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DE219:
Advanced Well Integrity Management

Training Description:

The Well Integrity Forum (WIF) was established in 2007 and one of the main issues that were initially brought up for review was well-integrity training. WIF members acknowledge a need for well-integrity training of key personnel working with well integrity offshore and onshore.

This advanced intensive training course on Advanced Well Integrity Management is designed to provide the participants with knowledge to deeply investigate the faultier and risk of well integrity. The participants have an excellent chance to share ideas and to correct the concept of well integrity management. This training course will discuss the proper approach to decision-making to provide certainty within the organization.

The knowledge and skills to make critical decision throughout well life cycle is vital, not only for WIM purpose but as well as for economic value. This training course will focus on the Well Integrity management systems and interfaces with other teams in the organization. Integrity barriers are defined, Well Failure model and how to establish one is discussed, as well how to create an efficient well integrity organization. The training course will deepen your knowledge of well integrity management, and develop the skills for designing, operating, and maintaining well equipment with the ultimate objective of ensuring a permanent, safe containment of all wellbore fluids.

The training course will highpoint:

- ✓ The concept of Well Integrity
- ✓ Awareness of regional Standards and Regulations
- ✓ Different stages of well operations from Design and Construction, to Production Impact Well Integrity
- ✓ Risks associated with different types of well integrity issues
- ✓ Different techniques to reduce / mitigate risks
- ✓ Procedures, roles and responsibilities of personnel involved in the well life cycle towards Well Integrity
- ✓ The focus on key areas of well integrity assurance
- ✓ The Production supervisor's duties with regard to well integrity

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Improve the delegates' appreciation of the well design and annulus construction; i.e. the well as a "pressure vessel"
- ✓ Provide knowledge & understanding of the guidelines and standards that when observed and implemented effectively will ensure well integrity
- ✓ Establish an increased awareness of well integrity issues and how they are controlled/managed and by whom
- ✓ Provide knowledge of how to maintain equipment for safe and effective operation

Training Designed for:

This course is intended for Affiliate Technical Directors, Asset Managers, Petroleum Engineers, Production Technologists, Production Personnel (Production Operators, Maintenance Supervisors), Drilling and Well

Servicing Personnel (Drilling Manager, Drilling/Well Engineers, Completion and Well Service Engineers, Drilling Supervisors, Rig Manager, Tool pusher, Drillers).

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- Fundamentals of Well Integrity and Detection of Problems
  - Definition of the various components of the well and showing the integrity barriers
  - Designing Integrity in Wells-Completion Design
  - Well Completion Components
  - Well Head construction steps
  - Influences on Well Integrity and why it needs managing
  - Preventive maintenance reduces operating cost and optimizes production
  - Maintenance Processes and Differences
  - External well integrity Tests
  - Internal well integrity Tests
  - Ways of losing well integrity

DAY TWO:

- How to Prevent Catastrophic Failure of a Well caused by External and Internal Corrosion
  - Technology & tools for internal well integrity diagnostic & monitoring
  - PLT Logging Techniques
  - Securing internal integrity, leak detection etc.
  - Establishes tubing base line wall thickness and corrosion over life cycle of the well
  - Non-intervention less investigations like Pressure testing
  - Detects leaks (Noise logging, temperature logging, etc.)
  - Production profile analysis
  - Risk to the completion string from internal sources
  - Barrier understanding
  - The management of Barrier testing
    - Discuss testing methods of the barriers in the well
    - Referring to the barriers discussed above, plan to test and verify the barriers

DAY THREE:

- Consequences of Loss of Integrity of One Well to its Surrounding Wells and Potential Financial Exposure
  - Monitor for and understand mechanical integrity problems preventing potential production rates
  - Sand removal

- Impact of Paraffin's and Asphaltene on well integrity
- Bacteria types and its effect on well integrity
- How to treat these problems in a proper way?
- How to execute scale removal
- Cement squeeze for water and gas shut off
- Evaluating Well Integrity, Annular pressure management
- Abandonment: Temporary and permanent

DAY FOUR:

❖ Well Integrity & Barrier Philosophy and How Testing is Done

- Well Failure Model
- Leak rate determination calculations
- Risk Based Well Integrity Management and Testing
- Failure Mode and Effects Analyses Diagram
  - Show barriers, function and its severity in case of failure
  - Discuss testing and managing the data
- Provide systems and procedures, which ensure that the integrity of the well is assured
  - Ensure that the well is maintained with reference to appropriate procedures and specifications
  - Ensure that the risks of operating the well are as low as reasonably practicable
  - Basis for the development of asset-specific well maintenance and integrity standards, policies, procedures and performance targets

DAY FIVE:

❖ Optimize Well Completion to Optimize Well Integrity during the Lifespan of the Wells, based on life time and possible Intervention Frequencies Assessments

- How to build an organization with sufficient Well Integrity competence and capability
  - Competent staff
- Well Failure Model
  - Failure Modes and Effect Analyses
  - Risk Based Well Maintenance
  - Well Hand Over Form
  - Well Head Check Sheet

❖ Course Conclusion

❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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