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COURSE BROCHURE

Development Geology Training Course for Geoscience Team Leads

25 – 29 October 2027
Vienna

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Registered in the United Kingdom and Saudi Arabia

Development Geology Training Course for Geoscience Team Leads

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Development Geology for Geoscience Team Leads is a 1-week training course for lead geologists, subsurface coordinators and asset managers who direct reservoir characterisation and well correlation work, and leave with a field development geology brief that links the geological model to drilling targets. Fields are being developed with fewer wells and tighter margins, so every geological call carries more weight. Jupiter Prime Training delivers this development geology course.

Why Development Geology Matters Now

Three pressures shape development geology today. Mature fields need infill and step-out wells placed in thinner, more compartmentalised sands; integrated asset teams expect geologists, petrophysicists and reservoir engineers to share one subsurface story; and digital subsurface platforms make it easy to build models faster than a team can test them. Handled well, producers land in connected pay; handled badly, wells are drilled against untested models and reserves are lost. The course rests on established practice in facies analysis, sequence stratigraphy and uncertainty-based static modelling.

Who Gains Most from Development Geology

- Lead geologists accountable for the static model behind each development well
- Subsurface coordinators who align geology, petrophysics and reservoir engineering inputs
- Asset managers who approve well proposals and field development plan revisions
- Operations geologists responsible for well placement and geosteering decisions while drilling
- Petrophysics leads who supply net pay and saturation inputs to the geological model

Integrated asset teams gain most when their geology lead, petrophysics lead and reservoir engineer attend together and test one shared field interpretation.

Development Geology Capabilities

Participants practise turning core, log and seismic evidence into reservoir architecture that a multidisciplinary team can act on and defend.

- Correlate wells using sequence stratigraphic surfaces and facies trends — infill well spacing
- Assess reservoir compartmentalisation from faults, pressure data and fluid contacts — development plan revisions
- Specify static model inputs and their ranges of uncertainty — reservoir engineering simulation teams
- Weigh drilling targets against geological risk and remaining connected volumes — well proposal approval

- Communicate subsurface uncertainty clearly to non-geologists — asset managers and partners
- Coordinate geoscience peer reviews and model handovers — multidisciplinary asset teams

Key Development Geology Terms

- Reservoir characterisation — Describing the geometry, rock properties and fluid distribution of a reservoir to predict how it will produce.
- Well correlation — Matching equivalent rock layers between wells using logs, core and stratigraphic surfaces to map reservoir continuity.
- Facies model — A description of rock types and their depositional settings, used to predict reservoir quality away from wells.
- Static model — A three-dimensional grid of structure, facies and properties built before flow simulation to estimate volumes in place.
- Compartmentalisation — Division of a reservoir into partly or fully isolated blocks by faults, shale barriers or diagenesis.
- Geosteering — Adjusting a well path while drilling, using real-time logs, to keep the bit inside the target reservoir zone.

Development Geology Day by Day

Day 1: The Development Geology Context

- Field Life Cycle Stages — Where Geology Drives Appraisal And Infill Choices
- Integrated Asset Team Roles — Who Owns Each Subsurface Interpretation
- Depositional Environments Review — Predicting Sand Geometry And Continuity
- Core And Cuttings Description — Calibrating Facies Before Building Models
- Subsurface Data Inventory — Gaps That Limit Confidence In Development Wells

Day 2: Correlation and Reservoir Architecture

- Sequence Stratigraphic Surfaces — Choosing Reliable Markers For Field Correlation
- Log Correlation Panels — Testing Sand Connectivity Between Producers And Injectors
- Fault Seal And Juxtaposition Analysis — Judging Compartment Boundaries
- Pressure And Fluid Contact Data — Confirming Or Rejecting Connectivity Assumptions
- Seismic Attribute Mapping — Extending Reservoir Bodies Away From Well Control

Day 3: Static Modelling and Uncertainty

- Facies And Property Modelling Workflow — Fit-For-Purpose Grid Design Choices
- Net-To-Gross And Cut-Off Selection — Agreeing Pay Definitions With Petrophysics
- Low, Base And High Geological Cases — Framing Volume Ranges For Decisions
- Model Handover To Simulation — Upscaling Choices That Preserve Heterogeneity
- Geoscience Peer Review Checklist — Challenging Models Before They Drive Spending

Day 4: From Geological Model to Drilling Target

- Infill And Step-Out Target Screening — Ranking Locations By Connected Volume
- Well Proposal Geological Prognosis — Tops, Risks And Contingency Depths
- Geosteering Plans For Horizontal Wells — Staying In The Best Reservoir Zone
- Post-Well Model Updates — Feeding Results Back Into The Next Location
- Communicating Geological Risk — Briefing Asset Managers And Drilling Teams Clearly

Day 5: Practising the Field Development Geology Brief

- Correlation Panel Defence — Applying Day 2 Methods To A Field Case
- Uncertainty Case Presentation — Applying Day 3 Ranges To Volume Choices
- Target Ranking Exercise — Applying Day 4 Screening To Competing Locations
- Leading A Cross-Discipline Subsurface Review — Resolving Conflicting Interpretations
- Field Development Geology Brief — Completing The Team Output For Sharing

Applying Development Geology After the Course

- Lead a correlation panel review of the next planned development well with the petrophysics and reservoir engineering leads.
- Run a peer review of the current static model using the checklist, recording low, base and high cases for the asset manager.

Development Geology Questions FAQ

What is development geology and why does it matter now?

Development geology is the work of describing a discovered reservoir well enough to place production and injection wells. It matters now because mature fields leave less room for poorly placed wells, and every infill location must be justified by connected pay.

Which roles gain most from development geology training for team leads?

Lead geologists, subsurface coordinators and asset managers gain most. They decide which interpretation the asset acts on and explain geological risk to engineers and partners.

How does development geology differ from a reservoir management course?

Development geology focuses on the rock: correlation, architecture, static models and drilling targets. A reservoir management course centres on flow, pressure support and economic ranking of scenarios.

What do you bring back from development geology training for team leads?

You bring back a field development geology brief: correlation panels, uncertainty cases and ranked drilling targets for one field, ready for your next well proposal.

Development Geology: The Way Forward

The field development geology brief first informs the choice of the next infill or step-out location. Lead geologists use it to defend the target, asset managers to approve the proposal, and drilling teams to plan contingency depths. After the first well is drilled against it, the correlation and uncertainty cases are worth revisiting, because new logs and pressures reshape connectivity.