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COURSE BROCHURE

Bypassed Pay Geology for Mature Fields Training Course

4 – 8 April 2027
Doha

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Bypassed Pay Geology for Mature Fields is a 1-week training course for development geologists, petrophysicists and reservoir geoscientists who must find hydrocarbons left behind in late-life reservoirs, and it ends with a bypassed pay opportunity map. As production declines and new discoveries grow costly, the oil still trapped in overlooked layers and isolated compartments of existing fields is often the cheapest barrel left to win. This course is delivered by Jupiter Prime Training.

Why Bypassed Pay Geology Matters Now

Three forces shape this subject today. Ageing fields hold decades of logs, cores and production records that were interpreted with older depositional concepts. Reprocessed seismic and modern petrophysical methods now reveal thin beds, channel edges and sealing shales that earlier studies missed. A team that re-reads its field well adds reserves from existing wells and pads; a team that does not drills water-swept targets, wastes rig time and loses credibility with partners and investment committees.

Who Gains Most from Bypassed Pay Geology

- Geoscientists responsible for correlation, facies interpretation and static models of producing fields
- Petrophysicists who define net pay cut-offs and re-evaluate old log suites
- Reservoir engineers who reconcile production history with the geological picture
- Well planners who select infill, sidetrack and recompletion targets
- Subsurface coordinators who rank opportunities across a portfolio of producing assets

Integrated subsurface teams of a single producing asset gain most when geologists, petrophysicists and engineers attend together and challenge the same well data.

Bypassed Pay Geology Capabilities

Participants learn to read a producing field as a set of geological questions about where hydrocarbons remain, why they stayed behind and how strong the evidence for each target is.

- Re-interpret depositional facies from cores and logs — the sand body geometry used in target selection
- Map stratigraphic and structural compartments — the drainage boundaries engineers test against pressure data
- Screen old wells for overlooked low-resistivity and thin-bed pay — the recompletion candidate list
- Calibrate the static model with production and saturation logs — the history-match reviewed by engineers
- Weigh geological uncertainty for each opportunity — the risked volumes presented to asset leadership
- Communicate bypassed targets with maps and cross-sections — the drilling and workover decisions of partners

Key Bypassed Pay Geology Terms

- Bypassed pay — hydrocarbon-bearing rock in a producing field that existing wells have not drained or completed.
- Depositional facies — a rock body defined by the environment and processes that laid down its sediment.
- Reservoir compartment — a volume of reservoir isolated from neighbouring rock by faults, shales or cemented zones.
- Low-resistivity pay — productive rock that logs as wet because of conductive clays, fine grains or laminations.
- Sweep efficiency — the share of a reservoir volume contacted and displaced by injected or encroaching fluids.
- Time-lapse saturation log — a repeat cased-hole measurement showing how fluid saturations have changed with production.

Bypassed Pay Geology Day by Day

Day 1: Reading the Mature Field Record

- Legacy Log and Core Inventory — Which Data Still Deserve Trust
- Production and Injection Histories — Where Fluids Have Really Moved
- Original Geological Concepts Review — Assumptions Ripe for Challenge
- Reprocessed Seismic Attributes — Hidden Bed Boundaries and Edges
- Field Data Gap Register — Priorities for New Measurement

Day 2: Re-interpreting Depositional Facies

- Core Description and Facies Logs — Reservoir Quality Distribution
- Fluvial and Deltaic Sand Body Geometry — Channel Edge Targets
- Carbonate Rock Typing and Diagenesis — Permeability Barrier Placement
- Electrofacies Classification From Logs — Facies in Uncored Wells
- Revised Facies Maps — Areas Undrained by Current Wells

Day 3: Mapping Compartments and Barriers

- High-Resolution Sequence Stratigraphy — Flow Unit Correlation Choices
- Fault Seal and Juxtaposition Diagrams — Lateral Compartment Limits
- Pressure and Fluid Contact Analysis — Connected or Isolated Blocks
- Shale Baffle and Cemented Layer Mapping — Vertical Sweep Limits
- Compartment Diagram — Drainage Areas per Producing Well

Day 4: Finding the Pay Left Behind

- Thin-Bed and Laminated Pay Evaluation — Recompletion Candidate Zones
- Low-Resistivity Pay Screening — Overlooked Intervals in Old Wells
- Cased-Hole Saturation Logging — Remaining Oil Column Confirmation
- Static Model Update and Calibration — Consistent History Match Inputs
- Volumetric Uncertainty and Risking — Opportunity Ranking by Confidence

Day 5: Practising the Bypassed Pay Opportunity Map

- Integrated Facies and Compartment Overlay — Unswept Area Outlines
- Candidate Well and Zone Selection — Infill Versus Recompletion Choices
- Risked Volume Tables per Target — Investment Committee Discussion
- Peer Challenge of Interpretations — Evidence Strength for Each Target
- Bypassed Pay Opportunity Map — Shared Target Portfolio for the Asset

Applying Bypassed Pay Geology After the Course

- Lead a facies and compartment re-interpretation of one producing block, using core, logs and pressure data to outline areas that current wells do not drain.
- Run a low-resistivity and thin-bed screening of ten legacy wells and present the recompletion candidates with risked volumes to the asset team.

Bypassed Pay Geology Questions FAQ

What is bypassed pay geology for mature fields and why does it matter now?

Bypassed pay geology is the re-reading of a producing field to locate hydrocarbons that existing wells missed. It matters now because adding barrels from known reservoirs is usually faster and cheaper than finding new fields, and modern data reveal targets older studies overlooked.

Which roles gain most from bypassed pay geology training?

Development geologists, petrophysicists and reservoir engineers gain most. Well planners and subsurface coordinators also benefit when they turn that evidence into well choices.

How does bypassed pay geology differ from mature field revitalisation planning?

Bypassed pay geology works on the rock itself: facies, compartments, overlooked pay and model updates. Revitalisation planning sits above it, ranking workovers, water handling, artificial lift and cost actions across a field. You leave this course with the geological targets such planning relies on.

What do you bring back from bypassed pay geology training?

You bring back a bypassed pay opportunity map for a field you know, with facies and compartment interpretations, screened candidate zones and risked volumes.

Bypassed Pay Geology: The Way Forward

The bypassed pay opportunity map gives an asset team a shared, evidence-based list of targets. Its first use is to choose the next infill or recompletion candidate, and it serves geologists, engineers and partners alike. After the first well results arrive, revisit the facies and compartment interpretations, because each new log either confirms the model or points to the next layer left behind.