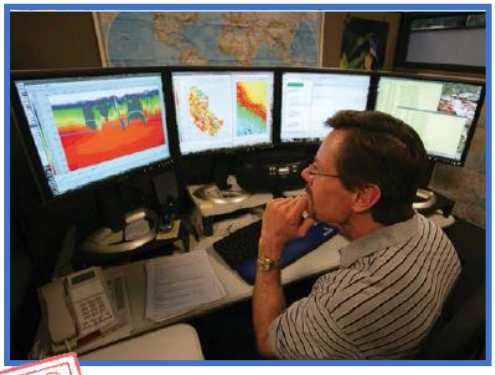
COURSE OVERVIEW DE0334
Petrel Property Modeling

Course Title
Petrel Property Modeling

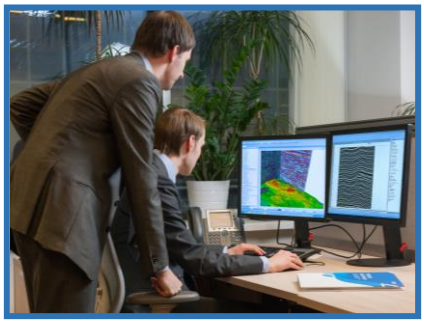


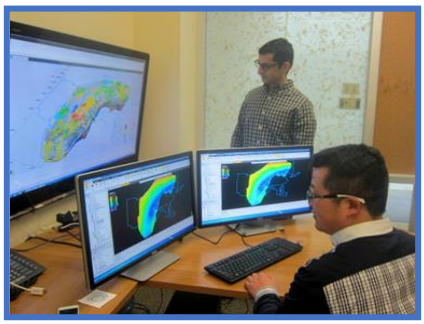
Course Date/Venue
Session 1: April 20-24, 2025/ Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar
Session 2: September 14-18, 2025/ Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar

Course Reference
DE0334

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 our state-of-the-art simulators.

A property model is considered as the flesh or the content of the Geomodel. Property modelling consists in populating the Geomodel away from control points with reservoir properties derived from Well, seismic and analog data.

This course is designed to provide participants with a detailed and up-to-date overview of Petrel property modeling. It covers the basics of uni and bivariate geostatistics; the data preparation, well log edits and calculation; the upscaling for discrete and continuous data; the facies modeling, data analysis, sequential indicator simulation and object facies modeling; the truncated gaussian simulation with and without trends; the use of secondary data to populate facies models; the petrophysical modeling, petrophysical modeling data analysis, sequential gaussian simulation, gaussian random function simulation and kriging; and the use of secondary data to populate petrophysical models.

Course Objectives

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

- Apply and gain a comprehensive knowledge on Petrel property modeling
- Discuss the basics of uni and bivariate geostatistics
- Employ data preparation, well log edits and calculation including upscaling for discrete and continuous data
- Illustrate facies modeling, data analysis, sequential indicator simulation and object facies modeling
- Demonstrate truncated gaussian simulation with and without trends
- Use secondary data to populate facies models
- Illustrate petrophysical modeling, petrophysical modeling data analysis, sequential gaussian simulation, gaussian random function simulation and kriging
- Use secondary data to populate petrophysical models

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 covers systematic techniques on petrel property modeling for managers, development and exploration geologists, geophysics, geochemists, petrophysicists, petroleum engineers, reservoir engineers and technical personnel with prior experience in petrel.

Course Fee

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.

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 **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 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:

