

COURSE OVERVIEW DE1056
Petrel Workflow Editor & Uncertainty Analysis

Course Title

Petrel Workflow Editor & Uncertainty Analysis

Course Reference

DE1056

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Date/Venue



Session(s)	Date	Venue
1	April 28-May 02, 2024	Oryx Meeting Room, Doubletree By Hilton Doha-Al Sadd, Doha, Qatar
2	September 29-October 03, 2024	
3	November 24-28, 2024	

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 is designed to provide participants with a detailed and up-to-date overview of Petrel geological workflows and uncertainty analysis. It covers the workflow editor and the uncertainty/optimization process; how to create own workflows for batch processing operations; and setting up, editing and repeating processes with new data for a complete reservoir modeling workflow.



To take full advantage of the uncertainty handling in Petrel, participant need to have an understanding of the Workflow editor, which is the building block of the uncertainty and optimization process.

Further, the course will also discuss the sensitivities and uncertainties of a base case volumetric reservoir model; the structural uncertainties related to surfaces and velocities; and the stochastic parameters related to fluid contacts, facies and petrophysical uncertainties.

During this interactive course, participants will learn the workflow editor interface and logic; running the predefined workflows; updating the 3D models with new input data; the uncertainty and optimization process; the sensitivity and uncertainty analysis setup; and the structural uncertainty and proper uncertainty.

Course Objectives

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

- Apply and gain a comprehensive knowledge on Petrel geological workflows and uncertainty analysis
- Discuss workflow editor interface and logic and run predefined workflows
- Update 3D models with new input data and identify the uncertainty and optimization process
- Illustrate sensitivity and uncertainty analysis setup
- Determine structural uncertainty, fluid contact uncertainty of proper uncertainty

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 Petrel geological workflows and uncertainty analysis for geoscientists and exploration, production and development geologists.

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 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.

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 **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.

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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:



Ms. Diana Helmy, PgDip, MSc, BSc, is a **Senior Petroleum & Geologist** with extensive years of experience within the **Oil & Gas, Refinery** and **Petrochemical** industries. Her expertise widely covers in the areas of **Tubular & Pipe Handling, Tubular Strength, Casing & Tubing Design, Production/Injection Loads** for Casing Strings & Tubing, **Drilling Loads, Drilling & Production Thermal Loads, Well Architecture, Wellhead Integrity, Well Integrity & Artificial Lift, Well Integrity Management, Well Completion & Workover, Applied Drilling**

Practices, Horizontal Drilling, Petroleum Production, Resource & Reserve Evaluation, Reserves Estimation & Uncertainty, Methods for Aggregation of Reserves & Resources, Horizontal & Multilateral Wells, Well Completion & Stimulation, Artificial Lift System Selection & Design, Well Testing & Oil Well Performance, Well Test Design Analysis, Well Test Operations, Well Testing & Perforation, Directional Drilling, Formation Damage Evaluation & Preventive, Formation Damage Remediation, Drilling & Formation Damage, Simulation Program for The International Petroleum Business, Well Testing & Analysis, Horizontal & Multilateral Wells & Reservoir Concerns, Oil & Gas Analytics, Petrophysics & Reservoir Engineering, Subsurface Geology & Logging Interpretation, Petroleum Geology, Geophysics, Seismic Processing & Exploration, Seismic Interpretation, Sedimentology, Stratigraphy & Biostratigraphy, Petroleum Economy, Core Analysis, Well Logging Interpretation, Core Lab Analysis & SCAL, Sedimentary Rocks, Rock Types, Core & Ditch Cuttings Analysis, Clastic, Carbonate & Basement Rocks, Stratigraphic Sequences, Petrographically Analysis, Thin Section Analysis, Scanning Electron Microscope (SEM), X-ray Diffraction (XRD), Cross-Section Tomography (CT), Conventional & Unconventional Analysis, Porosity & Permeability, Geological & Geophysical Model, Sedimentary Facies, Formation Damage Studies & Analysis, Rig Awareness, 2D&3D Seismic Data Processing, Static & Dynamic Correction, Noise Attenuation & Multiple Elimination Techniques, Velocity Analysis & Modeling and various software such as Petrel, OMEGA, LINUX, Kingdom and Vista. She is currently a **Senior Consultant wherein she is responsible in different facets of **Petroleum & Process Engineering** from managing **asset integrity, well integrity process, pre-commissioning/commissioning** and **start up** onshore & offshore process facilities.**

During her career life, Ms. Diana worked as a **Reservoir Geologist, Seismic Engineer, Geology Instructor, Geoscience Instructor & Consultant** and **Petroleum Geology Researcher** from various international companies like the **Schlumberger, Corex Services** for Petroleum Services, Petrolia Energy Supplies and Alexandria University.

