

COURSE OVERVIEW DE0394
Openhole and Cased Hole Data Acquisition and Interpretation

Course Title

Openhole and Cased Hole Data Acquisition and Interpretation

Course Reference

DE0394

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	February 18-22, 2024	Oryx Meeting Room, DoubleTree By Hilton Doha-Al Sadd, Doha, Qatar
2	April 28-May 02, 2024	
3	September 15-19, 2024	
4	November 17-21, 2024	

Course Description



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



This course is designed to provide participants with a detailed and up-to-date overview of Openhole and Cased Hole Data Acquisition and Interpretation. It covers the basic principles of well logging; the difference between logging while drilling (LWD) and wireline logging; the various openhole logging tools and their uses; the log quality control and calibration; the best practices for safe well logging operation; the resistivity and porosity logging techniques for assessing reservoir properties; the formation evaluation with openhole logs, shale volume and water saturation calculations; the advanced logging tools, core and log integration; and the cased hole logging and production logging tools and techniques.



During this interactive course, participants will learn the cement bond logs and evaluation; the perforation evaluation, cased hole formation testing and radiation safety in cased hole logging; the log interpretation, pressure transient analysis and advanced reservoir characterization; the latest tools and techniques in well logging; addressing the issues in high-angle, multilateral, and fractured wells; planing and monitoring EOR projects; the techniques for assessing and ensuring well integrity over time; the unconventional reservoirs logging challenges, digitalization and data analytics in well logging; and the best practices and standardization in logging.

Course Objectives

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

- Apply and gain an in-depth knowledge on openhole and cased hole data acquisition and interpretation
- Discuss the basic principles of well logging and differentiate logging while drilling (LWD) versus wireline logging
- Identify the various openhole logging tools and their uses and apply log quality control and calibration
- Employ best practices for safe well logging operations including resistivity and porosity logging techniques for assessing reservoir properties
- Carryout formation evaluation with openhole logs and shale volume and water saturation calculations
- Apply advanced logging tools, core and log integration, cased hole logging and production logging tools and techniques
- Implement cement bond logs and evaluation, perforation evaluation, cased hole formation testing and radiation safety in cased hole logging
- Review integrated log interpretation, pressure transient analysis with well logs and advanced reservoir characterization
- Discuss the latest tools and techniques in well logging and address the issues in high-angle, multilateral, and fractured wells
- Use log data to plan and monitor EOR projects and techniques for assessing and ensuring well integrity over time
- Explain the unconventional reservoirs logging challenges, digitalization and data analytics in well logging and best practices and standardization in logging

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 considerations of openhole and cased hole data acquisition and interpretation for petroleum engineers, geologists and geoscientists, petrophysicists, drilling engineers, well log analysts, reservoir engineers, logging and measurement while drilling (MWD) specialists, oilfield service company personnel, research and development professionals, graduate students and academia.

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:-


- 

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.

- 

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 Fees

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 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. Moammar Khallouf, is a **Senior Petroleum & Process Safety Engineer** with over **25 years** of integrated experience within the **Oil & Gas, Petroleum and Refinery** industries. His specialization widely covers in the areas of **Completion Design & Perforation, Completion & Production Engineering, Oil Wells Drilling Engineering, Oil Production Equipment Maintenance, Well Services, Wellhead Valves, Well Test Analysis & Rod Pumping**

