COURSE OVERVIEW DE0059
Seismic Interpretation & Structural Styles

Course Title
Seismic Interpretation & Structural Styles



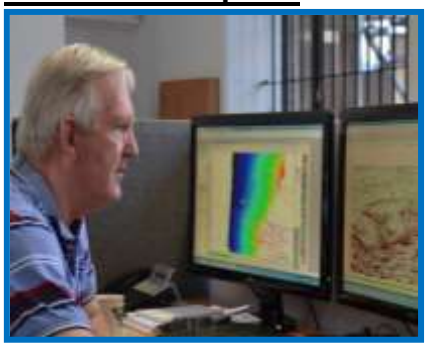
Course Date/Venue
November 23-27, 2026/Shaheen Meeting Room, VOGO Abu Dhabi Golf Resort & Spa formerly Westin Abu Dhabi Golf Resort & Spa, Abu Dhabi, UAE

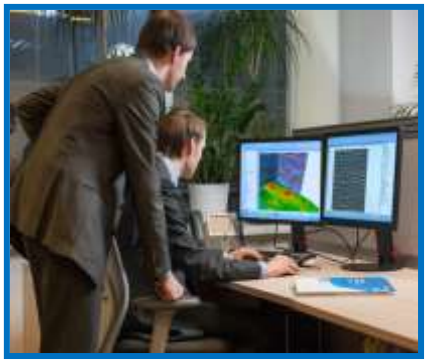
2.75 CEUs (27.5 PDHs) AWARD

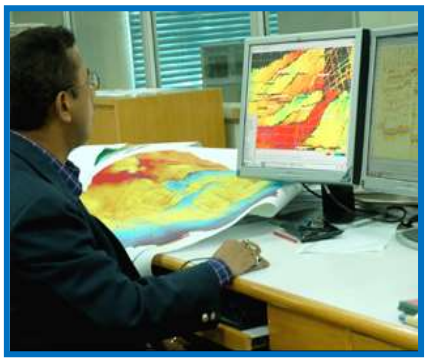
Course Reference
DE0059

Course Duration/Credits
Five days/2.75 CEUs/27.5 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.

This course is designed to provide participants with a detailed and up-to-date overview of Seismic Interpretation and Structural Styles. It covers the role of seismic interpretation in exploration and production; the basic concepts in seismic data processing and interpretation; the different types of seismic data, including 2D and 3D seismic data; preparing and processing seismic data for techniques, data quality control, data conditioning, and data enhancement; the seismic data processing workflows, statics correction, noise reduction, and velocity analysis; and interpreting seismic data for techniques, including horizon interpretation, fault interpretation, and structure interpretation.

Further, the course will also discuss the seismic interpretation workflows, seismic attribute analysis and seismic inversion; the different types of structural styles, covering extensional, compressional, strike-slip, and shear structures; the various techniques for identifying structural styles in seismic data that include mapping and cross-sectional analysis; characterizing reservoirs using seismic data, seismic facies analysis, seismic rock physics, and seismic inversion; and the reservoir characterization workflows, seismic-based volumetrics, seismic-based fluid identification, and seismic-based reservoir property prediction.

During this interactive course, participants will learn the industry-standard seismic interpretation software and its features and capabilities; interpreting complex seismic data for advanced techniques, covering time-lapse (4D) seismic, prestack inversion, and prestack time migration; and the advanced seismic interpretation workflows, including time-lapse seismic interpretation, full-waveform inversion, and rock physics modeling.

