WELL TESTING OPERATIONS AND ANALYSIS

COURSE OVERVIEW

This course covers a range of topics essential for understanding and executing well testing procedures, providing structured information about testing methods, data acquisition, and related downhole tools, as well as surface equipment used in the hazardous business of well testing. It also includes a comprehensive overview of the technology application, details of the hardware with its benefits and limitations, all important operational aspects of oil and gas well testing, as well as safety procedures and recommended practices. A dedicated module covers the theory and practice of well test analysis and interpretation as well as test design.

DATES, VENUES AND FEES

23 – 27 November 2025 – Doha

(5 Days)

Fees US$ 5000

Note: Fee is per participant.
Groups from the same company can enjoy a **discounted** price.

WHO SHOULD ATTEND?

This course is appropriate for a wide range of professionals but not limited to:

- Geologists
- Petro-physicists
- Reservoir Engineers
- Supervisors
- Managers involved in formation evaluation, reserve estimation and general reservoir engineering
- Directly involved in well test operations
- Dealing with service companies offering well testing

CONTACT US NOW

+971 (4) 4539841 – 42 – 43
WhatsApp: +971 52 398 7781

Millennium Solutions Training Center FZ-LLC
First Floor, Office #134, Knowledge Park, Block 2B, Dubai, UAE
Email: info@mstcme.com
Website: www.mstcme.com

ACCREDITATION

This training course is certified by CPD.

The CPD Certification Service is the leading independent CPD accreditation institution operating across industry sectors to complement the Continuing Professional Development policies of professional institutes and academic bodies. The CPD Certification Service provides support, advice, and recognised independent CPD accreditation compatible with global CPD principles. CPD is the term used to describe the learning activities professionals engage in to develop and enhance their abilities and keep skills and knowledge up to date. CPD Units are only awarded to programmes after each programme is scrutinised to ensure integrity and quality according to CPD standards and benchmarks.

COURSE CERTIFICATE

MSTC certificate will be issued to all attendees completing a minimum of 80% of the total tuition hours of the course.

CPD internationally recognized certificate will be issued for all participants who will meet the course requirements.
CPD certificates will be issued within a month of the successful completion of the course.

TRAINING METHODOLOGY

- Expert instructor lecture, input using numerous visual aids
- Supportive comprehensive course manual enabling practical application and reinforcement
- Participant discussion and involvement regarding their specific projects and challenges
- Real-world case studies and best practices

LEARNING OBJECTIVES

- Provide participants with a solid understanding of well testing principles, operational practices, and analysis techniques to optimize reservoir performance and make informed decisions.
- Build up confidence thorough:
  - Comprehensive overview of practical well testing operations
  - Typical offshore/onshore equipment set-up with stress on safety precautions
  - Spending significant time on test design and performance prediction
  - Step-by-step introduction in well test analysis and methodology
  - Demo of commercial software of well test interpretation
- Benefits of attending this course:
  - Select appropriate test equipment for a given well testing task
  - Review the testing procedures and evaluate operations safety
  - Understand the theory and practical application of well test analysis
  - Use commercial software for well test interpretation
  - Design a well test

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COURSE OUTLINE

DAY 1

Introduction to Well Testing

- Pre-test
- Purpose and types of well tests (DST, Build-up, Drawdown, Interference, etc.)
- Applications of well testing in reservoir evaluation
- Overview of reservoir flow regimes
- Test Design considerations and objectives
- Reasons for well testing
- Methodology of well testing
  - Initial perturbation
  - Constant pressure vs. constant rate condition
  - How to deal with wellbore storage
  - Types of well test sequences
- Surface and downhole equipment overview
- Pre-Job planning and test objectives
- Well test design (Duration, Flow Periods, Shut-ins)
- Flow measurement techniques (Separator, Multiphase Meter)
- Safety protocols during testing
- Case Study

DAY 2

Well Testing Operations and Planning

- Daily Quiz
- Well testing operations
  - Equipment checks
  - Well control
  - Perforating
  - Fluid's behavior and sampling operations
  - Stimulation in well testing
- Test execution procedures
- Data acquisition systems and Real-Time Monitoring
- Safety in well testing operations
- Job responsibilities
- Testing equipment and setup

Cont'd.

- Surface testing equipment
  - Onshore and offshore testing operations
  - Pressure gauges
  - Gas, oil and water flow measurement
  - Subsea equipment
- Surface equipment setup and instrumentation
- Test design
- Overview of testing tools and technologies
- Equipment calibration and maintenance
- Case study

DAY 3

Data Acquisition and Analysis

- Daily Quiz
- Downhole hardware options
  - How the well test data is gathered
  - Testing while drilling
  - Testing after completion of drilling
  - Traditional versus wireline formation testing
- Interpreting well test data
  - Analyzing pressure transient data
  - Identifying reservoir properties (permeability, porosity)
  - Understanding skin effect and wellbore storage
- Interpretation approach
  - Superposition concept
  - Diagnosing near wellbore conditions, reservoir behavior and boundaries
  - Deconvolution
  - Dealing with limited reservoirs
  - Predicting the well behavior

Data collection methods

Pressure and flow rate measurements

Case Studies and Practical Applications

- Real-world examples of well testing
- Problem-solving scenarios
- Group discussions on findings

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COURSE OUTLINE

DAY 4

Advanced Test Analysis and Field Cases

- Daily Quiz
- Regulatory and Environmental Considerations
  - Compliance with industry regulations
  - Environmental impact assessments
  - Use of software for data analysis
- Interference and Pulse Testing
- Horizontal and multilayer well testing
- Well test interpretation in fractured and heterogeneous reservoirs
- Gas well testing specifics
- Interpretation of multi-rate and multi-phase tests
- Field case studies and complex test scenarios

DAY 5

Data Integration, Reporting and Operational Challenges

- Integrating well test results into reservoir models
- Use of well test data in reservoir simulation
- Test reporting and communication of results
- Operational challenges (leaks, tool failures, data gaps)
- Decision-making based on test results
- Course summary and key takeaways
- Presentation: summary of results and recommendations
- Individual action plan development
- Post test

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