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COURSE BROCHURE

Commissioning Reservoir Simulation Studies Training Course

4 – 8 April 2027
Cairo

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Registered in the United Kingdom and Saudi Arabia

Commissioning Reservoir Simulation Studies Training Course

Ref: 2915_111006 **Date:** 4 – 8 April 2027 **Location:** Cairo **Fees:** 4000 GBP

Commissioning Reservoir Simulation Studies is a 1-week training course for reservoir engineering leads and asset managers who sponsor simulation work, and it ends with a simulation study scope for a development decision. Field development choices now hang on forecasts that take months to build, so the sponsor who frames the question decides whether that effort pays back. Jupiter Prime Training runs this course on commissioning reservoir simulation studies from the sponsor's side.

Why Commissioning Reservoir Simulation Studies Matters Now

Three forces shape how simulation studies are commissioned today. Partners and investment committees ask for forecast ranges rather than single profiles before they approve wells or facilities. Faster computing tempts teams towards finer grids on fixed budgets. Experienced simulation engineers are scarce, so sponsors must state clearly what they need from them. An asset that commissions well gets a model sized to its decision and ranges it can defend; one that commissions badly receives late results that answer a question nobody asked, and a sanction slips or proceeds on a weak case.

Who Gains Most from Commissioning Reservoir Simulation Studies

- Leads who set the technical direction of reservoir studies for an asset
- Managers who approve study budgets and accept the forecasts that come back
- Development planners who turn production profiles into well and facility counts
- Subsurface coordinators who agree study terms with partners and contractors
- Economics leads who carry simulated volumes into investment cases

An asset group gains most when its subsurface, planning and economics leads attend together.

Commissioning Reservoir Simulation Studies Capabilities

The outcomes centre on choices a sponsor makes before gridding starts and on reading returned results.

- Frame the development question a study must answer — the investment committee
- Specify the model resolution and physics that the decision actually needs — the simulation team
- Design a scenario matrix that spans the uncertainties driving value — the asset manager
- Weigh run count against calendar and computing budget — the study sponsor
- Test whether returned forecasts hold up against history and analogues — partners
- Communicate low, mid and high profiles as decision ranges — development planners

Key Commissioning Reservoir Simulation Studies Terms

- Study scope — the written agreement on question, deliverables, model detail, scenarios and run budget.
- Decision framing — stating the choice a study informs, the options on the table and the measure that separates them.
- Fit for purpose — a model whose detail and physics match the decision, neither too coarse to separate options nor too costly to run.
- Scenario matrix — a table of the combinations of uncertain inputs and development options a study will run.
- Forecast range — the spread of production profiles from low to high cases that reflects subsurface uncertainty.
- Run budget — the number of simulation runs the calendar and computing capacity allow within the study.

Commissioning Reservoir Simulation Studies Day by Day

Day 1: The Decision Behind the Study

- Development Decision Statement — What Choice the Study Must Inform
- Option Set Definition — Which Well and Facility Alternatives Are Compared
- Value Measure Selection — Which Result Separates the Options
- Stakeholder Question Log — What Partners and Committees Expect to See
- Study Timing Against Sanction Gates — When Answers Must Arrive

Day 2: Sizing the Model to the Question

- Grid Resolution Choice — Detail Needed to Separate Development Options
- Physics and Fluid Description — Which Recovery Processes Must Be Represented
- Sector Versus Full-Field Models — Speed Against Coverage of Interference
- Upscaling Expectations — How Much Geological Detail Survives
- Existing Model Reuse Test — Whether an Inherited Model Can Serve

Day 3: Scenarios and Uncertainty Ranges

- Uncertainty Inventory — Which Subsurface Unknowns Move Recoverable Volumes
- Sensitivity Screening — Ranking Parameters Before Committing Runs
- Scenario Matrix Construction — Combining Uncertainties With Development Options
- Low, Mid and High Case Selection — Ranges a Committee Can Accept
- Run Budget Allocation — Spending Runs Where Value Is Decided

Day 4: Reading and Challenging Results

- History Match Quality Review — Trust in Pressure and Water Response
- Analogue Field Comparison — Plausibility of Forecast Recovery and Rates
- Profile Handover to Economics — Volumes Feeding the Investment Case
- Study Milestone Checkpoints — When to Redirect or Stop Work
- Results Presentation Format — How Ranges Reach Decision Makers

Day 5: Practising the Simulation Study Scope

- Decision Statement Drafting — Applying Day One Framing to a Case Field
- Model Specification Sheet — Applying Resolution and Physics Choices
- Scenario and Run Plan — Applying the Uncertainty Matrix to the Case
- Acceptance Criteria for Deliverables — Tests the Returned Study Must Pass
- Simulation Study Scope for a Development Decision — Completed and Peer Challenged

Applying Commissioning Reservoir Simulation Studies After the Course

- Rewrite the scope of a live or planned simulation study around a single decision statement, a fitted model specification and an agreed run budget.
- Hold a scenario matrix session with the study team to rank uncertainties by their effect on the next development choice before further runs are spent.

Commissioning Reservoir Simulation Studies Questions FAQ

What is commissioning reservoir simulation studies and why does it matter now?

It is the sponsor's work of defining what a simulation study must answer, how detailed the model is and which scenarios run. It matters because investment cases now demand forecast ranges.

Which roles gain most from commissioning reservoir simulation studies?

Reservoir engineering leads and asset managers who sponsor or approve studies gain most, along with planners and economics leads who rely on simulated profiles.

How does commissioning reservoir simulation studies differ from a course on building simulation models?

It looks at simulation from the sponsor's side, not the modeller's keyboard. Model construction courses teach gridding and history matching; this one teaches how to frame, size, budget and accept a study.

What do you bring back from commissioning reservoir simulation studies?

You bring back a drafted study scope for a real or case decision. It holds a decision statement, model specification, run plan and acceptance criteria.

Commissioning Reservoir Simulation Studies: The Way Forward

The simulation study scope for a development decision gives the sponsor and the study team one shared reference. Its first use is agreeing which options a forthcoming sanction study compares and how many runs that justifies. Asset managers, subsurface leads and economics leads all draw on it. After the first study returns, revisit whether the model detail separated the options.