Operation, Well Integrity Investigations, Well Perforation, Well Control, Advanced Well Completion, Artificial Lift System, Production Technology, Production Logging Interpretation, Production Operation, Oil Production Optimization, Drilling Supervision, Well Drilling Operations, Drilling Technology, Drilling & Initial Completion, Well Completion & Workover Operation, Completion & Safety, Completion Design, Well Test Data Gathering, Wireline & Coiled Tubing Operation, Advanced Coiled Tubing & Stimulation, Electrical Submersible Pump (ESP), Beam Pump Operation & Troubleshooting, Mud Logging Interpretation Technique, Bits, Casing, Tubing & Drilling Milling Tools, Fishing & Milling Tools, Directional Drilling Technology & Tools, Water Shut Off, Water Injection, Acid Stimulation, Sand & Cement Plug Calculation and Ultra-Low Sulphur Diesel Production & VGO Deep Hydro Treatment. Further, he is also well-versed in **Vessel Traffic Management System, Oil & Gas Marine Terminals, Tank Farm & Storage Tank Design, Inspection Procedure, Operation, Repair & Maintenance, Liquid & Gas Flow Metering & Meter Proving, HSE Risk Assessment, HSE Induction, Accident & Incident Investigation, Job Hazards Analysis (JHA), Maintenance Planning, Firefighting, Permit to Work, Safety Skills, H2S, Unsafe Acts/Conditions, Emergency Response** and Work Environment.

During his career life, Mr. Moammar held significant positions and dedication as the **Artificial Lift Section Head, Drilling & Completion Materials Supervisor, Drilling Safety Supervisor, Well Services/Intervention Supervisor, Production Technology Engineer, Safety Engineer, Petroleum Engineering Consultant & Instructor and Senior Instructor/Trainer** for various international companies like the Alfurat Petroleum Company (Shell JV), TUV Nord, ASASA, CMC, GTFG, **ARAMCO, UNICO**, etc, just to name a few.

Mr. Moammar a **Bachelor's degree in Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, workshops, courses, seminars and conferences internationally.

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 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

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0900	Overview of Well Logging: Purpose, History & Evolution of Well Logging Practices
0900 – 0930	Basic Principles of Well Logging: The Fundamental Concepts & Tools
0930 – 0945	<i>Break</i>
0945 – 1130	Logging While Drilling (LWD) versus Wireline Logging: Comparing Methodologies & Applications
1130 – 1230	Openhole Logging Tools & Techniques: Various Openhole Logging Tools & Their Uses
1230 – 1245	<i>Break</i>
1245 – 1300	Log Quality Control & Calibration: Ensuring the Accuracy & Reliability of Log Data
1300 – 1420	Safety Considerations in Data Acquisition: Best Practices for Safe Well Logging Operations
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0830	Resistivity & Porosity Logging: Techniques for Assessing Reservoir Properties
0830 – 0930	Formation Evaluation with Openhole Logs: Integrating Various Logs for Comprehensive Formation Evaluation
0930 – 0945	<i>Break</i>
0945 – 1130	Shale Volume & Water Saturation Calculations: Methods & Challenges in Unconventional Reservoirs
1300 – 1230	Advanced Logging Tools (NMR, Sonic, Image Logs): Applications & Interpretation Techniques
1230 – 1245	<i>Break</i>
1245 – 1300	Core & Log Integration: Enhancing Log Interpretation with Core Data
1300 – 1420	Case Studies: Real-World Examples of Openhole Log Interpretation
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 – 0830	Overview of Cased Hole Logging: Purpose & Tools Used in Cased Hole Environments
0830 – 0930	Production Logging Tools & Techniques: Tools for Evaluating Well Performance
0930 – 0945	<i>Break</i>
0945 – 1130	Cement Bond Logs & Evaluation: Assessing Cement Quality & Zonal Isolation
1300 – 1230	Perforation Evaluation: Techniques for Assessing the Effectiveness of Perforations

1230 – 1245	Break
1245 - 1300	Cased Hole Formation Testing: Methods for Reservoir Pressure & Fluid Sampling
1300 - 1420	Radiation Safety in Cased Hole Logging: Handling Radiative Sources & Ensuring Safety
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

