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COURSE BROCHURE

Subsurface Interpretation Decision Gates Training Course

27 – 31 December 2026
Muscat

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Registered in the United Kingdom and Saudi Arabia

Subsurface Interpretation Decision Gates Training Course

Ref: 2484_94104 **Date:** 27 – 31 December 2026 **Location:** Muscat **Fees:** 6500 GBP

Subsurface Interpretation Decision Gates is a 1-week training course for geologists, geophysicists and petrophysicists who must turn separate interpretations into one gate-ready interpretation pack. Asset teams face shorter decision cycles and costlier wells, so a disconnected seismic pick or log cut-off can carry a weak prospect through to funding. Jupiter Prime Training runs this course for subsurface staff who present work at stage gates.

Why Subsurface Interpretation Decision Gates Matter Now

Three forces shape this subject today. Exploration and appraisal budgets are tighter, so each gate must show what the subsurface case rests on. Digital interpretation platforms let disciplines work in parallel, yet shared earth models still break where seismic horizons, log zonation and depositional concepts disagree. An organisation that handles these gates well drills fewer dry holes and recycles weak ideas early; one that handles them badly funds wells on untested assumptions. The course rests on stage-gate project practice and decision quality principles.

Who Gains Most from Subsurface Interpretation Decision Gates

- Geophysicists responsible for horizon picking, well ties and depth conversion
- Geologists responsible for depositional concepts, fault frameworks and trap definition
- Petrophysicists responsible for zonation, cut-offs and reservoir property estimates
- Prospect and appraisal leads responsible for assembling the gate submission
- Technical assurance reviewers responsible for challenging interpretations before funding

Asset teams that send a geophysicist, a geologist and a petrophysicist together gain most, since they can agree cut-offs and well ties on the spot.

Subsurface Interpretation Decision Gates Capabilities

Participants practise joining seismic, log and core evidence into one defensible subsurface case and carrying it through a gate review.

- Align well ties, depth conversion and petrophysical cut-offs across disciplines — the asset team building the shared earth model
- Weigh low, mid and high scenarios with correlated inputs — partners judging the resource range
- Assess geological chance of success element by element — exploration managers ranking prospects
- Test interpretations for anchoring and overconfidence — technical assurance reviewers
- Specify gate entry criteria for an interpretation package — gate keepers deciding readiness
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Communicate a proceed, recycle, hold or exit recommendation — the funding decision panel

Key Subsurface Interpretation Decision Gates Terms

- Decision gate — a planned review point where a panel decides whether a subsurface opportunity proceeds, recycles, holds or exits.
- Well tie — matching a synthetic seismogram built from logs to real seismic so horizons are picked at the right depth.
- Net reservoir cut-off — agreed limits on porosity, shale volume or saturation that separate productive rock from non-productive rock.
- Chance of success — the probability that trap, seal, charge and reservoir all work together to hold a discovery.
- Value of information — the expected gain in decision quality from acquiring new data, set against its cost.
- Peer assist — a session where colleagues from outside the team challenge an interpretation before it reaches a gate.

Subsurface Interpretation Decision Gates Day by Day

Day 1: Framing the Shared Subsurface Story

- Opportunity Framing Statement — Which Subsurface Questions the Gate Must Answer
- Discipline Handover Map — Where Seismic, Log and Core Inputs Meet
- Stage-Gate Asset Lifecycle — When Interpretation Maturity Must Increase
- Interpretation Assumption Register — Which Hidden Premises Drive Volumes
- Value of Information Screening — Which Extra Data Earns Its Cost

Day 2: Tying Seismic, Logs and Geology

- Synthetic Seismogram and Well Tie — Confidence in Horizon Picks
- Time-Depth Relationship Checks — Choice of Depth Conversion Velocity Model
- Petrophysical Cut-Offs Agreed Across Disciplines — Net Reservoir Definition
- Depositional Facies Concept From Core — Seismic Facies Calibration
- Fault Framework Consistency Review — Compartment Count and Connectivity

Day 3: Handling Uncertainty Between Disciplines

- Low, Mid and High Case Scenarios — Range Carried Into Volumetrics
- Probabilistic Volumetrics With Correlated Inputs — Realistic Spread of Outcomes
- Seismic Amplitude Support Grading — Weight Given to Direct Indicators
- Geological Chance of Success Elements — Trap, Seal, Charge and Reservoir
- Cognitive Bias Checks in Interpretation — Anchoring and Overconfidence Risks

Day 4: Running the Decision Gate

- Gate Entry Criteria Checklist — Readiness of the Interpretation Package
- Peer Assist and Technical Assurance Review — Independent Challenge Before Funding
- Decision Quality Elements — Alternatives, Information and Clear Trade-Offs
- Dissent and Minority View Logging — Transparent Record of Disagreement
- Gate Outcome Options — Proceed, Recycle, Hold or Exit

Day 5: Practising the Gate-Ready Interpretation Pack

- Applying Well Tie and Cut-Off Agreements — Single Integrated Cross-Section
- Applying Scenario Ranges — Volumetric Summary for Gate Reviewers
- Applying Chance of Success Grading — Risked Resource Statement
- Mock Gate Panel Exercise — Defending the Recommendation Under Challenge
- Completing the Gate-Ready Interpretation Pack — Team Sign-Off Sheet

Applying Subsurface Interpretation Decision Gates After the Course

- Lead a cross-discipline session to agree well ties and net reservoir cut-offs on a current prospect before its next gate
- Run a peer assist on an upcoming submission using the gate entry criteria checklist and a dissent log

Subsurface Interpretation Decision Gates Questions FAQ

What are subsurface interpretation decision gates and why do they matter now?

They are review points where joined seismic, log and geological work is judged before money is committed. Tighter budgets and parallel digital workflows make it easy for disconnected interpretations to slip through, so a disciplined gate protects drilling capital.

Which roles gain most from subsurface interpretation decision gates training?

Geophysicists, geologists and petrophysicists who prepare gate submissions gain most. Prospect leads and assurance reviewers also learn how to challenge a package fairly.

How does a subsurface interpretation decision gates course differ from a seismic interpretation course?

It focuses on joining disciplines and judging readiness rather than picking skills. A seismic interpretation course deepens one discipline; this one aligns ties, cut-offs, scenarios and chance of success so a panel can decide.

What do you bring back from subsurface interpretation decision gates training?

You bring back a gate-ready interpretation pack drafted on a realistic case. It holds an integrated cross-section, a volumetric range, a risked resource statement and a sign-off sheet your team can reuse at its next review.

Subsurface Interpretation Decision Gates: The Way Forward

The gate-ready interpretation pack first informs whether a prospect proceeds to drilling or recycles for more data. Prospect leads, assurance reviewers and decision panels use it to see where disciplines agree and where they still differ. After its first use, revisit the value of information screening, since new wells and seismic often change which uncertainty matters most.