

COURSE OVERVIEW DE0972
Well Integrity Management

Course Title

Well Integrity Management

Course Date/Venue

December 08-12, 2024/Oryx Meeting Room,
 Double Tree by Hilton Al Saad, Doha, Qatar

Course Reference

DE0972

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.



This course is designed to provide participants with up-to-date overview of well integrity management. It covers the well integrity for the operational phase and well integrity life cycle; the barrier standards and applications, barrier verification and subsequent monitoring; the various examples of well integrity management systems; the completion design for sustained well integrity and the function of each component.



Further, the course will also discuss the component (barrier) fails including the reliability and operability concerns; the stress and loads on completion strings and manual calculation; the external and internal influences like corrosion on the well integrity envelope and how to design for them; the change of well operating envelope; the well failure models and risk assessments, well integrity verification, confirmation of barrier envelope and the various types of well integrity testing; and the issues associated with sustained casing pressure and/or MAASP excursions.

During this interactive course, participants will learn to conduct the well/field investigations and changes to well operating envelope; repair and reinstate well barrier envelope; employ rig interventions, planning for workovers, remediations on wells with well integrity issues including multiple barrier failures; recognize the rigless remediation options covering sealants, straddles, insert SSSV's; apply management of change, extension of a well life and well suspension (temporary or permanent); and identify the criteria for extending or changing a well status as well as well abandonment, current technologies and methods.

Course Objectives

Upon the successful completion of this course, each participant will be able to: -

- Apply and gain an in-depth knowledge on well integrity management
- Discuss the well integrity for the operational phase and well integrity life cycle
- Recognize barrier standards and applications, barrier verification and subsequent monitoring
- Give various examples of well integrity management systems
- Apply completion design for sustained well integrity and identify the function of each component
- Explain what happen when a component (barrier) fails including the reliability and operability concerns
- Describe stress and loads on completion strings and apply manual calculation
- Identify external and internal influences like corrosion on the well integrity envelope and how to design for them
- Discuss change of well operating envelope and illustrate well failure models and risk assessments
- Carryout well integrity verification, confirmation of barrier envelope and the various types of well integrity testing
- Identify the issues associated with sustained casing pressure and/or MAASP excursions
- Conduct well/field investigations and changes to well operating envelope
- Repair and reinstate well barrier envelope as well as employ rig interventions, planning for workovers, remediations on wells with well integrity issues including multiple barrier failures
- Recognize the rigless remediation options covering sealants, straddles, insert SSSV's
- Apply management of change, extension of a well life and well suspension (temporary or permanent)
- Identify the criteria for extending or changing a well status as well as well abandonment, current technologies and methods

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and consideration of well integrity management for production engineers, completion engineers, well services engineers, well integrity management engineers, drilling/completion/intervention engineers (including drilling supervisor and drilling superintendent), production technologists and production operation personnel (including OIM, area production supervisors) and HSE personnel.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours: -

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US\$ 8,500 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation


Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council for Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Konstantin Zorbalas, MSc, BSc, is a Senior Petroleum Engineer & Well Completions Specialist with over 25 years of offshore and onshore experience in the Oil & Gas, Refinery & Petrochemical industries. His wide expertise includes Workovers & Completions, Petroleum Risk & Decision Analysis, Electrical Submersible Pumps Application, ESP Assembly & Disassembly Techniques, ESP Modeling & Design, ESP Construction & Operational Monitoring, ESP Troubleshooting & Maintenance, Acidizing Application in Sandstone & Carbonate, Well Testing Analysis, Stimulation Operations, Reserves Evaluation, Reservoir Fluid Properties, Reservoir Engineering & Simulation Studies, Reservoir Monitoring, Artificial Lift Design, Gas Operations, Workover/Remedial Operations & Heavy Oil Technology, Applied Water Technology, Oil & Gas Production, X-mas Tree & Wellhead Operations & Testing, Artificial Lift Systems (Gas Lift, ESP, and Rod Pumping), Well Cementing, Production Optimization, Well Completion Design, Sand Control, PLT Correlation, Slickline Operations, Acid Stimulation, Well testing, Production Logging, Project Evaluation & Economic Analysis. Further, he is actively involved in **Project Management** with special emphasis in production technology and field optimization, performing conceptual studies, economic analysis with risk assessment and field development planning. He is currently the **Senior Petroleum Engineer & Consultant of National Oil Company** wherein he is involved in the mega-mature fields in the Arabian Gulf, predominantly carbonate reservoirs; designing the acid stimulation treatments with post-drilling rigless operations; utilizing CT with tractors and DTS systems; and he is responsible for gas production and preparing for reservoir engineering and simulation studies, well testing activities, field and reservoir monitoring, production logging and optimization and well completion design.

