

COURSE OVERVIEW DE0009(KP4)-4D
Integration of Core & Log Data

Course Title

Integration of Core & Log Data

Course Reference

DE0009(KP4)-4D

Course Duration/Credits

Four days/2.4 CEUs/24 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	March 04-07, 2024	Jubail Hall, Signature Al Khobar Hotel, Al Khobar, KSA
2	June 03-06, 2024	Cheops Meeting Room, Radisson Blu Hotel, Istanbul Sisli, Turkey
3	September 09-12, 2024	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
4	December 09-12, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

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.

Reservoir evaluation requires good understanding of rock properties (core and log), logging tools and their measurements and well test and pressure data. Understanding these basics and integrating them in a meaningful way shall help to solve complex reservoir and production issues.



This course is designed to provide delegates with a detailed and up-to-date knowledge on core and log integration. It covers the RCAL and SCAL lab core measurements; the reservoir properties from RCAL and its porosity, permeability, grain density and saturation; the reservoir characteristics from SCAL and its relative permeability, capillary pressure, wettability and electrical properties; and the reservoir properties from log interpretation and its comparison with core requirements.



During this interactive course, participants will learn the core-log correlation and estimation of permeability from log and core; the rock types and facies from core description and logs; the electrofacies and poro-perm relation as well as well testing and integration with petrophysical analysis; the reservoir modeling and upscaling, uncertainties and integrating the core; and the logging and testing data for reservoir modeling.

Course Objectives

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

- Apply and gain a comprehensive knowledge on integration of core and log data
- Differentiate RCAL and SCAL lab core measurements
- Discuss reservoir properties from RCAL and its porosity, permeability, grain density and saturation as well as reservoir characteristics from SCAL and its relative permeability, capillary pressure, wettability and electrical properties
- Determine reservoir properties from log interpretation and compare it with core requirements
- Explain reservoir properties from log interpretation including its lithology, porosity, water saturation, cut-offs, net to gross ratio, averaging porosity and saturation
- Recognize core-log correlation and estimate permeability from log and core
- Define rock types and identify facies from core description and logs
- Determine ectrofacies and derive poro-perm relation as well as analyze well test and integrate with petrophysical analysis
- Employ reservoir modeling and upscaling, identify uncertainties and integrate the core
- Log and test data for reservoir modeling

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Howard 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 integration of core and log data for senior engineers, reservoir engineers, exploration and development geologists, core and log analysts, geophysicists, drilling and completion engineers.

Training Methodology

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

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos

The course instructor may modify the above training methodology before or during the course for technical reasons with no prior notice to participants.

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 **2.4 CEUs** (Continuing Education Units) or **24 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.

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. Stan Constantino, MSc, BSc, is a **Senior Petroleum Engineer** with over **35 years** of **Offshore & Onshore** experience in **Drilling/Reservoir/Petroleum Engineering** and **Well Service Operations**. His area of expertise includes **Reservoir Surveillance & Management**, in Electrical Submersible Pumps Application, **ESP Assembly & Disassembly Techniques**, **ESP Modeling & Design**, **ESP Construction & Operational Monitoring**, **ESP Troubleshooting & Maintenance**, **Reservoir Engineering & Simulation**, **Reservoir Monitoring**, **Reservoir Engineering Applications** with ESP and Heavy Oil, **Reserve Evaluation**, **Directional Drilling**, **Drilling Production & Operations**, **Field Development & Production of Oil & Gas**, **Wireline Logging**, **Mud Logging**, **Production Logging**, **Slick Line**, **Coil Tubing**, **Exploration Wells Evaluation**, **Horizontal Wells**, **Well Testing**, **Well Workover Supervision**, **Pressure Transient Analysis** and **Petrophysical Log Analysis**. Currently, he is the **Managing Director** of **Geotech** wherein he is responsible in managing the services and providing technical support to underground energy related projects concerning **field development**, **production**, **drilling**, **reservoir engineering** and **simulation**.

Throughout his long career life, Mr. Stan has worked for many international companies such as the **Kavala Oil**, **North Aegean Petroleum Company** and **Texaco Inc.**, as the **Managing Director**, **Operations Manager**, **Petroleum Engineering & Exploration Department Head**, **Assistant Chief Petroleum Engineer**, **Senior Petroleum Engineer** and **Petroleum Engineer**.

Mr. Stan has a **Master’s** in **Petroleum Engineering** and a **Bachelor’s** degree in **Geology** from the **New Mexico Institute of Mining & Technology** and from the **Aristotelian University, Greece**, respectively. Further, he is a member of the Society of Petroleum Engineers, USA (**SPE**), Society of Well Log Professional Analysts, USA (**SPWLA**) and European Association of Petroleum Geoscientists & Engineers (**EAGE**).

Course Fee

Al Khobar	US\$ 6,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Istanbul	US\$ 7,000 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	US\$ 6,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	US\$ 6,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Lab Core Measurement RCAL • SCAL
0930 – 0945	Break
0945 – 1100	Reservoir Rock Properties from RCAL Porosity • Permeability • Grain Density • Saturation
1100 – 1230	Reservoir Rock Properties from SCAL Relative Permeability • Capillary Pressure • Wettability • Electrical Properties
1230 – 1245	Break
1245 – 1420	Reservoir Properties from Log Interpretation Lithology • Porosity • Water Saturation • Cut-Offs • Net to Gross Ratio • Averaging Porosity • Saturation
1420 - 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 – 0930	Core-Log Correlation
0930 – 0945	Break
0945 – 1100	Permeability Estimation from Log & Core
1100 – 1230	Rock Typing
1230 – 1245	Break
1245 – 1420	Facies Identification from Core Description & Logs
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	Electrofacies & Derive Poro-Perm Relation
0930 – 0945	Break
0945 – 1100	Well Test Analysis
1100 – 1230	Integration with Petrophysical Analysis
1230 – 1245	Break
1245 – 1420	Reservoir Modeling
1420 - 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0930	Upscaling
0930 – 0945	Break
0945 – 1100	Uncertainties
1100 – 1230	Integrating Core
1230 – 1245	Break
1245 – 1345	Log & Test Data for Reservoir Modeling
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

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