# Advanced Casing Design



#### **TRAINING ACADEMY**

### Optimized Casing Design Through Understanding and Applying Stress Analysis Principles and Theory

# INSTRUCTOR:

#### Colin Stuart Managing & Technical Director

- 35 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

#### COURSE TESTIMONIALS:

"Excellent course. I had already recommended this course to the rest of my team"

Santos Drilling Engineer

"Excellent and well balanced between theory and practice" Drilling Engineer

"Training was specific and surpass all my expectations." Well Engineer

# RELEVANT COMPANY EXPERIENCE:

- Provision of complex casing design and review expertise to major
- operators and regulatorsHPHT casing thermal
- modelingWell examination
- capabilityWell design quality assurance review
- capability • Review of operator's drilling and completion well construction standards

## **Course Overview**

This course teaches you casing design for Oil & Gas drilling applications. Casing design is a mechanical stress analysis problem under a subsurface geotechnical stress environment.

Casing design is vital in safeguarding the operator's asset over its life cycle. This course will equip you with the following vital skills and knowledge;

- The main casing functions, characteristics and types of casing.
- Geometric characteristics and properties of casing and how these affect performance.
- Requirements for casing seat selection based on subsurface information.
- Conduct casing design calculations manually for different load cases using different methods.
- Understand how buckling affects casing design limitations and gain an appreciation for mitigating its effects.
- Learn about the effects of temperature, wear and corrosion on casing design.
- Recognize signs of corrosion.
- Become acquainted with industry standard casing design software (StressCheck).

#### Who Should Attend?

- Technical Directors
- Well Engineer / Manager
- Drilling Operations Manager/Engineer
- Petroleum Engineer
- Well Servicing and Workover Engineer/Manager
- Drilling and Well Servicing Personnel (Completion and Well Service Engineers, Drilling Supervisors, Rig Managers, Toolpushers, Drillers)
- Regulators
- Service Companies

For bookings/enquiries/cost, contact: Pearlyn Long, Finance & Contracts Manager 8 Kallang Avenue, #13-09 Aperia Tower 1 Singapore 339509 Email: <u>pearlyn.long@stuartwright.com.sg</u> Tel: +65 6303 9988

Claire Wilhelm, Supervising Well Engineer 31 Cliff St, Fremantle WA 6160 Email: <u>claire.wilhelm@stuartwright.com.sg</u>) Tel: +618 6336 9222 <u>http://www.stuartwright.com.sg/</u>

# **Course Schedule**

#### SUBJECTS FOR DAY 1

- Functions and Types of Casing
- Casing Connections
- Casing Properties and API Formulas

#### **SUBJECTS FOR DAY 2**

- Data Collection for Casing Design
- Casing Depth Selection Guidelines
- Collapse and Burst Casing Design

#### **SUBJECTS FOR DAY 3**

- Tensile and Triaxial Casing Design
- Re-emphasizing Engineering Science

#### SUBJECTS FOR DAY 4

- Buckling Behaviour and Prevention
- Casing Wear & Temperature Effects
- Casing Corrosion

#### **SUBJECTS FOR DAY 5**

- Design and Equipment Issues
- Casing modelling software

During the course, attendees will participate in workshops and round table discussions, using real examples, to maximize learning outcomes.