Course Objectives/Outcomes & Benefits for the Participants

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

- Apply and gain an in-depth knowledge on seismic interpretation and structural styles
- Discuss the role of seismic interpretation in exploration and production and the basic concepts in seismic data processing and interpretation
- Identify the different types of seismic data, including 2D and 3D seismic data
- Carryout techniques for preparing and processing seismic data, including data quality control, data conditioning, and data enhancement
- Illustrate seismic data processing workflows, including statics correction, noise reduction, and velocity analysis
- Employ techniques for interpreting seismic data, including horizon interpretation, fault interpretation, and structure interpretation
- Describe seismic interpretation workflows, including seismic attribute analysis and seismic inversion
- Recognize the different types of structural styles, including extensional, compressional, strike-slip, and shear structures
- Apply various techniques for identifying structural styles in seismic data that include mapping and cross-sectional analysis
- Characterize reservoirs using seismic data, including seismic facies analysis, seismic rock physics, and seismic inversion
- Discuss reservoir characterization workflows, seismic-based volumetrics, seismic-based fluid identification, and seismic-based reservoir property prediction
- Identify industry-standard seismic interpretation software and its features and capabilities
- Carryout advanced techniques for interpreting complex seismic data, covering time-lapse (4D) seismic, prestack inversion, and prestack time migration
- Illustrate advanced seismic interpretation workflows, including time-lapse seismic interpretation, full-waveform inversion, and rock physics 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 conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of seismic interpretation and structural styles for all geoscientists, geophysicists, seismic interpreters, seismic acquisition and processing specialists, reservoir engineers and project managers.

Training Methodology

Our courses employ an interactive, learner-centred methodology that integrates theoretical knowledge with practical application. The training is delivered through a suitable combination of some or all of the following methods, selected according to the course content and learning objectives:

- Instructor-led presentations and facilitated discussions
- Practical workshops and participant presentations
- Hands-on exercises and real-world case studies
- Equipment demonstrations and technical drawings
- Hardware- and software-based simulations
- Gamification & Role Play in soft-skills courses only
- Virtual Reality (VR) and Augmented Reality (AR)
- Instructional videos and other relevant training resources

This blended approach encourages active participation, strengthens practical skills and supports the effective application of acquired knowledge in the workplace.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

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 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

Haward's 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**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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 center, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- 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 **2.75 CEUs** (Continuing Education Units) or **27.5 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:



Dr. Mohsen Salem, PhD, MSc, BSc, is a **Senior Geophysicist** with over **30 years** of industrial experience within the **Oil & Gas**, **Petrochemical** and **Refinery Industries**. His expertise widely covers in the areas of **Sedimentology** & **Sequence Stratigraphy**, Properties of **Sedimentary Rocks** & **Processes**, Formation, Transportation, Deposition & Lithification (**Transformation to Rock**) of **Sediments**, Interpretation of Ancient **Environmental Conditions**, **Rock Physics** & **Seismic Data**, **Geology** & **Geophysics**, **Well Seismic Operations**, 2D & 3D **Seismic Acquisition**, Geo-Electric Methods, **Seismic Interpretation**, **Seismic Data Acquisition**, **Seismic Processing Sequences**, **Seismic Surveying** Operations & Investigation, **Seismic Inversion**, **Seismic Exploration**, **Reservoir** Characterization, **Play Assessment & Prospect Evaluation**, **Prospect Identification** Using **Sedimentological** & **Rock** Characteristics, **Volumetric Calculation**, Risking & Economics, **Petroleum Basin Formation**, **Basin Analysis** Principles & Techniques, **Hydraulic Fracturing**, Fault & Fracture Characterization, Trap Analysis, **Prospects Risk Analysis**, **Geological Risk & Uncertainty**, **Resource Assessment**, **E&P Risk Analysis Evaluation**, **Prospect Volume Calculation**, **Hydrocarbon** Charge Assessment, Acoustic Impedance, Porosity Volume Generation, **Fracture Reservoir Modelling**, Basin Potential Assessment, **Source Rock Estimation**, **Seismic Data**, Exploration Prospect Conversion, Shale Plays Evaluation, Shale Exploration, **Well Testing**, Control Well-Flow Lines Parameters, **Casing & Cementing**, **Reserve Estimation**, **Reserve Evaluation**, **Reservoir Management**, **Reservoir Engineering**, **Petroleum Geology**, Exploration Production, Tectonics & Structural Development, Clastic Reservoir, **Carbonate Reservoir**, Subsurface Facies Analysis, Borehole Images, Geophysical Methods, **Oil & Gas Exploration**, Exploration Geochemistry, **Structural Geology**, **Wellsite Geology**, **Geologic Modeling**, Analytic Modelling Methods, **Petroleum Geology**, **Geophysical Exploration**, **Petroleum Exploration**, **Petroleum Engineering**, Basin Modelling & Total Petroleum System (**TPS**), Inversion Techniques, **Well Testing & Data Interpretation** and **Oil & Gas Reserves Estimations**. He is currently the **University Professor** wherein he is responsible in delivering Geophysical courses and involve in supervising and examining MSc and PhD thesis.