Dr. John Petrus, PhD, MSc, BSc, is a **Senior Process & Petroleum Engineer** with over **30 years** of **onshore & offshore** experience within the **Oil & Gas**, **Refinery** and **Petroleum** industries. His wide experience covers in the areas of **Gas Sweetening Process** at Upstream Oil & Gas, **De-Sulfurization** Technology, **Process Troubleshooting**, **Distillation Towers**, **Fundamentals of Distillation** for Engineers, **Distillation** Operation and Troubleshooting, **Advanced Distillation** Troubleshooting, **Distillation** Technology, Vacuum **Distillation**, **Distillation Column** Operation & Control, **Oil Movement** Storage & Troubleshooting, **Process Equipment** Design, Applied **Process Engineering** Elements, **Process Plant** Optimization, **Revamping & Debottlenecking**, **Process Plant** Troubleshooting & Engineering Problem Solving, **Process Plant** Monitoring, **Catalyst** Selection & Production Optimization, Operations Abnormalities & Plant Upset, **Process Plant** Start-up & Commissioning, **Clean Fuel** Technology & Standards, Flare, Blowdown & Pressure Relief Systems, **Oil & Gas Field Commissioning** Techniques, **Pressure Vessel** Operation, **Gas Processing**, **Chemical** Engineering, **Process Reactors** Start-Up & Shutdown, **Gasoline Blending** for Refineries, **Urea Manufacturing** Process Technology, Continuous Catalytic Reformer (**CCR**), Advanced Operational & Troubleshooting Skills, Principles of Operations Planning, **Rotating Equipment** Maintenance & Troubleshooting. Further he is also well versed in **Formation Damage & Acid Stimulation**, **Production Technology** & Engineering, **Well Completions**, **Well Logs**, **Well Stimulation** & **Production Logging**, **Well Completion** Design & Operation, Well Surveillance, **Well Testing**, **Well Stimulation** & Control and **Workover** Planning, **Completions & Workover**, Hole Cleaning & Logging, Servicing and **Work-Over** Operations, **Wellhead** Operations, Maintenance & Testing, Petrophysics/Interpretation of Well Composite, **Reservoir & Tubing** Performance, Practical **Reservoir** Engineering, Clastic **Exploration & Reservoir Sedimentology**, **Carbonate Reservoir Characterization** & Modeling, **Seismic Interpretation**, **Mapping & Reservoir** Modelling, **Reservoir Geology**, Integrating **Geoscience** into **Carbonate Reservoir** Management, **Faulted & Fractured Reservoirs**, **Fractured Hydrocarbon Reservoirs**, Analyses, Characterisation & Modelling of **Fractured Reservoirs & Prospects**, **Fracture Reservoir** Modeling Using **Petrel**, **Reservoir** Engineering Applied Research, **Artificial Lift**, **Artificial Lift System** Selection & Design, Electrical Submersible Pumps (**ESP**), Enhance Oil Recovery (**EOR**), **Hydraulic Fracturing**, **Sand Control** Techniques, **Perforating** Methods & Design, **Perforating** Operations, **Petroleum** Exploration & Production, **Hydrocarbon Exploration** & Production, Exploration & Production, **Play Assessment & Prospect Evaluation**, **Formation** Evaluation, **Petroleum Engineering** Practices, **Petroleum** Hydrogeology & Hydrodynamics, **Project** Uncertainty, Decision Analysis & Risk Management, **Decision Analysis & Uncertainty** Management, **Exploration & Development Geology**, **Sedimentology & Sequence Stratigraphy**, **Structural Interpretation** in Exploration & Development, **Petrel Geology**, **Geomodeling**, **Structural Geology**, **Applied Structural Geology** in Hydrocarbon Exploration, **Petrophysics** and **Geology** of the Oil & Gas Field.. Further, he is also well-versed in **seismic interpretation**, **mapping** & **reservoir modelling tools** like **Petrel** software, **LandMark**, **Seisworks**, **Geoframe**, **Zmap** and has extensive knowledge in MSDos, Unix, **AutoCAD**, MAP, Overlay, Quicksurf, 3DStudio, **Esri ArcGIS**, Visual Lisp, Fortran-77 and Clipper. Moreover, he is a world **expert** in **analysis** and **modelling** of **fractured prospects** and **reservoirs** and a **specialist** and **developer** of **fracture modelling software tools** such as FPDM, FMX and DMX Protocols.

During his career life, Dr. Petrus held significant positions and dedication as the **Executive Director**, **Senior Geoscience Advisor**, **Exploration Manager**, **Project Manager**, **Manager**, **Process Engineer**, **Mechanical Engineer**, **Maintenance Engineer**, **Chief Geologist**, **Chief** of **Exploration**, **Chief** of **Geoscience**, **Senior Geosciences Engineer**, **Senior Explorationist**, **Senior Geologist**, **Geologist**, **Senior Geoscientist**, **Geomodeller**, **Geoscientist**, **CPR Editor**, **Resources Auditor**, **Project Leader**, **Technical Leader**, **Team Leader**, **Scientific Researcher** and **Senior Instructor/Trainer** from various international companies and universities such as the Dragon Oil Holding Plc., ENOC, MENA, ENI Group of Companies, Ocre Geoscience Services (OGS), Burren RPL, Ministry of Oil-Iraq, Eni Corporate University, Standford University, European Universities, European Research Institutes, NorskHydro Oil Company, Oil E&P Companies, just to name a few.

