

COURSE OVERVIEW DE0486
Well Testing & Equipment

Course Title

Well Testing & Equipment

Course Date/Venue

August 04-08, 2024/TBA Meeting Room,
 Divan Istanbul Sisli, Istanbul, Turkey

Course Reference

DE0486

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies 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 Well Testing and Equipment. It covers the importance, types and safety considerations of well testing; the fundamentals of well hydraulics, well testing equipment, data acquisition systems, wireline operations and health, safety, and environmental (HSE) practices; the surface testing equipment and downhole testing tools; the wireline logging and testing and well test design and planning; testing string design and calibrating and maintenance of equipment; and the well test data and pressure transient analysis.



During this interactive course, participants will learn the rate transient analysis, formation evaluation techniques and production optimization; the advanced wireline testing tools, multi-phase flow testing and reservoir characterization; the extended well tests (EWT), well test simulation models and new technologies in well testing; combining various well testing techniques and the integrated analysis for better results; and the techniques for improving operational efficiency, cost optimization strategies and HSE best practices in well testing.

Course Objectives

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

- Apply and gain an in-depth knowledge on well testing and equipment
- Discuss the importance, types and safety considerations of well testing
- Interpret the fundamentals of well hydraulics covering pressure behavior in wells, fluid flow in porous media and basic wellbore concepts
- Recognize well testing equipment, data acquisition systems, wireline operations and health, safety, and environmental (HSE) practices
- Identify surface testing equipment and downhole testing tools as well as apply wireline logging and testing
- Carryout well test design and planning, test string design and calibration and maintenance of equipment
- Conduct well tests, interpret well test data and apply pressure transient analysis
- Employ rate transient analysis, formation evaluation techniques and production optimization
- Apply advanced wireline testing tools, multi-phase flow testing and reservoir characterization
- Discuss extended well tests (EWT), well test simulation models and new technologies in well testing
- Combine various well testing techniques and apply integrated analysis for better results
- Implement techniques for improving operational efficiency, cost optimization strategies and HSE best practices in well testing

Who Should Attend

This course provides an overview of all significant aspects and considerations of well testing and equipment for well service engineers and the entire drilling and compensations team, including operators, drilling contractors, and service companies. The course is a must for drilling operations senior engineers, section leaders, drilling engineering supervisors and well engineers.

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: -

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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.

Course Fee

US\$ 8,500 per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), 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 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. Konstantin Zorbalas, MSc, BSc, is a Senior Petroleum Engineer & Well Completions Specialist with over 25 years of offshore and onshore experience in the Oil & Gas, Refinery & Petrochemical industries. His wide expertise includes Workovers & Completions, Petroleum Risk & Decision Analysis, Electrical Submersible Pumps Application, ESP Assembly & Disassembly Techniques, ESP Modeling & Design, ESP Construction & Operational Monitoring, ESP Troubleshooting & Maintenance, Acidizing Application in Sandstone & Carbonate, Well Testing Analysis, Stimulation Operations, Reserves Evaluation, Reservoir Fluid Properties, Reservoir Engineering & Simulation Studies, Reservoir Monitoring, Artificial Lift Design, Gas Operations, Workover/Remedial Operations & Heavy Oil Technology, Applied Water Technology, Oil & Gas Production, X-mas Tree & Wellhead Operations & Testing, Artificial Lift Systems (Gas Lift, ESP, and Rod Pumping), Well Cementing, Production Optimization, Well Completion Design, Sand Control, PLT Correlation, Slickline Operations, Acid Stimulation, Well testing, Production Logging, Project Evaluation & Economic Analysis. Further, he is actively involved in **Project Management** with special emphasis in production technology and field optimization, performing conceptual studies, economic analysis with risk assessment and field development planning. He is currently the **Senior Petroleum Engineer & Consultant of National Oil Company** wherein he is involved in the mega-mature fields in the Arabian Gulf, predominantly carbonate reservoirs; designing the acid stimulation treatments with post-drilling rigless operations; utilizing CT with tractors and DTS systems; and he is responsible for gas production and preparing for reservoir engineering and simulation studies, well testing activities, field and reservoir monitoring, production logging and optimization and well completion design.

