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COURSE BROCHURE

Reservoir Simulation Results for Non-Specialists Training Course

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Barcelona

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Reservoir Simulation Results for Non-Specialists Training Course

Ref: 2914_110990 **Date:** 1 – 5 March 2027 **Location:** Barcelona **Fees:** 6200 GBP

Reservoir Simulation Results for Non-Specialists is a 1-week training course for managers, geoscientists and engineers who rely on simulation forecasts without building the models, and who leave with a simulation study review checklist. As development, infill and abandonment choices increasingly rest on model forecasts, the people who approve them need to see what a model assumes and where its answers stop. Jupiter Prime Training delivers this course on reservoir simulation results for non-specialists.

Why Reservoir Simulation Results for Non-Specialists Matters Now

Three pressures meet when a simulation forecast reaches a decision meeting. Investment committees ask for production profiles behind well counts, facility sizing and reserves bookings. Joint venture partners and lenders want the assumptions behind those profiles. Simulation specialists are few, so their studies are often read by people who never opened the model. A forecast accepted without challenge can lock in surplus facilities or missed wells; a forecast questioned well sharpens the next study. The course rests on material balance logic, grid and property reasoning and history match diagnostics rather than any vendor tool.

Who Gains Most from Reservoir Simulation Results for Non-Specialists

- Asset and subsurface leads who approve development cases built on model forecasts
- Geoscientists whose maps and property models populate the simulation grid
- Production and facilities engineers who size equipment from forecast rates
- Planning and economics staff who turn production profiles into investment cases
- Petroleum engineers moving into roles that commission simulation studies

Asset groups gain most when a lead, a geoscientist and a planner from one field attend together.

Reservoir Simulation Results for Non-Specialists Capabilities

Participants open the black box far enough to ask the questions that change a forecast.

- Trace a forecast back to its grid, rock, fluid and well inputs — challenge at study approval
- Assess whether grid size and layering can represent the flow behaviour claimed — model fitness judgement
- Weigh the quality of a history match against the parameters adjusted — confidence in forecasts
- Test forecast cases for missing constraints such as facility limits and well uptime — planning realism
- Compare low, mid and high cases and the assumptions behind each — reserves and investment decisions
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Communicate specific, answerable questions to simulation engineers — productive study reviews

Key Reservoir Simulation Results for Non-Specialists Terms

- Simulation grid — cells dividing a reservoir, each holding the rock and fluid properties used to calculate flow.
- Upscaling — averaging fine geological properties into larger simulation cells.
- History match — adjusting model inputs until calculated pressures and rates reproduce measured well data.
- Well control — the rule setting how a model well produces or injects, such as fixed rate or minimum pressure.
- Forecast case — a run projecting future production under a stated set of wells, constraints and assumptions.
- Non-uniqueness — where different input combinations match history equally well but predict different futures.

Reservoir Simulation Results for Non-Specialists Day by Day

Day 1: What a Simulation Model Is For

- Decisions That Lean on Simulation Forecasts — Where Model Effort Pays Off
- Material Balance as a Sense Check — Testing Whether Volumes Add Up
- Model Purpose Statements — Matching Model Detail to the Question
- Simulation Study Workflow Stages — Knowing Which Step Produced Each Result
- Common Forecast Failures in Past Projects — Lessons for Study Sponsors

Day 2: Inside the Grid, Rock and Fluids

- Grid Cells, Layers and Faults — Resolution Limits on Predicted Flow
- Porosity, Permeability and Net-to-Gross Inputs — Tracing Properties to Geology
- Fluid Property Tables and Phase Behaviour — Gas, Oil and Water Movement
- Relative Permeability and Capillary Curves — Water and Gas Breakthrough Timing
- Aquifer and Boundary Representation — Pressure Support Assumptions

Day 3: Wells, Constraints and History Matching

- Well Placement, Completions and Skin in Models — Rate Prediction Credibility
- Production and Injection Constraints — Facility Limits and Uptime Realism
- History Match Plots and Mismatch Patterns — Reading Match Quality
- Parameters Adjusted During Matching — Spotting Unjustified Multipliers
- Non-Uniqueness and Alternative Matches — Limits on Forecast Confidence

Day 4: Forecasts, Uncertainty and Decisions

- Forecast Case Definitions and Assumptions — Comparing Like With Like
- Low, Mid and High Case Ranges — Reserves Categories and Investment Risk
- Sensitivity Tornado Charts — Ranking Inputs That Move Recovery
- Model Forecasts Versus Decline and Analogue Checks — Independent Cross-Checks
- Presenting Forecasts to Partners and Committees — Clear Statements of Limits

Day 5: Practising the Simulation Study Review Checklist

- Review of a Sample Study's Grid and Properties — Applying Input Tracing
- Critique of a Sample History Match — Applying Match Quality Tests
- Challenge of Forecast Constraints and Ranges — Applying Case Comparison
- Question Set for the Simulation Engineer — Focusing the Next Study Iteration
- Simulation Study Review Checklist — Agreeing Approval Criteria for Studies

Applying Reservoir Simulation Results for Non-Specialists After the Course

- Run the review checklist on the latest field study and send ranked questions to its authors.
- Compare the current forecast with a material balance and decline cross-check and record any gap.

Reservoir Simulation Results for Non-Specialists Questions FAQ

What are reservoir simulation results for non-specialists and why do they matter now?

Reservoir simulation results for non-specialists means reading model forecasts critically without building the model. It matters now because more investment, reserves and facility decisions rest on simulation profiles, while fewer people in the room can judge the assumptions behind them.

Which roles gain most from reservoir simulation results for non-specialists?

Asset leads, geoscientists, facilities engineers and planners gain most from reservoir simulation results for non-specialists. All use simulation profiles but rarely run the models.

How does reservoir simulation results for non-specialists differ from a reservoir basics or model building course?

Reservoir simulation results for non-specialists centres on questioning a finished study. A reservoir basics course explains rock, fluids and drive in general terms, while a model building course trains specialists to construct the model.

What do you bring back from reservoir simulation results for non-specialists?

You bring back a checklist for reviewing any simulation study, covering grid, properties, wells, history match and forecast cases.

Reservoir Simulation Results for Non-Specialists: The Way Forward

The simulation study review checklist first informs whether the next development study is ready for approval or needs another iteration. Asset leads, planners and geoscientists use it to agree what a study must show. After its first use, revisit the history match questions, since they usually reveal which uncertainties deserve dedicated forecast cases.