

COURSE OVERVIEW DE0238(KJ1)
Geostatistics for Reservoir Characterization

Course Title

Geostatistics for Reservoir Characterization

Course Date/Venue

Session 1: May 19-23, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Session 2: November 09-13, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Reference

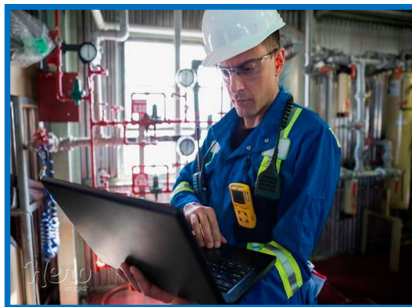
DE0238(KJ1)

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using the geological modelling software.



This course provides a comprehensive introduction to geostatistics and its application in reservoir characterization, specifically tailored for professionals in the oil and gas industry. Participants will learn how to analyze and model spatial data to improve reservoir understanding, optimize drilling, and enhance hydrocarbon recovery. The course integrates theoretical concepts with practical case studies and industry-standard software tools to ensure real-world applicability.



This course is designed to provide participants with a detailed and up-to-date overview of Geostatistics & Reservoir Modeling. It covers the fundamental understanding of the concepts and methodology of geo-statistics; geological, geophysical, petro physical and engineering data into high-resolution reservoir descriptions and simulation models; the univariate and bivariate statistical analysis; the Construction and interpretation of cross plot, PDF and CDF; spatial relationships between properties, building and interpreting variogram; the geo-statistical algorithms, properties and facies modeling; and the object-based modeling and up-scaling simulation.

Course Objectives

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

- Apply and gain an in-depth knowledge on geostatistical reservoir modeling
- Develop a fundamental understanding of the concepts and methodology of geo-statistics
- Integrate geological, geophysical, petro physical and engineering data into high-resolution reservoir descriptions and simulation models
- Discuss univariate and bivariate statistical analysis
- Construct and interpret cross plot, PDF and CDF
- Identify spatial relationships between properties as well as build and interpret variogram
- Recognize geo-statistical algorithms, properties and facies modeling
- Illustrate object-based modeling, up-scaling simulation

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 geostatistics for reservoir characterization for geologists, geophysicists, petro-physicists & engineers who are involved in reservoir characterization and modeling studies.

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.

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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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(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. David Berryman is a **Senior Drilling Operations Engineer** with over **40 years** of **Offshore & Onshore** experience within the **Oil & Gas** industries. He is an international expert in **Drill String Intensity & Design, Drill String Optimization, Stuck Pipe Prevention, Wireline Operations & Techniques, Fishing Operations, Drilling & Petroleum Engineering, ERD Drilling, Well Service Operations, Well Test Design & Analysis, Well Composite, Construction Integrity, Completion & Production Optimization, Well Completion, Well Integrity Management, Well Bore Analysis, Well Control & Blowout Prevention, Well Bore Integrity, High Pressure High Temperature (HPHT), Pulling Out of Hole (POOH), PWD Interpretation, Surface Logging, Drilling Optimization, Well Planning, Horizontal & Directional Drilling, Well Hole Cleaning, Mud-Logging, Downhole Vibration, Extended Reach Drilling, Torque & Drag Modelling, Pore Pressure Evaluation, Pressure Transient Testing & Reservoir Performance Evaluation, Review Process Data & Fluid Properties, Conductor Line Pressure Surveys and Chemical Tubing Cutting.** He is also well-versed in Bow-Tie HSE Risk Management System, **Hydraulics** Management, Data Interpretation, **Petroleum Data** Management, Hydraulic Calculations, Safety Management System, **Rig Operations** and various **drilling softwares** including **Well Plan** and **Compass (Landmark)**; DFG, Planit, Insite Anywhere (**Halliburton**); Discovery Well, Discovery Web (Kongsberg); Digital Well File (Petrolink) and Well View (Peloton).

Throughout his long career life, Mr. Berryman has worked for many international companies in the **Gulf of Mexico, Europe, Africa, Central Asia (Kazakhstan) the Middle East, Far East** and the **North Sea** such as Marathon Oil UK, Talisman-Sinopec, BG Group, Sperry Drilling, Stavanger, BP, Hycalog, Camtest/Camco and Gearheart. He had occupied various key positions as the **Drilling Manager, Drilling Engineer Supervisor, Drilling Supervisor, Drilling Operations Engineer, Applied Drilling Technology Engineer, Data Engineer, Mud Logger, Sales & Service Engineer** and **Downhole Gauge Engineer** and **Senior Instructor/Trainer**. During this period, he has led the development of a **software solution** for real-time monitoring of drag whilst tripping in extended reach wells.

