



## COURSE OVERVIEW DE0822

### Troubleshooting - Well Testing Artificial lift

#### Course Title

Troubleshooting - Well Testing Artificial lift

#### Course Date/Venue

Please see page 3

#### Course Reference

DE0822

#### Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



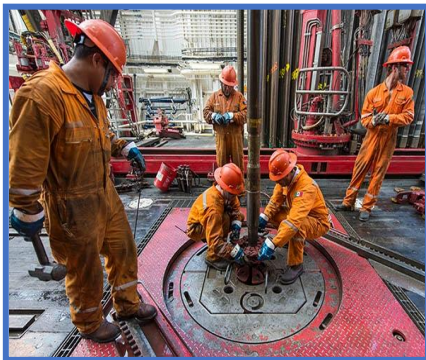
#### Course Description



***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 troubleshooting - well testing artificial lift. It covers the inflow-outflow and IPR curve of well performance; the formation and fluid characterization, PVT and sampling; the reservoirs description and driving mechanisms; the need of well testing, the principles of well testing and well testing processes; testing exploration wells and appraisal wells; and the drill stem testing, objectives, tools, principles of operations, types of DST's and job design principles.



During this interactive course, participants will learn the testing producing wells and opportunistic testing; the well test program design; the key parameters for successful well testing and real time technology in well testing; the early production testing; the well test interpretation and theories behind well test interpretation; the common tools required for test interpretation; observing from various plots and pressure transient analysis; the testing surface and down hole data acquisition; the open hole and cased hole sampling, methods of sampling, sample transfer, types of samplers and carriers; and the surface well testing operations, safety concerns, operations and job design.

### **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
- Discuss inflow-outflow and IPR curve of well performance
- Describe formation and fluid characterization, PVT and sampling
- Explain reservoirs description and driving mechanisms
- Interpret the need of well testing and carryout principles of well testing and well testing processes
- Identify testing exploration wells and appraisal wells
- Determine drill stem testing, objectives, tools, principles of operations, including the types of DST's and job design principles
- Employ testing producing wells, opportunistic testing and well test program design
- Identify the key parameters for successful well testing and real time technology in well testing
- Implement early production testing and well test interpretation as well as discuss theories behind well test interpretation
- Identify the common tools required for test interpretation and illustrate the best practice in well test interpretation
- Observe from various plots and apply pressure transient analysis, testing surface and down hole data acquisition
- Employ open hole and cased hole sampling, methods of sampling, sample transfer, types of samplers and carriers
- Carryout surface well testing operations, safety concerns, operations and job design

### **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 well testing for drilling operations section leaders, drilling engineering supervisors, well engineers, petroleum engineers, well servicing/workover/ completion staff and field production staff.

### Course Date/Venue

Session(s)	Date	Venue
1	March 29-April 20, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
2	May 03-07, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
3	July 12-17, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
4	September 21-25, 2026	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
5	November 22-26, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
6	December 13-17, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
7	January 03-07, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
8	March 15-19, 2027	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain

### Course Fee

Doha	<b>US\$ 8,500</b> per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Istanbul	<b>US\$ 8,500</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
London	<b>US\$ 8,800</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Seville	<b>US\$ 8,800</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	<b>US\$ 8,000</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Cairo	<b>US\$ 8,000</b> per Delegate + <b>VAT</b> . 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.

### **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: -

-  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.

-  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 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's degree 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.



### **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 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 &amp; Coffee</i>
0800 – 0815	<i>Welcome &amp; Introduction</i>
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Well Performance: Inflow – Outflow, IPR Curve</b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>Formation &amp; Fluid Characterization</b> <i>PVT &amp; Sampling</i>
1100 – 1215	<b>Reservoirs Description &amp; Driving Mechanisms</b>
1215 – 1230	<i>Break</i>
1230 – 1420	<b>The Need for Well Testing</b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

#### **Day 2**

0730 – 0930	<b>Principles of Well Testing, Basic Overview of Well Testing Processes</b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>Testing Exploratin Wells - Appraisal Wells</b>
1100 – 1215	<b>Drill Stem Testing &amp; Case Study, Objectives, Tools, Principle of Operations, Types of DST's, Job Design Principles</b>
1215 – 1230	<i>Break</i>
1230 – 1420	<b>Testing Producing Wells, Opportunistic Testing</b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>

#### **Day 3**

0730 – 0930	<b>Well Test Program Design</b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>Key Parameters for Successful Well Testing</b>



1100 – 1215	<b><i>Real-Time Technology in Well Testing</i></b>
1215 – 1230	<i>Break</i>
1230 – 1420	<b><i>Early Production Testing</i></b>
1420 - 1430	<b><i>Recap</i></b>
1430	<i>Lunch &amp; End of Day Three</i>

#### **Day 4**

0730 – 0930	<b><i>Introduction to Well Test Interpretation, Theories Behind Well Test Interpretation</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Common Tools Required for Test Interpretation</i></b>
1100 – 1215	<b><i>Best Practice in Well Test Interpretation</i></b>
1215 – 1230	<i>Break</i>
1230 – 1420	<b><i>Observations from Various Plots, Pressure Transient Analysis</i></b>
1420 - 1430	<b><i>Recap</i></b>
1430	<i>Lunch &amp; End of Day Four</i>

#### **Day 5**

0730 – 0930	<b><i>Testing Surface &amp; Down Hole Data Acquisition</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Open Hole &amp; Cased Hole Sampling, Methods of Sampling, Sample Transfer, Types of Samplers &amp; Carriers</i></b>
1100 – 1215	<b><i>Surface Well Testing Operations: Safety Concerns, Operations &amp; Job Design</i></b>
1215 – 1230	<i>Break</i>
1230 – 1345	<b><i>Surface Well Testing Operations: Safety Concerns, Operations &amp; Job Design (cont'd)</i></b>
1345 - 1400	<b><i>Course Conclusion</i></b>
1400 – 1415	<b><i>POST-TEST</i></b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>



### **Practical Sessions**

This practical and highly-interactive course includes real-life case studies and exercises:-



### **Course Coordinator**

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