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COURSE BROCHURE

Structural Trap Styles and Prospect Geometry Training Course

18 – 22 January 2027
Madrid

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Registered in the United Kingdom and Saudi Arabia

Structural Trap Styles and Prospect Geometry Training Course

Ref: 2933_111468 **Date:** 18 – 22 January 2027 **Location:** Madrid **Fees:** 6200 GBP

Structural Trap Styles and Prospect Geometry is a 1-week training course for exploration geologists and geophysicists who must define, map and risk structural closures, and who leave with a structural trap risk summary for one prospect. As exploration targets grow smaller, deeper and more complex, misread fold and fault geometry remains a leading cause of dry holes. Jupiter Prime Training delivers this course on Structural Trap Styles and Prospect Geometry.

Why Structural Trap Styles and Prospect Geometry Matter Now

Three forces shape structural prospecting today. Licence rounds increasingly offer mature acreage where the obvious anticlines have been drilled, leaving subtle, fault-bounded and inverted closures. Partners and finance committees now expect trap volumes to be defended with balanced sections and explicit uncertainty rather than a single contour map. Organisations that read closure geometry correctly drill fewer failed structures; those that do not commit rigs to traps that never closed. The course rests on established principles of kinematic restoration, section balancing and structural trap classification.

Who Gains Most from Structural Trap Styles and Prospect Geometry

- Interpreters turning seismic horizons and faults into closed structures
- Prospect generators mapping spill points, closure area and gross rock volume
- Geophysicists judging how depth conversion changes closure
- Portfolio reviewers challenging trap definitions before drilling
- Development geologists revisiting structural models after appraisal wells

Exploration asset groups gain most when interpreters and prospect reviewers attend together.

Structural Trap Styles and Prospect Geometry Capabilities

Participants turn folded and faulted horizons into closures that survive peer challenge.

- Classify a structure by its deformation regime and trap style — prospect ranking meetings
- Build a balanced cross-section through the crest and spill point — interpretation peer reviews
- Test fold and fault geometry against restoration to a pre-deformation state — technical assurance panels
- Calculate closure height, area and gross rock volume ranges from depth maps — volumetric estimates for partners
- Weigh fault-dependent closure against four-way dip closure — chance of success assignments
- Communicate trap geometry risk in a single summary page — drilling investment committees

Key Structural Trap Styles and Prospect Geometry Terms

- Structural closure — the vertical distance between a trap's crest and its lowest closing contour, the spill point.
- Spill point — the structurally lowest point at which hydrocarbons can escape a trap and migrate elsewhere.
- Fault-dependent closure — a trap that holds hydrocarbons only if a bounding fault prevents lateral leakage across it.
- Inversion structure — a former basin or graben uplifted and folded when extensional faults are reactivated in compression.
- Balanced cross-section — a section whose deformed and restored states preserve bed length or area.
- Fault juxtaposition — the rock units placed against each other across a fault by its displacement.

Structural Trap Styles and Prospect Geometry Day by Day

Day 1: Deformation Regimes and Trap Families

- Extensional, Compressional and Strike-Slip Regimes — Which Trap Families To Expect
- Principal Stress Orientation From Fault Patterns — Likely Fault Trends Across Acreage
- Four-Way Dip Closures and Drape Folds — Low-Risk Anticline Screening
- Tilted Fault Blocks and Rollover Anticlines — Footwall Versus Hanging Wall Targets
- Thrust-Related and Inverted Folds — Crest Position and Imaging Risk

Day 2: Fold and Fault Geometry on Seismic

- Fault Throw Profiles and Displacement Mapping — Fault Linkage and Relay Ramps
- Fold Shape Description: Hinge, Limb and Plunge — Crest Location on Maps
- Fault Polygons and Horizon Gridding — Closure Contours Honest to Data
- Time-to-Depth Conversion Choices — Closure Survival Under Velocity Uncertainty
- Salt and Shale Mobility Structures — Flank and Crestal Trap Options

Day 3: Restoration and Section Balancing

- Line-Length and Area Balancing Rules — Geometric Validity of Interpreted Sections
- Flexural Slip and Simple Shear Restoration — Choosing a Deformation Assumption
- Sequential Restoration Through Time — Trap Timing Against Charge Timing
- Growth Strata and Syn-Kinematic Wedges — Dating Fault and Fold Activity
- Restored Section Error Diagnosis — Revising Unbalanced Interpretations

Day 4: Closure, Juxtaposition and Volume Ranges

- Spill Point and Closure Height Mapping — Maximum Column a Trap Can Hold
- Juxtaposition Diagrams Along Bounding Faults — Reservoir-on-Reservoir Leak Windows
- Fault-Dependent Versus Dip Closure Splits — Separating Volume by Confidence
- Gross Rock Volume Ranges From Depth Scenarios — Low, Mid and High Cases
- Structural Uncertainty Envelopes — Geometric Chance Factor for the Trap

Day 5: Practising the Structural Trap Risk Summary

- Regime and Trap Style Classification of a Case Prospect — Applying Day One
- Balanced Section Through the Case Crest — Applying Restoration Checks
- Closure and Volume Range Calculation — Applying Depth and Spill Mapping
- Peer Challenge of Competing Interpretations — Agreeing the Defensible Geometry
- Structural Trap Risk Summary Completion — Prospect Ready for Portfolio Review

Applying Structural Trap Styles and Prospect Geometry After the Course

- Lead a restoration check of one live prospect's key section and record whether its interpreted fold and fault geometry balances.
- Rebuild closure and gross rock volume ranges for a ranked prospect using two depth conversion scenarios and present the spread to the asset group.

Structural Trap Styles and Prospect Geometry Questions FAQ

What is Structural Trap Styles and Prospect Geometry and why does it matter now?

It is the practice of identifying how folds and faults create closed structures. It matters now because remaining prospects are subtler, and partners expect geometric risk to be shown openly before any well is approved.

Which roles gain most from Structural Trap Styles and Prospect Geometry?

Seismic interpreters, prospect generators, depth conversion geophysicists and portfolio reviewers gain most. You share one method for defining crest, spill and closure.

How does Structural Trap Styles and Prospect Geometry differ from a fault seal course?

This course concentrates on trap shape, restoration and closure volume across every structural style. A fault seal course goes deeper into membrane sealing, shale content and pressure capacity of fault rock.

What do you bring back from Structural Trap Styles and Prospect Geometry?

You bring back a structural trap risk summary for one prospect, covering trap style, a balanced section, volume ranges and a geometric chance factor.

Structural Trap Styles and Prospect Geometry: The Way Forward

The structural trap risk summary first informs whether a prospect earns a place in the drilling inventory. Exploration managers and partners use it to compare closures on equal terms. After its first use, the geometric chance factor deserves revisiting once new seismic or a nearby well result arrives, since both can shift spill points.