Dr. Petrus has a **PhD** in **Geology** and **Tectonophysics** and **Master** and **Bachelor** degrees in **Earth Sciences** from the **Utrecht University**, **The Netherlands**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management** (**ILM**), a Secretary and Treasurer of Board of Directors of Multicultural Centre, Association Steunfonds SSH/SSR and Founding Member of Sfera Association. He has further published several scientific publications, journals, research papers and books and delivered numerous trainings, workshops, courses, seminars and conferences internationally.

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	***Basics of Uni & Bivariate Geostatistics***
0930 – 0945	*Break*
0945 – 1100	***Data Preparation, including Well Log Edits & Calculations as well as Well Log Upscaling for Discrete & Continuous Data***
1100 – 1215	***Facies Modeling***
1215 – 1230	*Break*
1230 – 1420	***Facies Modeling (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Data Analysis***
0930 – 0945	*Break*
0945 – 1100	***Sequential Indicator Simulation***
1100 – 1215	***Object Facies Modeling***
1215 – 1230	*Break*
1230 – 1420	***Object Facies Modeling (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Truncated Gaussian Simulation with & without Trends***
0930 – 0945	*Break*
0945 – 1100	***Using Secondary Data to Populate Facies Models***
1100 – 1215	***Petrophysical Modeling Data Analysis***
1215 – 1230	*Break*
1230 – 1420	***Petrophysical Modeling Data Analysis (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

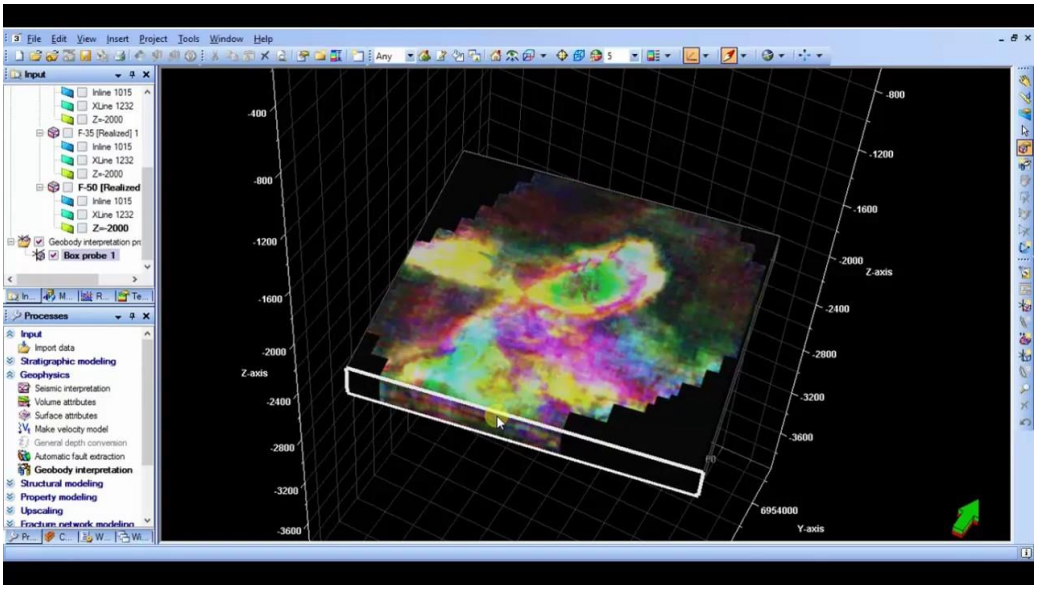
0730 – 0930	***Sequential Gaussian Simulation***
0930 – 0945	*Break*
0945 – 1100	***Sequential Gaussian Simulation (cont'd)***
1100 – 1215	***Gaussian Random Function Simulation***
1215 – 1230	*Break*
1230 – 1420	***Gaussian Random Function Simulation (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Kriging***
0930 – 0945	*Break*
0945 – 1100	***Kriging (cont'd)***
1100 – 1215	***Using Secondary Data to Populate Petrophysical Models***
1215 – 1230	*Break*
1230 – 1345	***Using Secondary Data to Populate Petrophysical Models (cont'd)***
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

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 one of our state-of-the-art simulators "Petrel software".



Petrel Software

Course Coordinator

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