packers, barriers and sand exclusion method that connect a reservoir to surface. It matters now because weaker and deeper formations punish poor choices with sand production, failed screens and costly recompletions.

Which roles gain most from well completion design and sand control selection?

Completion, production and drilling engineers gain most, along with well integrity specialists. Each owns part of the decision, so a shared method reduces handover errors.

How does well completion design and sand control selection differ from a well intervention course?

It focuses on choosing and sizing the completion before installation, not on slickline, coiled tubing or fishing work on wells already producing.

What do you bring back from well completion design and sand control selection?

You bring back a completion basis of design for a sample well, covering inflow and tubing sizing, packer and load checks, barrier schematics and a ranked sand control choice.

Well Completion Design and Sand Control Selection: The Way Forward

The sample-well completion basis of design first informs the choice between screens and gravel placement for the next well campaign. Completion engineers own it, while drilling and production engineers plan around it. Once the first well is on stream, revisit the sanding assumptions against actual drawdown and measured produced solids.