Produced Water Management, Treatment and Reinjection Training Course

20 – 24 June 2027
Johannesburg

AGILE LEADERS
Training Center

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Ref: 1380_201928 **Date:** 20 – 24 June 2027 **Location:** Johannesburg **Fees:** 6000 Euro

Overview

Produced Water Management, Treatment and Reinjection Training Course is a one-week advanced course for production, process, reservoir, water-treatment, environmental, and integrity functions who leave with an Integrated Produced Water Management Plan. Participants connect produced water characterization, treatment train selection, oil-in-water monitoring, solids control, reinjection water quality, and injectivity management to practical operating decisions. Agile Leaders Training Center presents produced water treatment through lifecycle, assurance, and troubleshooting decisions.

Who Should Attend

- Functions responsible for production-water balances and operating performance
- Teams that select and monitor separation and water-treatment processes
- Functions responsible for reservoir injection strategy and well performance
- Teams that manage water chemistry, corrosion, scaling, and bacterial risks
- Functions responsible for environmental performance and water disposition
- Asset-integrity teams that investigate equipment and injection-system failures

The course assumes participants already support oil and gas production, water treatment, reservoir operations, or integrity decisions and leaves out detailed equipment mechanical design and reservoir simulation.

Departments and Industries

The course serves departments and industries that manage water produced during hydrocarbon extraction and subsequent treatment or injection.

- Upstream oil and gas production operations
- Offshore and onshore processing facilities
- Reservoir engineering and subsurface assurance departments
- Water treatment, chemistry, and laboratory functions
- Environmental performance and asset-integrity teams

Learning Objectives

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

- Analyze produced-water composition and operating variability
- Compare separation and treatment train options
- Build water-quality monitoring and control plans
- Evaluate reuse, discharge, disposal, and reinjection pathways
- Diagnose injectivity, scaling, corrosion, and plugging problems
- Build an Integrated Produced Water Management Plan

Course Agenda

Day 1: Produced Water Characterization and Strategy

- Produced Water Source and Volume Balance
- Water Composition and Variability Profile
- Oil-in-Water Measurement Decision Map
- Suspended Solids and Particle-Size Analysis
- Lifecycle Water Disposition Decision Matrix

Day 2: Separation and Treatment Train Selection

- Primary Separation Performance Map
- Hydrocyclone and Flotation Selection Criteria
- Filtration and Solids-Control Design Basis
- Chemical Treatment Screening Matrix
- Treatment Train Evaluation Scorecard

Day 3: Chemistry, Monitoring, and Assurance

- Water Compatibility Assessment Method
- Scale and Corrosion Risk Register
- Bacterial Activity and Souring Control Plan
- Sampling and Analytical Quality Checklist
- Produced Water Performance Dashboard

Day 4: Reinjection, Injectivity, and Integrity

- Reinjection Water-Quality Specification
- Injection Pressure and Capacity Envelope
- Injectivity Decline Diagnostic Tree
- Formation Damage and Plugging Assessment
- Injection-System Integrity Barrier Map

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Day 5: Integrated Produced Water Practice

- Exercise: Characterize a Variable Produced-Water Stream
- Exercise: Select and Challenge a Treatment Train
- Exercise: Diagnose an Injectivity Decline
- Exercise: Prioritize Water Assurance Actions
- Capstone Exercise: Integrated Produced Water Management Plan

Practical Exercises

The course uses production, treatment, and injection scenarios from onshore fields and offshore facilities.

- Suggested activity: use fluid, solids, and operating data to define a produced-water characterization basis.
- Suggested activity: compare treatment technologies against outlet quality, variability, operability, and disposition requirements.
- Suggested activity: trace an injectivity loss through water quality, compatibility, plugging, pressure, and well-performance evidence.
- Suggested activity: integrate monitoring points, limits, owners, responses, and performance indicators into a management plan.

FAQs

Who suits produced water management training, and what does it assume?

Produced water management training suits experienced production, process, reservoir, treatment, environmental, and integrity functions that already work with field operating data and water-handling decisions.

How does produced water treatment training differ from general wastewater treatment?

Produced water treatment training addresses hydrocarbon-field fluids, oil-in-water control, formation compatibility, reinjection quality, injectivity, and production-system constraints rather than municipal or general industrial wastewater processes.

How is reinjection water quality linked to injectivity management?

Reinjection water quality affects solids deposition, emulsion behavior, scaling, bacterial growth, formation damage, and well plugging, so monitoring and response criteria must connect treatment performance with injection-well trends.

How should a produced water treatment train be selected?

A produced water treatment train should be selected by comparing inlet variability, target outlet quality, contaminant removal duties, chemical interactions, equipment operability, monitoring needs, and the chosen reuse, discharge, disposal, or reinjection pathway.

What evidence supports produced water troubleshooting?

Produced water troubleshooting uses fluid analyses, particle data, chemical records, pressure and rate trends, equipment performance, sampling quality, integrity observations, and changes in operating conditions.

Conclusion

The course integrates characterization, treatment selection, chemistry control, monitoring, reinjection quality, injectivity, integrity, and troubleshooting. Participants take back an Integrated Produced Water Management Plan that links risks, specifications, controls, indicators, responsibilities, and response actions. The plan improves alignment among production, treatment, subsurface, environmental, and integrity functions.