During his career life, Dr. Mohsen has gained his practical and field experience through his various significant positions and dedication as the **Geophysics General Manager**, **Chief Geophysicist**, **Senior Geophysicist**, **Development Geophysicist**, **Petroleum Instructor**, **Technical Consultant** and **Demonstrator** for various companies and universities such as the Petrogulfmisr Oil Co., Suez Oil Co., Limited Nation, Khalda Oil Co., Cairo University, Ain Shams University and Al-Azhar University.

Dr. Mohsen has **PhD** and **Master's** degree in **Geophysics** and a **Bachelor's** degree in **Geology**. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**), an active member of the Egyptian Geophysical Society and has authored various technical published papers on Geophysical prospecting. He has further delivered numerous trainings, courses, seminars, workshops 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: Monday, 23rd of November 2026

0800 – 0830	*Registration & Coffee*
0830 – 0845	*Welcome & Introduction*
0845 – 0900	***PRE-TEST***
0900 – 0930	***Introduction to Seismic Interpretation***
0930 – 0945	*Break*
0945 – 1030	***Seismic Interpretation & its Role in Exploration & Production***
1030 – 1100	***Basic Concepts in Seismic Data Processing & Interpretation***
1100 – 1200	***Different Types of Seismic Data, Including 2D & 3D Seismic Data***
1200 – 1215	*Break*
1215 – 1350	***Seismic Data Processing***
1350 – 1400	***Recap***
1400	*Lunch & End of Day One*

Day 2: Tuesday, 24th of November 2026

0800 – 0930	***Techniques for Preparing & Processing Seismic Data, Including Data Quality Control, Data Conditioning & Data Enhancement***
0930 – 0945	*Break*
0945 – 1030	***Seismic Data Processing Workflows, Including Statics Correction, Noise Reduction & Velocity Analysis***
1030 – 1100	***Seismic Interpretation Fundamentals***
1100 – 1200	***Techniques for Interpreting Seismic Data, Including Horizon Interpretation, Fault Interpretation & Structure Interpretation***
1200 – 1215	*Break*
1215 – 1350	***Seismic Interpretation Workflows, Including Seismic Attribute Analysis & Seismic Inversion***
1350 – 1400	***Recap***
1400	*Lunch & End of Day Two*

