

COURSE OVERVIEW DE0696(KP4) MICP and Deterministic Rock Typing

Course Title

MICP and Deterministic Rock Typing

Course Date/Venue

Session 1: February 09-13, 2025/Boardroom 1,
Elite Byblos Hotel Al Barsha, Sheikh
Zayed Road, Dubai, UAE

Session 2: August 11-15, 2025/Fujairah
Meeting Room, Grand Millennium Al
Wahda Hotel, Abu Dhabi, UAE

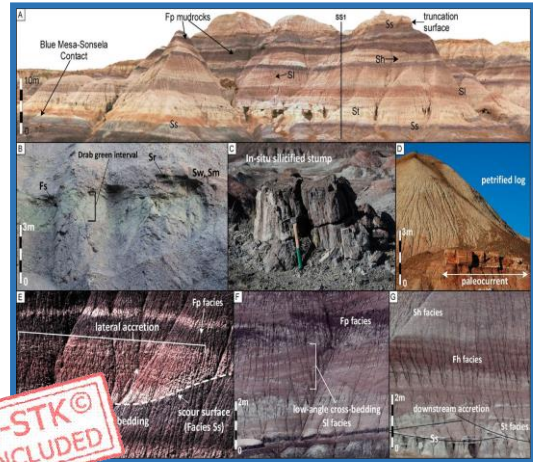
Course Reference

DE0696(KP4)

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 a detailed and up-to-date overview of facies analysis and rock typings. It covers the general work-flow for rock typing based on logs, core description and petrophysical data; the supervision of electrofacies analysis with discriminant analysis and integrate core description; and the electrofacies analysis based on supervised approach with various clustering techniques like statistical, neural network, optimizing techniques, etc.

During this interactive course, participants will learn the interpretation from the analysis of multivariate probability density function; comparing methods and results for electrofacies analysis; performing electrofacies propagation at wells with limited or different sets of logs, electrofacies to rock-types with petrophysical data as well as permeability/porosity modeling for the electrofacies with various types of regression; integrating SCAL data in rock-typing and reservoir quality indexes; assessing capillary pressure curve processing for rock-typing; integrating rock-types in seismic attribute analysis; and interpreting work-flows for seismic attribute using rock-types.

Course Objectives

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

- Apply and gain an in-depth knowledge on facies analysis and rock typings
- Recognize general work-flow for rock typing based on logs, core description and petrophysical data
- Supervise electrofacies analysis with discriminant analysis and integrate core description
- Discuss electrofacies analysis based on supervised approach with various clustering techniques like statistical, neural network, optimizing techniques, etc.
- Build an interpretation from the analysis of multivariate probability density function and compare methods and results for electrofacies analysis
- Perform electrofacies propagation at wells with limited or different sets of logs, electrofacies to rock-types with petrophysical data as well as permeability/porosity modeling for the electrofacies with various types of regression
- Integrate SCAL data in rock-typing and illustrate reservoir quality indexes
- Assess capillary pressure curve processing for rock-typing and describe the integration of rock-types in seismic attribute analysis
- Explain work-flows for seismic attribute interpretation using rock-types

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 facies analysis and rock typings for senior production, petroleum, reservoir and field 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: -

- 
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.

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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.

Course Instructor

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 & Reservoir Engineer with over 35 years of Offshore & Onshore extensive experience within the Oil, Gas & Petroleum industries. His area of expertise include Reserves & Resources, Reserves Estimation & Uncertainty, Reservoir Characterization, Unconventional Resource & Reserves Evaluation, Oil & Gas Reserves Estimation, Methods for Aggregation of Reserves & Resources, Fractured Reservoir Classification & Evaluation, Sequence Stratigraphy, Petrophysics & Rock Properties, Seismic Technology, Geological Modelling, Water Saturation, Crude Oil & Natural Gas Demand, Exploration Agreements & Financial Modelling, Seismic Survey Evaluation, Exploration Well Identification, Field Production Operation, Field Development Evaluation, Crude Oil Marketing, Core & Log Data Integration, Core Logging, Advanced Core & Log Integration, Well Logs & Core Analysis, Advanced Petrophysics/Interpretation of Cased Hole Logs, Cased Hole Formation Evaluation, Cased Hole Formation Evaluation, Cased Hole Evaluation, Cased-Hole Logging, Applied Production Logging & Cased Hole & Production Log Evaluation, Cased Hole Logging & Formation Evaluation, Open & Cased Hole Logging, Screening of Oil Reservoirs for Enhanced Oil Recovery, Enhanced Oil Recovery, Enhanced Oil Recovery Techniques, Petroleum Economic Analysis, Oil Industry Orientation, Oil Production & Refining, Crude Oil Market, Global Oil Supply & Demand, Global Oil Reserves, Crude Oil Types & Specifications, Oil Processing, Oil Transportation-Methods, Oil & Gas Exploration and Methods, Oil & Gas Extraction, Technology Usage in Industrial Security; Upstream, Midstream & Downstream Operations; Oil Reservoir Evaluation & Estimation, Oil Supply & Demand, Oil Contracts, Government Legislation & Oil Contractual Agreements, Oil Projects & Their Feasibility (revenue and profitability), Water Flooding, Reservoir Souring & Water Breakthrough, Reservoir Performance Using Classical Methods, Fractured Reservoir Evaluation & Management, Reservoir Surveillance & Management, Reservoir Engineering & Simulation, Reservoir Monitoring, Pressure Transient Testing & Reservoir Performance Evaluation, Reservoir Characterization, Reservoir Engineering Applications with ESP and Heavy Oil, Reservoir Volumetrics, Water Drive Reservoir, Reserve Evaluation, Rock & Fluid Properties, Fluid Flow Mechanics, PVT Analysis, Material Balance, Darcy's Law & Applications, Radial Flow, Gas Well Testing, Natural Water Influx, EOR Methods, Directional Drilling, Drilling Production & Operations, Field Development & Production of Oil & Gas, Wireline Logging, Mud Logging, Cased Hole Logging, Production Logging, Slick Line, Coil Tubing, Exploration Wells Evaluation, Horizontal Wells, Well Surveillance, Well Testing, Design & Analysis, Well Testing & Oil Well Performance, Well Log Interpretation (WLI), Formation Evaluation, Well Workover Supervision, Pressure Transient Analysis and Petrophysical Log Analysis. Currently, he is the CEO & Managing Director of Geo Resources Technology wherein he is responsible in managing the services and providing technical supports 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, Technical Trainer, Training Consultant, Petroleum Engineering & Exploration Department Head, Assistant Chief Petroleum Engineer, Reservoir Engineer, Resident Petroleum Engineer, Senior Petroleum Engineer and Petroleum Engineer wherein he has been managing the evaluation of exploration wells, reservoir simulation, development training, production monitoring, wireline logging and well testing including selection and field application of well completion methods. Mr. Stan has a Master's degree in Petroleum Engineering and a Bachelor's degree in Geology from the New Mexico Institute of Mining & Technology (USA) and from the Aristotelian University (Greece) respectively. Further, he is a Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer by the Institute of Leadership of Management (ILM) and 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). Moreover, Mr. Stan published numerous scientific and technical papers and delivered various trainings, courses and workshops worldwide.