Mr. Berryman has a **Bachelor's** degree in **Mining** from the **University of Leeds, UK**. Further, he has acquired **certifications** from the **IWCF** for **Combined Surface and Subsea Blow-Out Preventer Stack**, the **BOSIET**, the **UKCS** for **Offshore Working** and the **Prince2 Foundation** for **Project Management**. Further, he is a **Certified Instructor/Trainer**, a **Drill String Design Proctor** by **Fearnley**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management (ILM)** and has delivered and presented innumerable training courses and workshops worldwide.

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 - 0930	<i>Introduction to Geo-Statistics</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<i>Practical Uses of Geo-Statistics</i>
1100 - 1230	<i>Univariate & Bivariate Statistical Analysis</i>
1230 - 1245	<i>Break</i>
1245 - 1420	<i>Univariate & Bivariate Statistical Analysis (cont'd)</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 - 0930	<i>Cross Plot, PDF & CDF Construction & Interpretation</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<i>Cross Plot, PDF & CDF Construction & Interpretation (cont'd)</i>
1100 - 1230	<i>Spatial Relationships Between Properties</i>
1230 - 1245	<i>Break</i>
1245 - 1420	<i>Spatial Relationships Between Properties (cont'd)</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 - 0930	<i>Variogram Building & Interpretation</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<i>Variogram Building & Interpretation (cont'd)</i>
1100 - 1230	<i>Geo-Statistical Algorithms</i>
1230 - 1245	<i>Break</i>
1245 - 1420	<i>Geo-Statistical Algorithms (cont'd)</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4

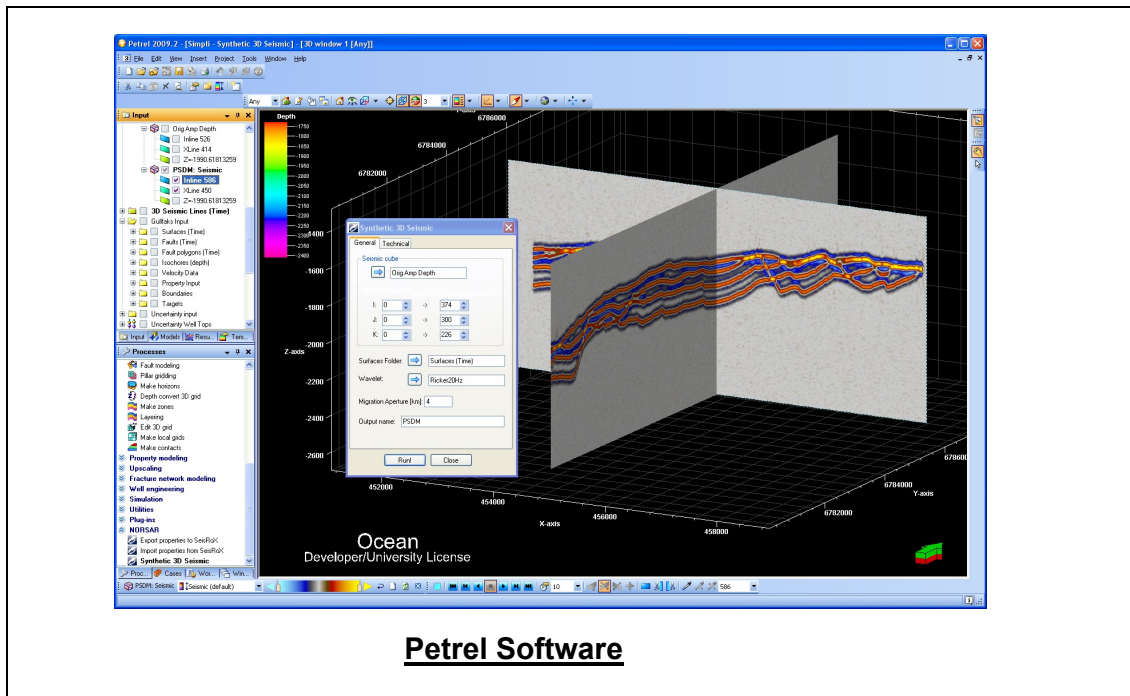
0730 – 0930	<i>Properties & Facies Modeling</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Properties & Facies Modeling (cont'd)</i>
1100 – 1230	<i>Properties & Facies Modeling (cont'd)</i>
1230 – 1245	<i>Break</i>
1245 – 1420	<i>Object-Based Modeling</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Four</i>

Day 5

0730 – 0930	<i>Object-Based Modeling (cont'd)</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Up-Scaling & Simulation</i>
1100 – 1230	<i>Up-Scaling & Simulation (cont'd)</i>
1230 – 1245	<i>Break</i>
1245 – 1345	<i>Up-Scaling & Simulation (cont'd)</i>
1345 – 1400	<i>Course Conclusion</i>
1400 – 1415	<i>POST-TEST</i>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the “Petrel” software.



Petrel Software

Course Coordinator

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