

COURSE OVERVIEW DE0698
Borehole Geophysics

Course Title

Borehole Geophysics

Course Date/Venue

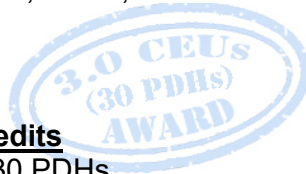
Session 1: May 26-30, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Session 2: November 16-20, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Reference

DE0698



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 borehole seismic acquisition, processing and operation. It covers the borehole seismic principles and applications; the seismic acquisition equipment and job planning for offshore and onshore; the VSP acquisition, hDVS acquisition and modelling, wellsite and post-job deliverables; the borehole seismic modelling covering walkabove, offset VSP, walkaway, 3DVSP modelling and microseismic modelling; the borehole seismic processing comprising of VSP workflow, corridor stack and well to seismic tie; and the time correction and sonic drift.



During this interactive course, participants will learn the reporting and time depth computation; the advanced operations, navigation, walkaway and walkabove acquisition; the 3D VSP and PAT (portable airgun tank); the advanced conveyance and application for TLC, tractors, through drillpipe seismic and seismicVISION; and the advanced processing and application through imaging, Q--factor, quantitative borehole matching, VSP inversion, anisotropy, AVO-AVA, microseismic advanced applications and walkaway imaging practical.

Course Objectives

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

- Apply and gain systematic techniques on borehole seismic acquisition, processing and operation
- Carryout borehole seismic acquisition and processing principles, procedures, standards and operation skills
- Discuss borehole seismic principles and applications
- Identify seismic acquisition equipment and apply job planning for offshore and onshore
- Recognize VSP acquisition, hDVS acquisition and modelling, wellsite and post-job deliverables
- Illustrate borehole seismic modelling covering walkabove, offset VSP, walkaway, 3DVSP modelling and microseismic modelling
- Describe borehole seismic processing comprising of VSP workflow, corridor stack and well to seismic tie
- Apply time correction and sonic drift as well as reporting and time depth computation
- Carryout advanced operations, navigation, walkaway and walkabove acquisition
- Identify 3D VSP and PAT (portable airgun tank)
- Employ advanced conveyance and application for TLC, tractors, through drillpipe seismic and seismicVISION
- Implement advanced processing and application through imaging, Q--factor, quantitative borehole matching, VSP inversion, anisotropy, AVO-AVA, microseismic advanced applications and walkaway imaging practical

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 borehole seismic acquisition, processing and operation for geoscientists, operations geologists and geophysicists, drilling operator, and those who are involved in borehole seismic acquisition, processing and operation.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course 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 Fee

US\$ 8,000 per Delegate + **VAT**. This rate includes H-STK® (Howard 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 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	Introduction to Borehole Seismic Principles Borehole Seismic Principles & Application • VSP Acquisition Examples • VSP Processing Examples
0930 – 0945	Break
1100 – 1230	Borehole Seismic Acquisition & Tools Seismic Acquisition Equipment
1230 – 1245	Break
1245 – 1420	Borehole Seismic Acquisition & Tools (cont'd) Job Planning & Preparation – Offshore/Onshore
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2

0730 – 0930	VSP Acquisition – Vibroseis & Airgun Operation Safety • Rig-Up VSI • Vibro Setup • VSI Run in Hole • VSP Acquisition – VSI & Vibroseis
0930 – 0945	Break
0945 – 1100	VSP Acquisition – Vibroseis & Airgun (cont'd) Continuous Recording with VSI (Microseismic Mode) • Tool 3-axes Orientation with Offset Source • Operation Safety • Airgun Setup • VSI Run in Hole • VSP Acquisition -VSI & Airguns • Run VSI to TD for hDVS acquisition •
1230 – 1245	Break
1245 – 1420	hDVS Acquisition & Modelling Operation Safety • VSP Acquisition with hDVS • Rig Down VSI
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two





