Well Testing Operations

3 – 14 October 2027
Online



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Introduction

Well testing operations play a crucial role in the oil and gas industry, aiding in the assessment of reservoir conditions and predicting well behavior. This course offers a comprehensive training on well testing, focusing on the principles, methodologies, and practical applications involved. It aims to equip participants with the skills necessary to perform well tests, understand the involved equipment and techniques, ensure safety during operations, and effectively interpret test data to assess reservoir conditions and forecast well performance.

Course Objectives

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

- Understand the importance of well testing operations in optimizing well and reservoir performance.
- Learn different well testing methodologies and types, and how to efficiently perform them.
- Familiarize themselves with well testing equipment, including well water testing tools, oil well testing equipment, and surface testing apparatus.
- Conduct well testing operations safely and effectively, ensuring the proper use of techniques and equipment.
- Analyze well test data to diagnose reservoir conditions and predict well behavior.

Course Outlines

Day 1: Introduction to Well Testing

- The role of well testing in the oil and gas industry.
- Reasons for performing well tests.
- Key terminology and concepts in well testing.
- Overview of well testing equipment and tools.
- Types of well tests and their practical applications.



Day 2: Methodology of Well Testing

- Initial perturbation: principles and effects.
- Constant pressure vs. constant rate conditions.
- Managing wellbore storage.
- Types of well test sequences and their purposes.
- Planning and preparation for well testing operations.

Day 3: Downhole Hardware Options

- Overview of downhole tools used in well testing.
- Gathering data from downhole sensors.
- Testing while drilling TWD methods and equipment.
- Testing after drilling completion.
- Traditional vs. wireline formation testing.

Day 4: Surface Testing Equipment

- Key components of surface testing equipment.
- Onshore vs. offshore well testing operations: differences and similarities.
- Using pressure gauges in well testing.
- Measuring gas, oil, and water flow at the surface.
- Calibration and maintenance of surface testing equipment.

Day 5: Well Testing Operations

- Equipment checks before starting well tests.
- Well control procedures during testing.
- Perforating techniques in well testing.
- Fluid behavior and sampling operations.
- The role of stimulation in well testing.

Day 6: Safety in Well Testing Operations

- Safety protocols and guidelines for well testing.
- Risk assessment and hazard identification.
- Emergency response plans for well testing operations.
- Ensuring safety during onshore and offshore testing.
- Case studies of safety incidents and lessons learned.



Day 7: Roles and Responsibilities

- Responsibilities of personnel involved in well testing.
- Communication and coordination among team members.
- Preparing reports and documentation.
- Regulatory compliance and standards in well testing.
- Training and competency development for testing personnel.

Day 8: Interpretation Approach: Basic Concepts

- Understanding the superposition concept in well testing.
- Diagnosing near-wellbore conditions.
- Identifying reservoir behavior and boundaries.
- Introduction to deconvolution techniques.
- Analyzing limited reservoirs and their challenges.

Day 9: Advanced Interpretation Techniques

- Predicting well behavior using test data.
- Advanced reservoir diagnostics.
- Understanding boundary effects in reservoir systems.
- Case studies on well test interpretation.
- Practical exercises on data interpretation.

Day 10: Application and Review

- Hands-on exercises with real well testing scenarios.
- Group discussions on interpreting results.
- Application of testing methodologies in various environments.
- Course wrap-up: Q&A session.
- Final evaluation and certification ceremony.

Why Attend this Course: Wins & Losses!

- Receive an internationally recognized well testing certification through a comprehensive training course.
- Gain practical skills in using advanced well testing equipment, including oil well testing equipment and environmental well testing tools.
- Learn how to interpret well testing data to diagnose reservoir conditions and predict well performance effectively.
- Stay up-to-date with the latest well testing methodologies used in the industry, including advanced testing techniques like wireline formation testing and testing while drilling TWD.
- Understand both onshore and offshore well testing environments, preparing you for diverse testing scenarios in the oil and gas industry.



Conclusion

Well testing is an essential process for assessing and optimizing oil and gas reservoir performance. By attending this course, you'll gain the expertise needed to execute well testing operations confidently, use well testing equipment effectively, and analyze test data to gain valuable insights into reservoir behavior and well performance. With practical experience and advanced skills, you'll be better prepared to tackle well testing challenges in both onshore and offshore environments. Join us and start your journey to becoming a well testing expert!