Ms. Diana has a **Postgraduate Diploma in Geophysics, Master** degrees in **Petroleum Geology** and **Geophysics** and a **Bachelor's** degree in **Geology**. Further, she is a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management (ILM)** and has delivered numerous trainings, courses, workshops, 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	<i>Registration, Coffee, Welcome & Introduction</i>
0800 – 0815	PRE-TEST
0815 – 0830	Workflow Editor Interface & Logic
0830 – 0930	<i>Break</i>
0930 – 0945	Workflow Editor Interface & Logic (cont'd)
0945 – 1100	Running Predefined Workflows
1100 – 1215	<i>Break</i>
1215 – 1230	Running Predefined Workflows (cont'd)
1230 – 1420	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0930	Creating User Defined Workflows
0930 – 0945	<i>Break</i>
0945 – 1100	Creating User Defined Workflows (cont'd)
1100 – 1215	Updating 3D Models with New input data
1215 – 1230	<i>Break</i>
1230 – 1420	Updating 3D models with new Input Data (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 – 0930	Updating 3D Models with New Input Data (cont'd)
0930 – 0945	<i>Break</i>
0945 – 1100	Get familiar with the Uncertainty & Optimization Process
1100 – 1215	Get familiar with the Uncertainty & Optimization Process (cont'd)
1215 – 1230	<i>Break</i>
1230 – 1420	Get familiar with the Uncertainty & Optimization Process (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4

0730 – 0930	Sensitivity & Uncertainty Analysis Setup
0930 – 0945	<i>Break</i>
0945 – 1100	Sensitivity & Uncertainty Analysis Setup (cont'd)
1100 – 1215	Structural Uncertainty
1215 – 1230	<i>Break</i>
1230 – 1420	Structural Uncertainty (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day Four</i>

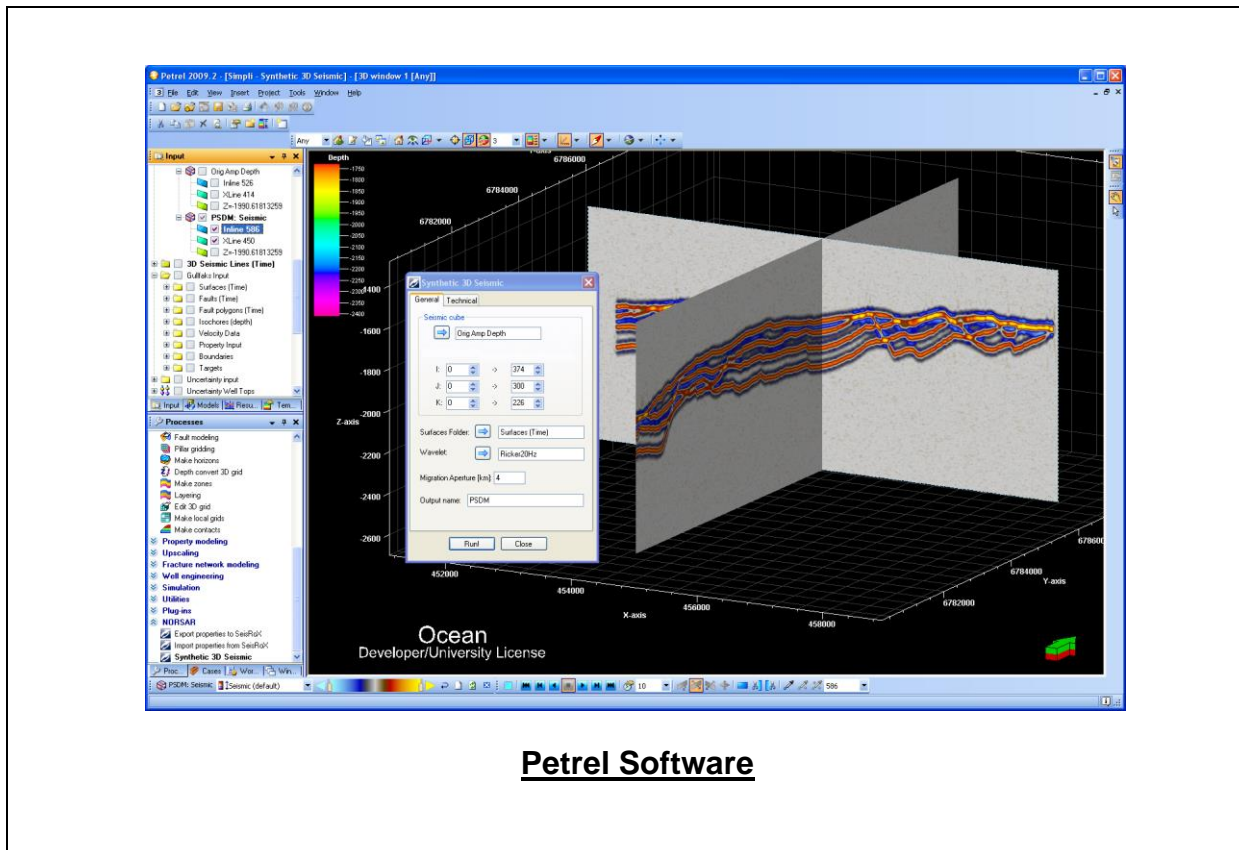
Day 5

0730 – 0930	Fluid Contact Uncertainty
0930 – 0945	<i>Break</i>

0945 - 1100	Fluid Contact Uncertainty (cont'd)
1100 - 1215	Property Uncertainty
1215 - 1230	<i>Break</i>
1230 - 1300	Property Uncertainty (cont'd)
1300 - 1315	Course Conclusion
1315- 1415	POST-TEST
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

Jaryl Castillo, Tel: +974 4423 1327, Email: jaryl@haward.org