Day 3

0730 – 0930	Wellsite & Post-Job Deliverables Wellsite Acquisition Deliverables • Wellsite Processing & Field Acquisition Report
0930 – 0945	Break
0945 – 1100	Borehole Seismic Modelling Walkabove, Offset VSP, Walkaway & 3DVSP Modelling
1230 – 1245	Break
1245 – 1420	Borehole Seismic Modelling (cont'd) Microseismic Modelling • Modelling Example - Practical
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4

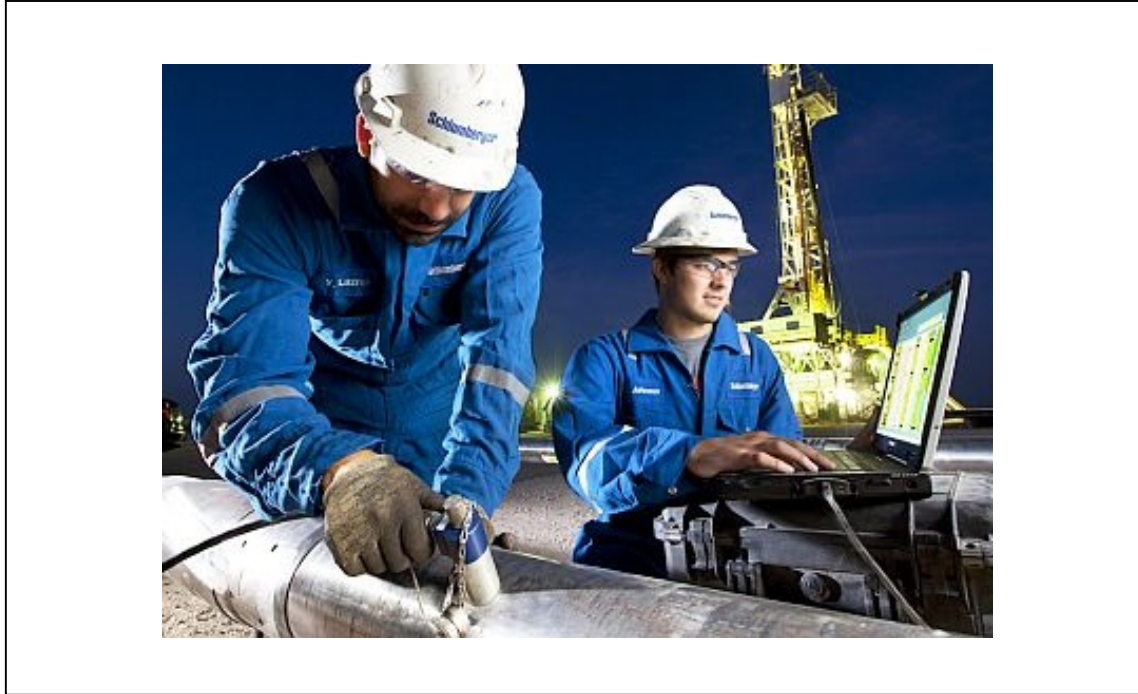
0730 – 0930	Borehole Seismic Processing VSP Workflow, Corridor Stack, Well to Seismic Tie • Exercise – Time Correction & Sonic Drift •
0930 – 0945	Break
0945 – 1100	Borehole Seismic Processing (cont'd) Reporting & Time Depth Computation • ZVSP Processing Workflow – Practical
1230 – 1245	Break
1245 – 1420	Advanced Operations Navigation – Walkaway & Walkabove Acquisition (SWINGS Practical Demo & Classroom) • 3D VSP • PAT (Portable Airgun Tank)
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 5

0730 – 0930	Advanced Conveyance & Applications TLC • Tractors • Through Drillpipe Seismic • SeismicVISION
0930 – 0945	Break
0945 – 1100	Advanced Processing & Applications Imaging – Offset, Walkway, 3D-VSP • Q-Factor, Quantitative Borehole Matching • VSP Inversion (Acoustic Impedance, Full-Waveform) • Anisotropy • AVO-AVA
1230 – 1245	Break
1245 – 1345	Advanced Processing & Applications (cont'd) Microseismic Advanced Applications • Walkaway Imaging - Practical
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	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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