

Drilling & Workover Engineering Risk Management and Internal Audit Training

16 – 20 November 2026
Baku

AGILE LEADERS
Training Center

Drilling & Workover Engineering Risk Management and Internal Audit Training

Ref: 945_228940 **Date:** 16 – 20 November 2026 **Location:** Baku **Fees:** 8000 Euro

Overview

Drilling & Workover Engineering Risk Management and Internal Audit Training is a one-week course designed for upstream technical specialists and oversight professionals seeking robust operational control frameworks. Complex subsea and onshore well operations face geological uncertainties, mechanical integrity degradation, and severe process safety hazards that require systematic assurance. Participants examine standardized risk assessment models, barrier verification techniques, and structured governance workflows to detect operational vulnerabilities before catastrophic failures occur. Agile Leaders Training Center provides this Drilling & Workover Engineering Risk Management and Internal Audit Training to establish rigorous operational governance across active asset programs.

Who Should Attend

- Professionals responsible for well planning, casing design, and drilling program execution.
- Engineers tasked with well intervention, workover programs, and artificial lift maintenance.
- Auditors responsible for operational compliance, engineering verification, and internal control reviews.
- Health, safety, and environment specialists overseeing asset integrity and process safety barriers.
- Technical managers accountable for contractor rig oversight, rig equipment commissioning, and risk mitigation.

Departments and Industries

- Drilling and completions engineering in offshore oil and gas production.
- Well intervention and reservoir management in onshore exploration operations.
- Health, safety, environment, and technical safety in deepwater extraction assets.
- Subsurface asset integrity and internal audit in geothermal energy development.
- Field operations and surface facility maintenance in carbon capture and underground storage projects.

Learning Objectives

By the end of this course, participants will be able to:

- Apply ISO 31000 risk management principles to identify critical drilling hazards.
- Evaluate well barriers using API RP 96 deepwater well design criteria.
- Build a Risk-Based Internal Audit program for workover rig interventions.
- Analyze well control risks using bowtie analysis and barrier failure mode models.
- Diagnose Well Integrity Audit findings using ISO 16530-1 life-cycle standards.
- Prioritize audit actions through standardized Risk-Based Internal Audit scoring matrices.

Course Agenda

Day 1: Well Engineering Risk Identification and Risk-Based Internal Audit

- ISO 31000 Framework for Drilling Risk Management and Hazard Identification
- API RP 96 Well Design Guidelines for Well Engineering Audit Scoping
- Process Hazard Analysis PHA and HAZOP Methodologies for Rig Operations
- Workover Risk Management Frameworks for Well Intervention Activities
- Risk-Based Internal Audit Planning Using IIA Standards for Upstream Operations

Day 2: Well Control Barriers and Technical Assurance

- API Standard 53 Blowout Prevention Equipment Inspection Procedures
- Bowtie Methodology for Well Control Assurance and Barrier Verification
- Drilling Engineering Audit Protocols for Mud Weight and Kick Tolerance Calculations
- Casing and Cementing Barrier Failure Analysis Using NORSOK D-010 Standards
- Blowout Contingency Planning and Well Kill Simulation Verification Protocols

Day 3: Well Integrity Life Cycle and Mechanical Risk

- ISO 16530-1 Life-Cycle Management for Well Integrity Audit Programs
- Tubing and Casing Corrosion Risk Profiling Using Caliper Log Data
- Annular Pressure Monitoring and Sustained Casing Pressure Diagnostic Guides
- Workover Rig Safety Management Systems and API RP 54 Audit Checklists
- Subsea Tree and Wellhead Integrity Verification Checklists

Day 4: Internal Audit Execution and Contractor Governance

- IADC Daily Drilling Report Reconciliation and Rig Contract Audit Protocols
- Contractor Management Audit Checklists Based on IOGP Report 423
- Non-Productive Time NPT Root Cause Analysis Using TapRooT Methods
- Management of Change MOC Verification Audit Tools for Well Program Revisions
- Audit Evidence Gathering Protocols for Material Test Reports and Equipment Traceability

Day 5: Audit Simulation and Integrated Practice

- Audit Finding Formulation Exercise Using Cause-Effect-Condition-Criteria Matrices
- Risk Scoring and Corrective Action Plan Exercise for Well Barrier Failures
- Drilling Engineering Audit Reporting Exercise for Rig Site Non-Conformances
- Contractor Audit Negotiation Exercise for Material Discrepancies
- Integrated Drilling and Workover Audit Capstone Simulation and Closeout Presentation

Practical Exercises

The course incorporates practical group activities that apply engineering risk methods to actual field scenarios.

- Suggested activity: construct a barrier failure bowtie diagram for a lost-circulation well control incident.
- Suggested activity: build a one-week Drilling Engineering Audit work program using actual daily drilling logs.
- Suggested activity: evaluate sustained casing pressure test data to determine Well Integrity Audit compliance ratings.

FAQs

Who benefits from this Drilling & Workover Engineering Risk Management and Internal Audit Training?

The course suits petroleum engineers, drilling supervisors, asset managers, and technical auditors who evaluate well operations. Participants should understand standard wellbore schematics and rig systems, as the material focuses directly on risk frameworks and audit execution rather than basic petroleum engineering mechanics.

How does this course differ from general internal audit training?

General internal audit training addresses financial controls, enterprise governance, and administrative compliance. This course concentrates exclusively on technical risk engineering, process safety barriers, Well Control Assurance, and API and ISO operational standards across drilling and well intervention environments.

What methodologies guide Drilling Risk Management during rig operations?

Drilling Risk Management relies on structured hazard identification, bowtie barrier analysis, quantitative kick tolerance modeling, and Management of Change procedures aligned with ISO 31000 and NORSOK D-010 standards to mitigate loss of well control and equipment failure.

How does a Well Integrity Audit evaluate active production wells?

A Well Integrity Audit examines barrier envelope status, sustained casing pressure trends, corrosion logging data, and annular fluid monitoring records against ISO 16530-1 criteria to verify that mechanical and chemical boundaries meet defined containment standards.

Conclusion

Participants take back a customized Well Engineering Audit and Risk Register containing barrier verification checklists, risk matrices, and corrective action workflows. This work product enables operating teams and audit departments to systematically detect well containment flaws, streamline regulatory reporting, and enforce technical accountability across drilling and workover campaigns. By embedding structured assurance routines into field programs, organizations reduce non-productive time and operational exposure.