During his career life, Mr. Zorbalas worked as a **Senior Production Engineer, Well Completion Specialist, Production Manager, Project Manager, Technical Manager, Technical Supervisor & Contracts Manager, Production Engineer, Production Supervisor, Production Technologist, Technical Specialist, Business Development Analyst, Field Production Engineer and Field Engineer.** He worked for many **world-class oil/gas companies** such as **ZADCO, ADMA-OPCO, Oilfield International Ltd, Burlington Resources (later acquired by Conoco Phillips), MOBIL E&P, Saudi Aramco, Pluspetrol E&P SA, Wintershall, Taylor Energy, Schlumberger, Rowan Drilling and Yukos EP** where he was in-charge of the **design and technical analysis** of a gas plant with capacity **1.8 billion m3/yr gas.** His achievements include **boosting oil production 17.2% per year** since 1999 using **ESP and Gas Lift systems.**

Mr. Zorbalas has **Master and Bachelor degrees in Petroleum Engineering** from the **Mississippi State University, USA.** Further, he is an **SPE Certified Petroleum Engineer, Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM),** an active member of the **Society of Petroleum Engineers (SPE)** and has numerous scientific and technical publications and delivered innumerable training courses, seminars and workshops worldwide.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 04th of August 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Overview of Well Testing Objectives & Importance • Types of Well Tests • Safety Considerations
0930 – 0945	Break
0945 – 1030	Fundamentals of Well Hydraulics Pressure Behavior in Wells • Fluid Flow in Porous Media • Basic Wellbore Concepts
1030 – 1130	Well Testing Equipment Introduction to Surface & Downhole Equipment • Functions & Applications • Equipment Safety Features
1130 – 1215	Data Acquisition Systems Types of Data Acquisition Systems • Data Collection Methods • Real-Time Data Monitoring
1215 – 1230	Break
1230 – 1330	Wireline Operations Wireline Tools & Techniques • Applications in Well Testing • Safety & Operational Protocols
1330 – 1420	Health, Safety & Environmental (HSE) Practices HSE Regulations & Standards • Risk Assessment & Mitigation • Emergency Response Planning
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: Monday, 05th of August 2024

0730 – 0830	Surface Testing Equipment Separator Types & Operations • Flow Meters & Their Usage • Pressure & Temperature Sensors
0830 – 0930	Downhole Testing Tools Pressure Gauges & Recorders • Fluid Sampling Tools • Production Logging Tools
0930 – 0945	Break
0945 – 1100	Wireline Logging & Testing Types of Wireline Logs • Techniques for Wireline Testing • Case Studies & Practical Examples
1100 – 1215	Well Test Design & Planning Designing a Well Test • Test Objectives & Parameters • Planning & Logistics
1215 – 1230	Break



1230 – 1330	Test String Design Components of a Test String • Selection Criteria for Test String Components • Assembly & Installation Procedures
1330 – 1420	Calibration & Maintenance of Equipment Calibration Procedures for Testing Equipment • Routine Maintenance Schedules • Troubleshooting Common Issues
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: Tuesday, 06th of August 2024

0730 – 0830	Conducting Well Tests Step-By-Step Test Procedures • Monitoring & Recording Data • Handling Unexpected Situations
0830 – 0930	Interpreting Well Test Data Data Analysis Techniques • Software Tools for Data Interpretation • Case Studies on Data Interpretation
0930 – 0945	Break
0945 – 1100	Pressure Transient Analysis Fundamentals of Pressure Transient Analysis • Interpretation of Pressure Data • Practical Examples & Exercises
1100 – 1215	Rate Transient Analysis Concepts of Rate Transient Analysis • Application in Well Testing • Examples & Case Studies
1215 – 1230	Break
1230 – 1330	Formation Evaluation Techniques for Evaluating Formation Properties • Role of Well Testing in Formation Evaluation • Practical Applications & Case Studies
1330 – 1420	Production Optimization Using Well Test Data for Production Optimization • Techniques for Improving Production • Case Studies & Examples
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: Wednesday, 07th of August 2024

0730 – 0830	Advanced Wireline Testing Tools Latest Advancements in Wireline Tools • Applications in Complex Well Environments • Case Studies & Examples
0830 – 0930	Multi-Phase Flow Testing Principles of Multi-Phase Flow • Equipment & Techniques for Multi-Phase Flow Testing • Interpretation of Multi-Phase Flow Data
0930 – 0945	Break
0945 – 1100	Reservoir Characterization Role of Well Testing in Reservoir Characterization • Techniques for Characterizing Reservoirs • Practical Examples & Case Studies
1100 – 1215	Extended Well Tests (EWT) Planning & Conducting Extended Well Tests • Data Analysis & Interpretation for EWT • Case Studies & Practical Examples