Day 3: Wednesday, 25th of November 2026

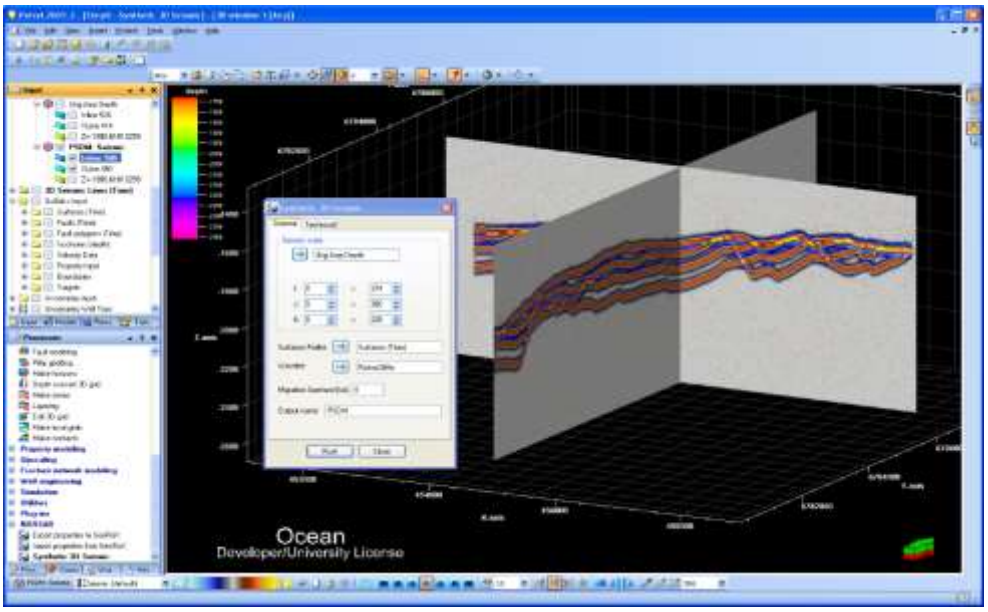
0800 – 0930	***Structural Styles in Seismic Interpretation***
0930 – 0945	*Break*
0945 – 1030	***Different Types of Structural Styles, Including Extensional, Compressional, Strike-Slip & Shear Structures***
1100 – 1200	***Techniques for Identifying Structural Styles in Seismic Data, Including Mapping & Cross-Sectional Analysis***
1200 – 1215	*Break*
1215 – 1350	***Reservoir Characterization***
1350 – 1400	***Recap***
1400	*Lunch & End of Day Three*

Day 4:	Thursday, 26th of November 2026
0800 – 0930	***Techniques for Characterizing Reservoirs Using Seismic Data, Including Seismic Facies Analysis, Seismic Rock Physics & Seismic Inversion***
0930 – 0945	*Break*
0945 – 1030	***Reservoir Characterization Workflows, Including Seismic-Based Volumetrics, Seismic-Based Fluid Identification & Seismic-Based Reservoir Property Prediction***
1100 – 1200	***Seismic Interpretation Case Studies*** *Analyzing Real-World Case Studies of Seismic Interpretation, Including Exploration and Appraisal, Field Development and Production, and Enhanced Oil Recovery and Carbon Capture • Evaluating the Impact of Seismic Interpretation on Exploration and Production Decision-Making, Including Reservoir Delineation, Reserve Estimation, and Production Optimization*
1200 – 1215	*Break*
1215 – 1350	***Seismic Interpretation Software*** *Industry-Standard Seismic Interpretation Software, Including Petrel, Kingdom, and Landmark • Features and Capabilities of Seismic Interpretation Software, Including Horizon Interpretation, Fault Interpretation, and Structure Interpretation*
1350 – 1400	***Recap***
1400	*Lunch & End of Day Four*

Day 5:	Friday, 27th of November 2026
0800 – 0930	***Advanced Seismic Interpretation Techniques***
0930 - 0945	*Break*
0945 – 1100	***Techniques for Interpreting Complex Seismic Data, Including Time-Lapse (4D) Seismic, Prestack Inversion & Prestack Time Migration***
1100 – 1200	***Advanced Seismic Interpretation Workflows, Including Time-Lapse Seismic Interpretation, Full-Waveform Inversion & Rock Physics Modeling***
1200 - 1215	*Break*
1215 – 1315	***Group Project & Presentations*** *Group Project on Seismic Interpretation and Structural Styles • Presentation and Discussion of Group Project Results • Review of Best Practices and Tips for Successful Seismic Interpretation, Including Seismic Data Processing, Structural Style Analysis, and Reservoir Characterization*
1315 – 1330	***Course Conclusion***
1330 – 1345	***POST-TEST***
1345 – 1400	*Presentation of Course Certificates*
1400	*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 the "Petrel Software".



Petrel Software

Course Coordinator

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