Haward Technology Middle East

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

Course Title
Integration of Core & Log Data

Course Date/Venue
Session 1: September 09-12, 2024/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
Session 2: December 09-12, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
DE0009(KP4)-4D

Course Duration/Credits
Four days/2.4 CEUs/24 PDHs

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 ectrofacies 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 "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, sample video clips of the instructor's actual lectures & practical sessions during the course 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

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 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 **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.

- 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

US$ 6,750 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:-
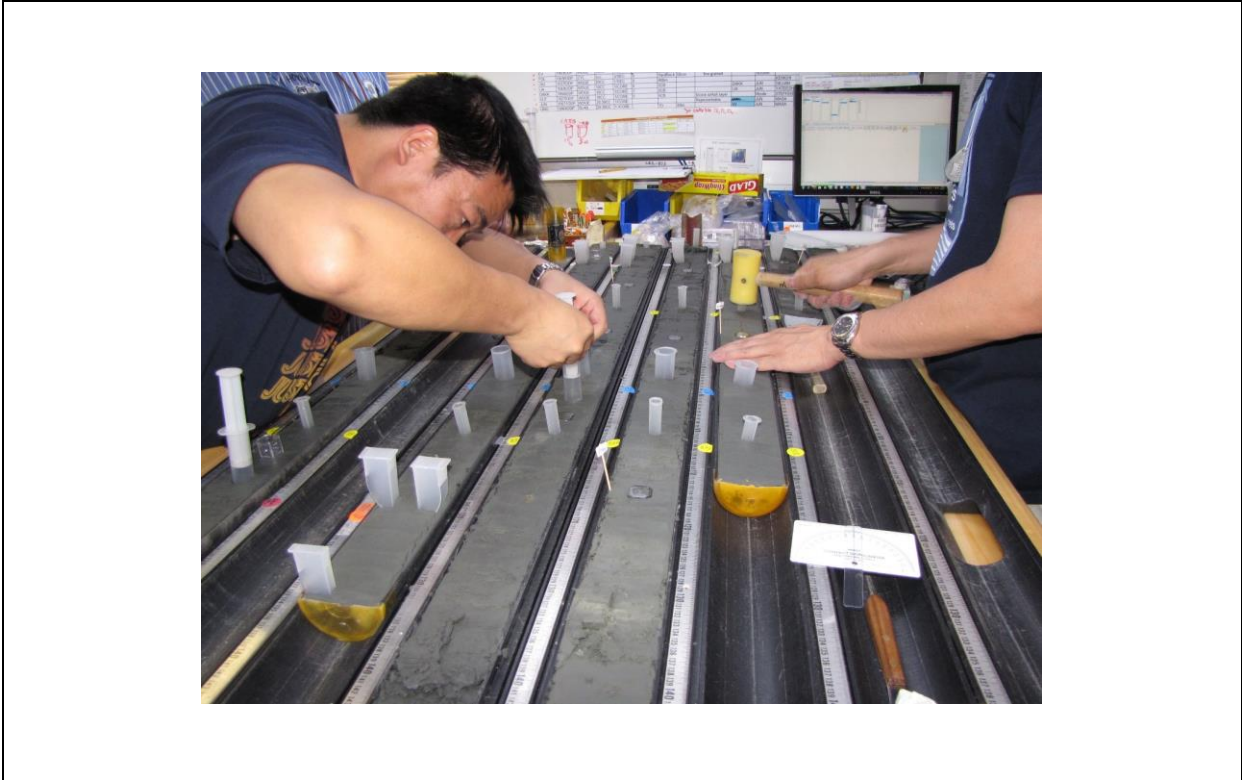
Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org