



Arabian Institute For Training

Well Integrity Technologies

INTRODUCTION

- This highly-interactive training course covers the main aspects of Well Integrity, starting with the construction of the well. Keeping the well operation within the safety envelope is critical for any oil & gas operator (well integrity). Well integrity technologies, focusing on monitoring problematic wells, diagnosing the causes of those problems, and implementing techniques to mitigate and/or repair those problems in order to keep the wells operating safely and avoid release of hydrocarbons to environment.

This training course will highlight:

- Well integrity technologies
- Focus on monitoring problematic wells
- Diagnose of causes of those problems
- Implementing techniques to mitigate and/or repair those problems

OBJECTIVES

By the end of this training course, participants will feel confident in their understanding of:

- The fundamentals of well integrity monitoring, and all implications on production efficiency
- How to monitor and identify well integrity problems and technical procedures available for their mitigation

WHO SHOULD ATTEND?

This training course is suitable to a wide range of professionals but will greatly benefit:

- Petroleum Engineers
 - Production Engineers
 - Drilling Engineers
 - Completion Engineers
 - Oil Field Technical Staff
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Course Outline

Introduction to Well Integrity

- What is Well Integrity?
- Well integrity standards
- Problematic wells
- Well integrity failures
- Well barriers philosophy
- Importance of SC-SSSV and control line
- Performance indicators
- Leak detection techniques
- Uneven depletion and cross-flow
- Well management and control
- Scale and Asphaltene management
- Corrosion management
- Investigation of a real SAP Case (practical example, Case 1)

Monitoring Annulus Pressure and Investigating Causes

- Monitoring annulus pressures
- Evolution of burst and collapse pressures
- Three corrosion modules and MAASP evolution
- Downhole material selection
- Well schematics and basic design
- Importance of cement job quality
- Cement evaluation tools
- CBL-VDL
- Forms of corrosion
- SSC sulfide cracking and its prevention
- CO₂ corrosion
- Investigation of a real SAP Case (practical example, Case 2)

Corrosion Monitoring and Mitigation

- CO₂/H₂S metal loss regimes
 - CRA corrosion resistance alloys
 - Control / mitigation of corrosion
 - Corrosion monitoring
 - Corrosion logs
 - Corrosion-tubing leaks
 - Consequences of well integrity degradation
 - Corrosion mitigation and prevention
 - Surface casing repairs
 - Temporary well abandonment
 - Casing perforation best practices
 - Risk assessment
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Integrity of Well Heads, HAZOP, and Risk Assessment

- Review of primary cementing and well integrity
- Downtime and maintenance costs
- Testing seals on wellheads
- Well maintenance and managing risk
- Well integrity in a nutshell
- HAZOP & risk assessment
- Investigation of a real SAP Case (practical example, Case 4)
- Course revue, evaluation and feedback



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