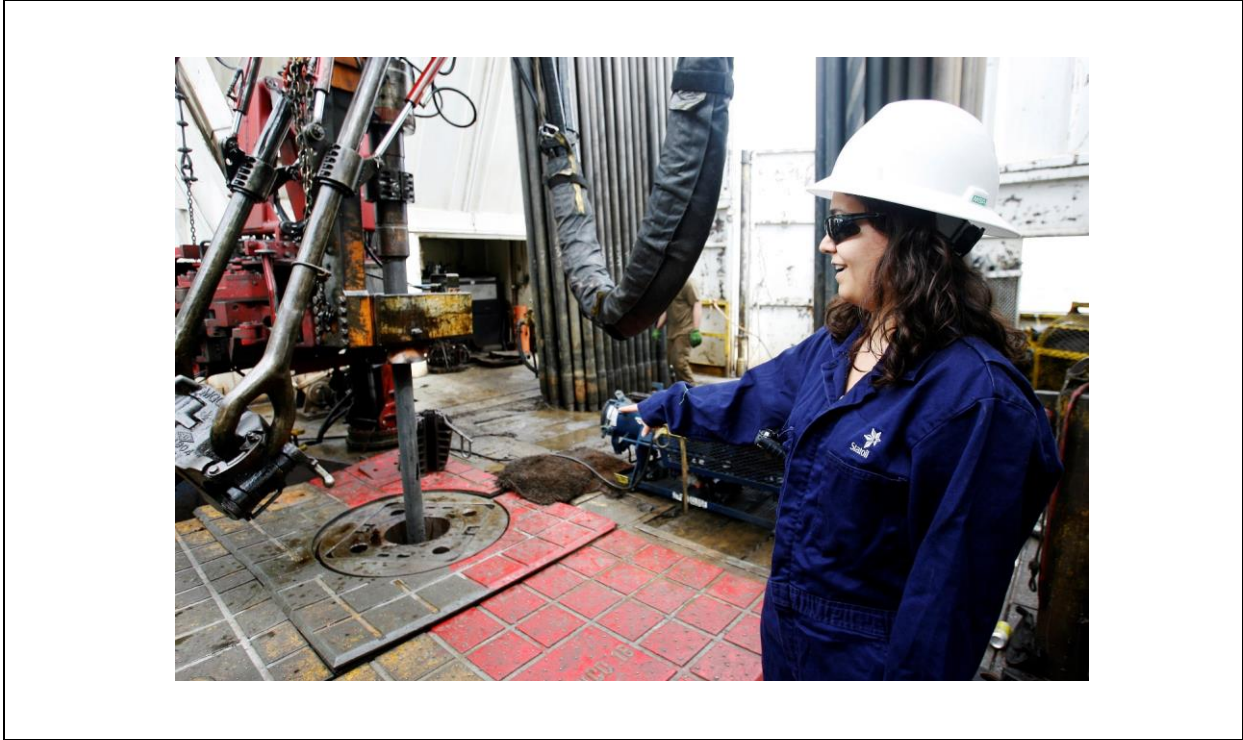
0730 – 0830	Integrated Log Interpretation: Combining Openhole & Cased Hole Data for Enhanced Insights
0830 - 0930	Pressure Transient Analysis with Well Logs: Using Log Data for Reservoir Pressure Analysis
0930 – 0945	Break
0945 – 1130	Advanced Reservoir Characterization: Applying Log Data in Reservoir Modeling & Simulation
1300 – 1230	Emerging Technologies in Well Logging: Overview of the Latest Tools & Techniques
1230 – 1245	Break
1245 - 1300	Challenges in Complex Reservoirs: Addressing Issues in High-Angle, Multilateral & Fractured Wells
1300 - 1420	Workshop: Hands-On Session on Integrated Log Interpretation
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0830	Applications in Enhanced Oil Recovery (EOR): Using Log Data to Plan & Monitor EOR Projects
0830 - 0930	Well Integrity Assessment: Techniques for Assessing & Ensuring Well Integrity Over Time
0930 – 0945	Break
0945 – 1130	Unconventional Reservoirs Logging Challenges: Special Considerations in Shale, Tight Sands & Coalbed Methane
1130 – 1230	Digitalization & Data Analytics in Well Logging: The Role of Big Data & Machine Learning
1230 – 1245	Break
1245 – 1345	Best Practices & Standardization in Logging: Ensuring Consistent & High-Quality Data Acquisition & Interpretation
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

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



Course Coordinator

Jaryl Castillo, Tel: +974 4423 1327, Email: jaryl@haward.org