CONCEPT

Well, Reservoir and Facility Management (WRFM): Production Surveillance and Opportunity Funnel

29 August – 2 September 2027
Jeddah - Corniche four-star



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Ref: 910_21261 **Date:** 29 August – 2 September 2027 **Location:** Jeddah - Corniche four-star **Fees:** 19500 SAR

Introduction:

Well, reservoir and facility management WRFM breaks down when surveillance data is collected but never reviewed: allocation factors drift, well tests go unvalidated, deferment is logged without causes and good opportunities wait months for a decision. This Core Concept course gives engineers a disciplined WRFM review cycle that turns production surveillance, diagnostic plots, forecasts, waterflood balance and facility constraints into a ranked, executable list of well and facility actions. Participants assemble a WRFM Review Pack with a ranked opportunity list for a case field.

Course Objectives:

- Run a WRFM review cycle with clear roles, meeting cadence and decision rights across well, reservoir and facility disciplines
- Validate production allocation, well test quality and deferment records before they feed any performance conclusion
- Diagnose well and pattern behaviour with rate-time, water-oil ratio, Chan, Hall and gas-oil ratio plots
- Build and challenge short-term production forecasts from decline trends, well potential and facility limits
- Assess waterflood balance using voidage replacement, injector-producer connectivity and pattern performance
- Rank, mature and hand over well intervention and debottlenecking opportunities through an opportunity funnel with WRFM KPIs

Target Audience:

- Engineers who review daily well rates, well tests and production losses for an operating asset
- Engineers who forecast reservoir performance and set injection and offtake targets
- Engineers who monitor surface network, separation and water handling capacity against well potential
- Surveillance staff who maintain production databases, allocation and deferment records
- Team leads who coordinate WRFM meetings and propose well intervention budgets

Course Outline:

Day 1: WRFM Principles, Review Cycle and Production Data Integrity

- WRFM Scope Map Linking Well, Reservoir and Facility Decisions
- WRFM Review Cycle: Daily, Monthly and Annual Meeting Cadence
- Production Database Structure: Well Master, Test and Daily Volume Tables
- Back-Allocation Factors and Fiscal Meter Reconciliation Checks
- Surveillance Plan Template: Data Type, Frequency and Owner per Well

Day 2: Well Performance Reviews, Test Validation and Deferment Accounting

- Well Test Validation Rules: Stabilisation, Duration and Repeatability
- Well Potential Versus Actual Rate Gap Analysis
- Deferment Categories: Planned, Unplanned, Reservoir, Well and Facility
- Loss Tracking Register with Root Cause Codes and Recovery Actions
- Well Status Review Board for Shut-In, Cycling and Restricted Wells

Day 3: Diagnostic Plots, Decline Trends and Production Forecasting

- Rate-Time and Rate-Cumulative Plots for Trend Break Detection
- Chan Water-Oil Ratio Derivative Plots: Coning Versus Channelling
- Gas-Oil Ratio and Water Cut Trend Interpretation by Drive Type
- Arps Exponential, Hyperbolic and Harmonic Forecast Fitting
- Short-Term Forecast Build: Base Decline, Activity Adds and Facility Caps

Day 4: Waterflood Surveillance and Surface Facility Constraints

- Voidage Replacement Ratio Tracking by Pattern and Sector
- Hall Plot Reading for Injectivity Loss and Out-of-Zone Injection
- Injector-Producer Connectivity from Rate Correlation and Tracer Results
- Pattern Performance Scorecard: Injection Allocation and Sweep Indicators
- Facility Bottleneck Screening: Separation, Water Handling and Compression Limits

Day 5: Case Study: WRFM Review Pack and Opportunity Funnel

- Case Field Data Pack: Well Tests, Allocation History and Injection Records
- Opportunity Identification Workshop Across Well, Reservoir and Facility Levers
- Opportunity Funnel Stages from Idea to Execution with Gate Criteria
- Intervention Ranking by Incremental Rate, Cost and Risk with WRFM KPIs
- WRFM Review Pack Presentation to an Asset Decision Panel

Skills You Will Gain:

- Allocation Reconciliation
- Well Test Quality Assurance
- Deferment Root Cause Coding
- Water and Gas Breakthrough Diagnosis
- Short-Term Production Forecasting
- Injection Balance Assessment
- Opportunity Maturation
- WRFM Meeting Facilitation

Why Attend This Course:

- Leave with a WRFM Review Pack and ranked opportunity list built on a case field and ready to adapt to your own asset
- Spot allocation errors and invalid well tests before they distort decisions on wells and injectors
- Move stalled opportunities through a funnel with gate criteria so interventions reach execution sooner
- Compare surveillance and review practice with engineers from onshore and offshore oil and gas assets

Conclusion:

WRFM delivers value when surveillance data is trusted, reviewed on a steady rhythm and converted into decisions. The course moves from the review cycle, database structure and allocation checks to well test validation and deferment accounting, then to diagnostic plots, decline-based forecasts, waterflood balance and facility bottlenecks. The final day turns this work into a WRFM Review Pack with a ranked opportunity list for a case field, ready for an asset decision panel.