

# Well Integrity for National Regulators

Singapore

2 days 2017



TRAINING ACADEMY

Well Integrity is 'the application of technical, operational and organizational solutions to Reduce risk of uncontrolled release of formation fluids throughout the life cycle of a well' (NORSOK D-010).

## INSTRUCTOR:

### Colin Stuart

Managing & Technical Director

- 37 years of experience
- Fellow of Institute of Mechanical Engineers
- Specialist in well control support, risk management, integrity management and complex well design including HPHT
- NOPSEMA Expert Witness for the Montara Blowout Investigation
- Well Integrity consultant to WorkSafe, New Zealand

## RELEVANT COMPANY EXPERIENCE:

- Provision of well integrity expertise to operators and regulators
- Failure investigation and analysis, including blowouts
- Developers of barrier integrity management solutions
- Well construction and completion design
- HPHT services

## Course Overview

**Well integrity** is of the utmost importance for personnel safety, environmental protection and risk management. As such there is an ever increasing need for raising awareness and managing risks for oil and gas operators and government bodies. This applies to the design and operation of the well throughout its lifecycle.

This course is aimed primarily at inspectors carrying out reviews on operators' well integrity management systems and production site WI management systems.

The training agenda is a condensed version from AWIMS 2 with a particular focus on identifying well integrity issues and investigation techniques for regulators and certain aspects of regulator responsibilities. The training may be customized on request to reference the latest regulations of a specific regulator system for relevance and more effective training outcome.

### Course Objective:

1. Understand the current well integrity standards and how to achieve compliance; how to define and test barriers; approaches to setting standards.
2. Understand the scope purpose and frequency of wellhead integrity assessment; key corrosion mechanisms and material selection considerations; Surface wellhead and Xmas tree specifics; challenges in barrier validation against standards; appreciate the potential for and severity of 'Loss of Containment' events in wells.
3. Understand how to establish a decision framework based on well integrity assessment; to interpret annulus pressure trends and recommend appropriate action to management; understand when and how to conduct fluid sampling, what testing to request, and interpreting the results; be up to date on latest well integrity diagnostic techniques; to compile a context rich assessment of a well condition, to positive identify the source well integrity problem; Learn possible applications of various tools.

### For registration and enquiries, contact:

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## Course Schedule

### DAY 1: Setting Corporate Rules for WI and Identifying WI Issues

- 1.1 Introduction and Well Integrity Case Studies
- 1.2 Latest WI standards and applying them
- 1.3 Barriers & Barrier rules validation
- 1.4 Surface and subsea wells
- 1.5 Maintenance and inspection for well integrity
- 1.6 Corrosion mechanisms and material selection
- 1.7 Changes in U.S Regulations since Macondo

### DAY 2: WI Investigation Techniques

- 2.1 Well Failure Models
- 2.2 Monitoring of suspended wells
- 2.3 Well integrity management system
- 2.4 Pressure trends
- 2.5 Fluids sampling and diagnostics
- 2.6 Downhole diagnostics
- 2.7 Well integrity investigation case studies
- 2.8 Well integrity inspection guidelines

### Activity

Operator & regulator perspectives

### Who Should Attend?

Regulators, Well Integrity inspectors, Technical Directors, Asset Managers, Petroleum Engineers, Well Integrity Engineers, Production Technologists, Production Personnel (OIMs, Production Operators, Maintenance Supervisors), Drilling and Well Servicing Personnel (Drilling Managers, Well Engineers, Completion and Well Service Engineers, Drilling Supervisors)

During the course, attendees will participate in Exercises and knowledge sharing using real examples, to maximize learning outcomes.