Accommodation

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

Course Fee

US\$ 8,000 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

0800 – 0815	<i>Registration & Coffee</i>
0815 – 0830	<i>Welcome & Introduction</i>
0830 – 0845	PRE-TEST
0845 – 0915	General Work-Flow for Rock-Typing <i>Overview of Rock-Typing Based on Logs</i>
0915 – 0935	<i>Break</i>
0935 – 1030	General Work-Flow for Rock-Typing (cont'd) <i>Core Description • Petrophysical Data</i>
1030 – 1140	Supervised Electrofacies Analysis with Discriminant Analysis <i>Electrofacies Analysis with Supervised Approach</i>
1140 – 1225	<i>Break</i>
1225 – 1350	Supervised Electrofacies Analysis with Discriminant Analysis (cont'd) <i>Exercise for Integrating Core Description in Electrofacies Analysis with Supervised Approach</i>
1350 – 1400	Recap
1400	<i>Lunch & End of Day One</i>

Day 2

0800 – 0915	Techniques for Non-Supervised Electrofacies Analysis <i>Electrofacies Analysis Based on Non-Supervised Approach with Various Clustering Techniques (Statistical, Neural Network, Optimizing Techniques, Etc.)</i>
0915 – 0935	<i>Break</i>
0935 – 1030	Techniques for Non-Supervised Electrofacies Analysis (cont'd) <i>Exercise with Non-Supervised Approach (Building An Interpretation from the Analysis of the Multivariate Probability, Density Function)</i>
1030 – 1140	Comparing Methods & Results for Electrofacies Analysis <i>Hands on Optimization Techniques for Non-Supervised Approach</i>
1140 – 1225	<i>Break</i>
1225 – 1350	Comparing Methods & Results for Electrofacies Analysis (cont'd) <i>Exercise for Merging Supervised and Non-Supervised Results</i>
1350 – 1400	Recap
1400	<i>Lunch & End of Day Two</i>

Day 3

0800 – 0915	Hands on Electrofacies Propagation at Wells with Limited (or Different) Set of Logs
0915 – 0935	Break
0935 – 1030	Hands on Electrofacies Propagation at Wells with Limited (or Different) Set of Logs (cont'd)
1030 – 1140	From Electrofacies to Rock-Types with Petrophysical Data
1140 – 1225	Break
1225 – 1350	From Electrofacies to Rock-Types with Petrophysical Data (cont'd)
1350 – 1400	Recap
1400	Lunch & End of Day Three

Day 4

0800 – 0915	Porosity/Permeability Modeling with Various Types of Regression Exercise for Permeability/Porosity Modeling for the Electrofacies
0915 – 0935	Break
0935 – 1030	Porosity/Permeability Modeling with Various Types of Regression (cont'd) Exercise for Permeability/Porosity Modeling for the Electrofacies (cont'd)
1030 – 1140	Capillary Pressure Curve Processing for Rock-Typing Integration of SCAL Data in Rock-Typing
1140 – 1225	Break
1225 – 1350	Capillary Pressure Curve Processing for Rock-Typing (cont'd) Integration of SCAL Data in Rock-Typing (cont'd)
1350 – 1400	Recap
1400	Lunch & End of Day Four

Day 5

0800 – 0915	Reservoir Quality Indexes RQI • FZI
0915 – 0935	Break
0935 – 1030	Reservoir Quality Indexes (cont'd) Exercise on Reservoir Quality Indexes
1030 – 1140	Work-Flows for Seismic Attribute Interpretation Using Rock-Types Integration of Rock-Types in Seismic Attributes (General Work-Flow, Seismic Facies Analysis, Linear Regression & Cokriging for Attribute Interpretation)
1140 – 1225	Break
1225 – 1315	Work-Flows for Seismic Attribute Interpretation Using Rock-Types (cont'd) Hands-on Scale Issue Related Seismic Attribute Analysis • Exercise on Cokriging
1315 – 1330	Course Conclusion
1330 – 1345	POST-TEST
1345 – 1400	Presentation of Course Certificates
1400	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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