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COURSE BROCHURE

Well Integrity Management Training Course

4 – 8 April 2027
Muscat

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Registered in the United Kingdom and Saudi Arabia

Well Integrity Management Training Course

Ref: 1436_53504 **Date:** 4 – 8 April 2027 **Location:** Muscat **Fees:** 6500 GBP

Well Integrity Management is a 1-week training course for well engineers and integrity specialists who must keep every well's barriers verified from construction to abandonment, and who leave with a well integrity management plan for their own well stock. Ageing wells, higher pressure completions and closer scrutiny of leaks and emissions mean a single failed barrier can halt production or trigger a costly intervention. Jupiter Prime Training delivers this well integrity management course.

Why Well Integrity Management Matters Now

Three forces shape well integrity work today: well stocks that keep producing long past their design life, with corroded tubulars and degraded cement; new wells in deeper, hotter and sour reservoirs that load barriers harder; and partners, insurers and communities who expect proof that no hydrocarbons escape to surface or shallow aquifers. An operator that manages integrity well keeps wells online, plans workovers before failures and can show a clean record. One that does not faces uncontrolled annulus pressure, shut-in wells and emergency interventions. The course draws on international well integrity guidance on two-barrier philosophy, operating limits and life-cycle assurance.

Who Gains Most from Well Integrity Management

- Engineers who design casing, cement and completion barriers for new wells
- Integrity specialists who monitor annulus pressures and test safety valves
- Production engineers who set operating envelopes for producing and injection wells
- Workover planners who rank wells for repair, recompletion or abandonment
- Data coordinators who maintain well integrity records and barrier status

Well and production groups gain most when design, operations and integrity staff attend together and agree one barrier status method.

Well Integrity Management Capabilities

Participants learn to describe every well as a set of verified barriers and to act when one of them weakens.

- Build well barrier schematics for each well type — handover between drilling and operations
- Calculate maximum allowable annulus surface pressure — operating limit decisions
- Apply test criteria for valves, packers and cement — barrier acceptance
- Assess sustained casing pressure sources and bleed-down results — intervention priorities
- Weigh risk-based categories for wells with anomalies — shut-in or continued operation
- Specify integrity key performance indicators — asset and partner reporting

Key Well Integrity Management Terms

- Well barrier envelope — One or more elements that together prevent unintended flow of formation fluids to surface or between zones.
- Two-barrier principle — The rule that two independent tested barriers stand between the reservoir and the environment at all times.
- MAASP — Maximum allowable annulus surface pressure, the highest pressure an annulus may hold without risking barrier failure.
- Sustained casing pressure — Annulus pressure that rebuilds after bleed-down, indicating communication through a leaking barrier.
- Subsurface safety valve — A downhole valve that closes the tubing automatically if surface control is lost.
- Well integrity category — A risk ranking assigned to each well according to the condition of its barriers.

Well Integrity Management Day by Day

Day 1: Barrier Philosophy Across the Well Life Cycle

- Two-Barrier Principle and Barrier Envelopes — Defining Acceptable Well Status
- Well Barrier Schematics for Producers and Injectors — Documenting Barrier Elements
- Design, Construction, Operation and Abandonment Phases — Assigning Integrity Ownership
- Common Failure Modes in Tubulars, Cement and Wellheads — Anticipating Weak Points
- Lessons From Well Control and Leak Incidents — Prioritising Barrier Discipline

Day 2: Barrier Elements and Their Verification

- Casing and Cement Evaluation Logs — Confirming Annular Isolation
- Packer and Tubing Leak Testing — Accepting Completion Barriers
- Subsurface Safety Valve Inflow Tests — Setting Test Frequencies
- Wellhead and Christmas Tree Valve Testing — Verifying Surface Barriers
- Corrosion and Erosion Monitoring of Tubulars — Predicting Remaining Wall Thickness

Day 3: Annulus Pressure Management

- MAASP Calculation for Each Annulus — Setting Operating Limits
- Thermal Expansion and Trapped Annulus Pressure — Separating Benign From Harmful Build-Up
- Bleed-Down and Build-Up Diagnostic Tests — Locating Leak Paths
- Sustained Casing Pressure Response Options — Choosing Monitor, Repair or Shut-In
- Annulus Fluid and Gas Sampling — Identifying Pressure Sources

Day 4: Risk Assessment and Integrity Decisions

- Well Integrity Categorisation by Barrier Condition — Ranking Wells by Risk
- Risk Assessment for Wells With Anomalies — Approving Continued Operation
- Workover and Remediation Option Screening — Selecting Repair Methods
- Suspension and Abandonment Barrier Requirements — Planning End-of-Life Wells
- Integrity Key Performance Indicators — Reporting Well Stock Health

Day 5: Practising the Well Integrity Management Plan

- Barrier Schematic Review for a Gas Producer — Applying Barrier Philosophy
- Annulus Pressure Case Study for an Injector — Applying MAASP and Diagnostics
- Categorisation of a Mixed Well Stock — Applying Risk Ranking
- Testing Schedule and Data Responsibilities — Defining Verification Routines
- Well Integrity Management Plan — Presenting Barriers, Limits and Actions to Leadership

Applying Well Integrity Management After the Course

- Update barrier schematics for ten wells with the oldest completions and flag any element without a recent test.
- Recalculate MAASP for wells reporting annulus pressure and categorise them by barrier condition.

Well Integrity Management Questions FAQ

What is well integrity management and why does it matter now?

Well integrity management is the application of technical, operational and organisational measures to keep well barriers intact throughout a well's life. It matters now because ageing wells and harsher reservoirs increase barrier loads while tolerance for leaks keeps falling.

Which roles gain most from well integrity management training?

Well engineers, integrity specialists, production engineers and workover planners gain most. You benefit if you design barriers, monitor annulus pressures or decide whether a well with an anomaly keeps producing.

How does well integrity management differ from a casing design course?

This well integrity management course follows barriers through operation, testing and abandonment, while casing design courses focus on selecting and sizing tubulars during well construction.

What do you bring back from well integrity management training?

You bring back a well integrity management plan with barrier schematics, annulus limits, test schedules and a risk-ranked well list for your own field.

Well Integrity Management: The Way Forward

The well integrity management plan becomes the reference for the next well stock review, first informing which wells need testing or repair before the next production cycle. Well, production and integrity engineers use it to share one view of barrier status. After its first use, revisit the categorisation rules once test results show how barrier condition actually changes over time.