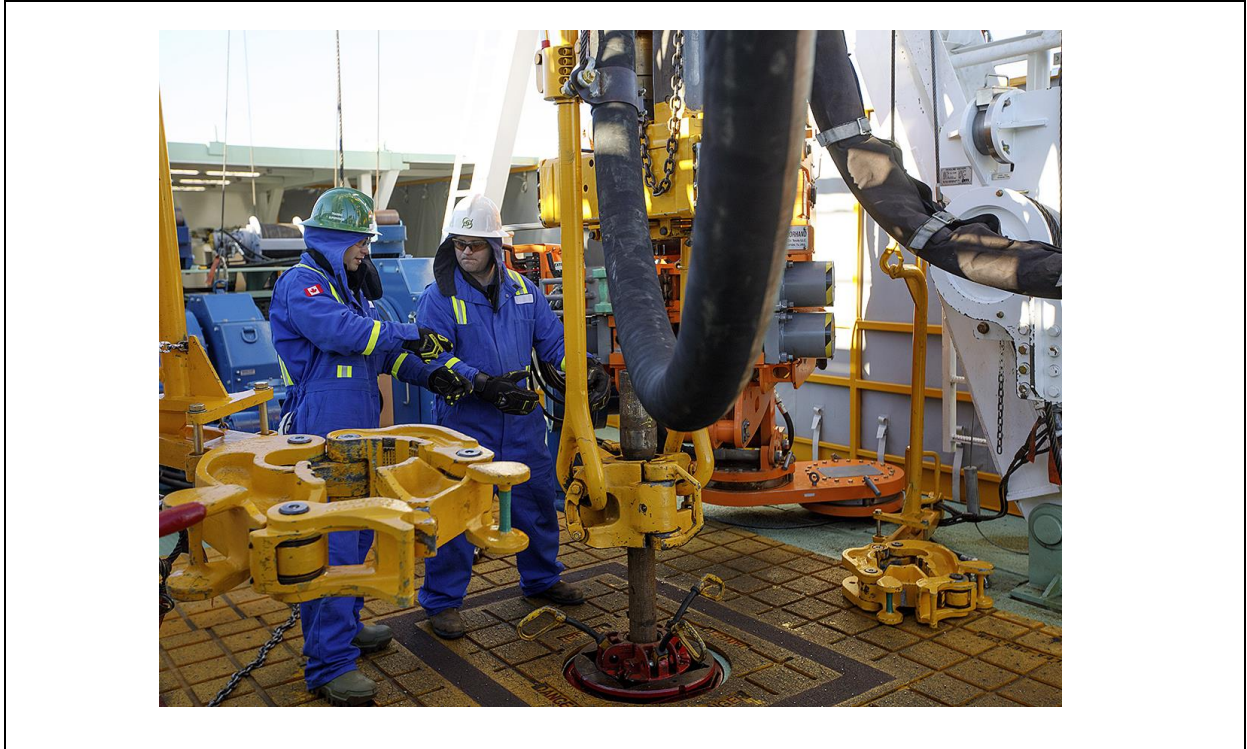
1215 – 1230	Break
1230 – 1420	New Technologies in Well Testing Emerging Technologies & Their Applications • Future Trends in Well Testing • Case Studies on The Implementation of New Technologies
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four

Day 5: Thursday, 08th of August 2024

0730 – 0830	Integrated Well Testing Approach Combining Various Well Testing Techniques • Integrated Analysis for Better Results • Case Studies & Examples
0830 – 0930	Field Applications & Challenges Practical Challenges in the Field • Solutions & Best Practices • Real-World Examples & Case Studies
0930 – 0945	Break
0945 – 1100	Operational Efficiency & Cost Optimization Techniques for Improving Operational Efficiency • Cost Optimization Strategies • Case Studies & Examples
1100 – 1230	HSE Best Practices in Well Testing Advanced HSE Practices • Case Studies on HSE Implementation • Practical Exercises & Role-Plays
1230 – 1245	Break
1245 – 1345	Interactive Session: Q&A & Troubleshooting Addressing Participant Queries • Troubleshooting Common Issues • Interactive Discussion on Best Practices
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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