Reservoir Surveillance Software and Performance Analysis Training Course

4 – 8 July 2027
Amman

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Overview

Reservoir Surveillance Software and Performance Analysis Training Course is a one-week course for reservoir, production, petroleum, subsurface, and asset teams, who leave with a Reservoir Surveillance Decision Pack. The course connects production and injection data, pressure histories, well tests, reservoir-model references, data validation, surveillance dashboards, rate-pressure diagnostics, voidage replacement ratio, pressure support, exception monitoring, and intervention screening. Agile Leaders Training Center presents the course on reservoir surveillance software and performance analysis.

Who Should Attend

- Teams responsible for reservoir-performance surveillance and asset reviews
- Functions responsible for production and injection data quality
- Specialists responsible for well-test and pressure-data interpretation
- Teams responsible for waterflood monitoring and pressure support
- Functions responsible for intervention screening and subsurface recommendations

The course assumes participants work with reservoir or production data and leaves out full history matching, static geostatistical modeling, software development, and introductory petroleum engineering.

Departments and Industries

The course supports surveillance decisions across producing assets, technical centers, and energy operations.

- Reservoir engineering and subsurface departments
- Production technology and petroleum engineering teams
- Well operations and intervention functions
- Onshore and offshore producing assets
- Conventional and unconventional field operations
- Technical consulting and energy-service organizations

Learning Objectives

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

- Apply data-quality rules to reservoir surveillance inputs
- Build field, pattern, and well surveillance dashboards
- Analyze rate, pressure, injection, and well-test trends
- Evaluate voidage replacement and pressure-support performance
- Diagnose exceptions using multi-source evidence
- Prioritize interventions through traceable screening criteria

Course Agenda

Day 1: Surveillance Data Foundation

- Reservoir Surveillance Data Source Map
- Production and Injection Data Validation Checklist
- Pressure and Well-Test Reference Register
- Reservoir Model Context and Assumption Log
- Field, Pattern, and Well Hierarchy Template

Day 2: Dashboard and Trend Analysis

- Production Rate and Cumulative Trend Dashboard
- Injection Rate and Pressure-Support Plot Set
- Rate-Pressure Diagnostic Crossplot Method
- Recovery Factor and Injected Pore Volume Chart
- Surveillance Baseline and Target Band Register

Day 3: Waterflood and Pressure Support

- Voidage Replacement Ratio Calculation Sheet
- Producer-Injector Pattern Balance Matrix
- Pressure Depletion and Recharge Trend Method
- Water Cut and Gas-Oil Ratio Diagnostic Plot
- Injection Response and Connectivity Evidence Map

Day 4: Exceptions and Decisions

- Exception Threshold and Alert Logic Table
- Data Anomaly Triage Workflow
- Well Performance Deviation Diagnosis Tree
- Intervention Opportunity Screening Matrix
- Surveillance Finding and Recommendation Record

Day 5: Reservoir Surveillance Practice

- Data Validation and Hierarchy Exercise
- Dashboard and Diagnostic Plot Exercise
- Voidage and Pressure-Support Exercise
- Exception and Intervention Screening Exercise
- Reservoir Surveillance Decision Pack Capstone Exercise

Practical Exercises

The course uses suggested activities to practice software-enabled reservoir surveillance decisions.

- Suggested activity: validate production, injection, pressure, and well-test records and document unresolved data issues.
- Suggested activity: build field, pattern, and well dashboards using trend plots, diagnostic crossplots, and target bands.
- Suggested activity: evaluate voidage replacement, pressure support, and producer-injector response evidence.
- Suggested activity: rank intervention opportunities and assemble the evidence into a Reservoir Surveillance Decision Pack.

FAQs

Who suits reservoir surveillance software training and what does it assume?

Reservoir surveillance software training suits reservoir, production, petroleum, subsurface, well, and asset professionals. It assumes practical exposure to production or reservoir data but not prior ownership of a surveillance system.

How does reservoir surveillance software training differ from history-matching training?

Reservoir surveillance software training focuses on operational data integration, dashboards, diagnostics, exceptions, pressure support, and intervention decisions. History-matching training concentrates on calibrating dynamic simulation models against observed performance.

What data belongs in a reservoir surveillance dashboard?

A reservoir surveillance dashboard combines validated production, injection, pressure, well-test, completion, hierarchy, and model-reference data with targets, exceptions, trends, and decision ownership.

How is voidage replacement ratio used in reservoir surveillance?

Voidage replacement ratio compares injected reservoir volume with produced reservoir volume. Teams review instantaneous and cumulative behavior with pressure, production, injection, and pattern evidence before judging pressure-support performance.

How does reservoir surveillance software support intervention screening?

Reservoir surveillance software supports intervention screening by connecting deviations, data confidence, pattern response, operating constraints, expected impact, uncertainty, and review criteria in a traceable comparison.

Conclusion

Participants take a Reservoir Surveillance Decision Pack back to work. It connects validated inputs, dashboards, diagnostic plots, voidage calculations, pressure-support evidence, exception records, and intervention screening. It changes fragmented surveillance data into repeatable reviews, traceable findings, prioritized technical actions, and documented asset decisions.