During his career life, Mr. Zorbalas worked as a **Senior Production Engineer, Well Completion Specialist, Production Manager, Project Manager, Technical Manager, Technical Supervisor & Contracts Manager, Production Engineer, Production Supervisor, Production Technologist, Technical Specialist, Business Development Analyst, Field Production Engineer and Field Engineer.** He worked for many world-class oil/gas companies such as **ZADCO, ADMA-OPCO, Oilfield International Ltd, Burlington Resources** (later acquired by **Conoco Phillips**), **MOBIL E&P, Saudi Aramco, Pluspetrol E&P SA, Wintershall, Taylor Energy, Schlumberger, Rowan Drilling and Yukos EP** where he was in-charge of the **design and technical analysis** of a gas plant with capacity **1.8 billion m³/yr gas**. His achievements include **boosting oil production 17.2% per year** since 1999 using **ESP and Gas Lift systems**.

Mr. Zorbalas has **Master and Bachelor degrees in Petroleum Engineering** from the **Mississippi State University, USA**. Further, he is an **SPE Certified Petroleum Engineer, Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)**, an active member of the **Society of Petroleum Engineers (SPE)** and has numerous scientific and technical publications and delivered innumerable training courses, seminars and workshops worldwide.



Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 08th of December 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Well Integrity Standards ISO 16530-2 – Well Integrity for the Operational Phase • ISO 16530-1 – Well Integrity Life Cycle
0930 – 0945	Break
0945 – 1100	Well Integrity Standards (cont'd) NORS OK D10 rev 4 • Understanding Barriers Standards & Applications
1100 – 1230	Well Integrity Standards (cont'd) Barriers Verification and Subsequent Monitoring • Examples of Well Integrity Management Systems
1230 – 1245	Break
1245 – 1420	Well Integrity Standards (cont'd) Real Life Examples are Used to Illustrate the Subjects
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2: Monday, 09th of December 2024

0730 – 0930	Completion Design Completion Design for Sustained Well Integrity • What is the Function of Each Component (Why it is Run? Why is it Essential? Is it Critical for Safety?)
0930 – 0945	Break
0945 – 1100	Completion Design (cont'd) What Happens When a Component (Barrier) Fails • Reliability and Operating Concerns
1100 – 1230	Completion Design (cont'd) Stress and Loads on Completion Strings. Manual Calculation is Used to Better Understand the Mater, as Opposed to Learning How to Use a Software Program to Calculate Stress and Loads • External and Internal Influences, like Corrosion, on the Well Integrity Envelope and How to Design for them.
1230 - 1245	Break
1245 – 1420	Completion Design (cont'd) Change of Well Operating Envelope (Product to Injector; Introduction of Artificial Lift; Stimulation, Fracturing, Perforating during the full Well Life Cycle)
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two





Day 3: Tuesday, 10th of December 2024

0730 – 0930	Identification of Well Integrity Issues Well Failure Models & Risk Assessments • Well Integrity Verification, Confirmation of Barrier Envelope
0930 – 0945	Break
0945 – 1100	Identification of Well Integrity Issues (cont'd) Understand Various types of Well Integrity Testing • Understand the Issues Associated with Sustained Casing Pressure and /or MAASP Excursions
1100 – 1230	Identification of Well Integrity Issues (cont'd) Conduct Well/Field Investigations and Changes to Well Operating Envelop • Examples of WI Identification Tools
1230 – 1245	Break
1245 – 1420	Identification of Well Integrity Issues (cont'd) Opportunity to Discuss Internal Examples of Failures
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4: Wednesday, 11th of December 2024

0730 – 0930	Well Integrity Solutions Repairing and Reinstating the Well Barrier Envelope
0930 – 0945	Break
0945 – 1100	Well Integrity Solutions (cont'd) Rig Interventions, Planning for Workovers, Remediation's on Wells with Well Integrity Issues Including Multiple Barrier Failures
1100 – 1230	Well Integrity Solutions (cont'd) Rigless Remediations Options – Sealants, Straddles, Insert SSSV's
1230 – 1245	Break
1245 – 1420	Well Integrity Solutions (cont'd) Management of Change – Derogations – Deviations – Produce until Failure of Well.
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four

Day 5: Thursday, 12th of December 2024

0730 – 0930	End of Well Life Cycle Extension of a Well Life • Well Suspension (Temporary or Permanent)
0930 – 0945	Break
0945 – 1100	End of Well Life Cycle (cont'd) Criteria for Extending or Changing a Well Status • Well Abandonment, Current Technologies & Methods
1100 – 1230	End of Well Life Cycle (cont'd) Case Studies of Above both Positive & Negative Results
1230 – 1245	Break



1245 - 1345	End of Well Life Cycle (cont'd) <i>Closing the Loop, Effective Lessons Learned, AAR's as well as Understanding the Need for Change as Opposed to the Reluctance of Change</i>
1345 - 1400	Course Conclusion
1400 - 1415	POST-TEST
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises: -



Course Coordinator

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