

COURSE OVERVIEW DE0831
Advanced Drilling, Completion and Workovers Technology

Course Title

Advanced Drilling, Completion and Workovers Technology

Course Date/Venue

Feruary 16-20, 2025/Al Buraimi Meeting Room, Sheraton Oman Hotel, Muscat

Course Reference

DE0831

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.



The profitability of a well as an investment venture depends on how long it is on stream and how much it produces. Its lifetime and output are naturally due to the reservoir's initial characteristics. However, they are also dependent on keeping the well maintained in good working order and adapting completion properly to the constantly varying conditions prevailing in the reservoir and around the wellbore. The operations that may have to be carried out on a well are numerous and can be broken down into measurements, maintenance and workover.



Working on a well to reclaim or increase oil and gas production is a formidable segment of today's petroleum industry. This was not always the case, however, and many factors have changed the position of the workover industry from a minor to a major role. Foremost of these factors is that petroleum demand continues to grow, while reserves continue to decline. This difference has to be made up with existing wells, which means reworking off-production wells.

This course is designed to provide participants with up-to-date overview of the drilling and workover operations. The course covers the main factors influencing well construction, mud technology, casing design, directional drilling, completion design, the overall approach to a well's flow capacity, the major types of completion configurations, the main phases in completion, treating the pay zone, the special case of horizontal wells, the general configuration of flowing well equipment, the production wellhead, the production string or tubing, packers, downhole equipment, subsurface safety valves, servicing & workover operations, servicing & workover special cases and well stimulation.

During this interactive course, participants will learn the origin of pore pressure; the drilling problems associated with abnormal pressure; the optimization of bit hydraulics, casing design process, single and multiple stage cementing; the trajectory for a directional wells; the directional drilling tools and BHA, directional surveying tools and the main factors influencing completion design; the overall approach to a well's flow capacity; the major types of completion configurations and the main phases in completion; the cement job, perforating and treating the pay zone; the general configuration of flowing well equipment, the production wellhead, the production string or tubing and packers; the down hole equipment, subsurface safety valves and running procedure; the run procedures, artificial lift process and down hole equipment for smart completion; the main types off well servicing and workover; the servicing & workover special cases; and the carbonate acidizing, sandstone acidizing, scales and paraffin removal and squeeze cementing.

Course Objectives

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

- Apply and gain an advanced knowledge in drilling, completion and workovers technology
- Discuss the origin of pore pressure as well as identify drilling problems associated with abnormal pressure, predict and confirm formation fracture pressures, select drilling fluid
- Recognize optimization of bit hydraulics, casing design process, single and multiple stage cementing
- Design the trajectory for a directional well as well as identify directional drilling tools and BHA, directional surveying tools and the main factors influencing completion design
- Explain the overall approach to a well's flow capacity, the major types of completion configurations and the main phases in completion
- Evaluate and restore the cement job as well as demonstrate perforating and treating the pay zone
- Recognize the general configuration of flowing well equipment, the production wellhead, the production string or tubing and packers
- Identify down hole equipment, subsurface safety valves and running procedure
- Perform run procedures, choose an artificial lift process and distinguish down hole equipment for smart completion, main types off well servicing and workover, servicing & workover special cases including well stimulate on methods
- Demonstrate carbonate acidizing, sandstone acidizing, scales and paraffin removal and squeeze cementing

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 is primarily designed for well engineers, drilling supervisors, reservoir engineers, geologists, production and completion engineers needing a practical understanding and an appreciation of well construction, well completion design and operation, well stimulation and intervention.

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\$ 8,000 per Delegate + **VAT**. 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: -

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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 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. Dimitri Massaras is a **Senior Petroleum Engineer** with over **35 years** of **Offshore & Onshore** experience within the **Oil, Gas, Refinery** and **Petrochemical** industries. His expertise widely covers **Petroleum Geology, Geophysics, Advanced Petrophysics, Petroleum Exploration, Petroleum Economics, Petroleum Engineering, Reservoir Modelling, Drilling, Core-to-Log Data Integration (SCAL), Basin Modelling & Total Petroleum System (TPS), Seismic Interpretation, Well Logging, Formation Evaluation, Well Testing & Data Interpretation, Pore Pressure Prediction** and **Oil & Gas Reserves Estimations**. He is also an expert in **Risk Analysis, Refining Unit (De-asphalting), Catalytic Cracking Unit (CCU), Lube Oil Unit, Lighter Fluid Unit, Oil, Gas & Water Samples for HPLC Testing and Analysis, Petrel, SeisWorks, StrataModel, Finder, Charisma, Zmap, Seitex, LogTech & GeoLog, ASU, VSPC** and many more. Currently, he is the **Senior Petroleum Consultant & Asset Manager** of one of the leading exploration company wherein his in-charge of **petroleum exploration** in various regions particularly in **Algeria and Europe**.

During his long career, Mr. Massaras has gained his practical and field experience through his various significant positions and dedication as the **Senior Petroleum Consultant, Senior Geologist, Project Geologist, Operations Geologist** and **Refinery Unit Operator** from numerous international companies such as the **Pennzoil E & P Company, Petrofina SA** and **Gulf Oil E & P Company** just to name a few.

Mr. Massaras has a **Bachelor** degree in **Petroleum Geology & Geophysics** from the **University of Massachusetts** in **USA**. Further, he is a **Certified Instructor/Trainer**; a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)**; a former **Director** of Swiss Section of the **Society of Petroleum Engineers (SPE)**; an active member of **Swiss Association of Energy Geoscientists (SASEG)** and has delivered innumerable trainings 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 course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 16th of February 2025

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Origin of Pore Pressures
0930 – 0945	<i>Break</i>
0945 – 1040	Drilling Problems Associated with Abnormal Pressures
1040 – 1130	Prediction & Confirmation of Formation Fracture Pressures
1130 – 1230	Drilling Fluid Selection
1230 – 1245	<i>Break</i>
1245 – 1345	Optimization of Bit Hydraulics
1345 – 1420	Casing Design Process
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2: Monday, 17th of February 2025

0730 – 0830	Single & Multiple Stage Cementing
0830 – 0930	Designing the Trajectory for a Directional Well
0930 – 0945	<i>Break</i>
0945 – 1030	Directional Drilling Tools & BHA
1030 – 1130	Directional Surveying Tools
1130 – 1230	Main Factors Influencing Completion Design
1230 – 1245	<i>Break</i>
1245 – 1330	Overall Approach to a Well's Flow Capacity
1330 – 1420	Major Types of Completion Configurations
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3: Tuesday, 18th February 2025

0730 – 0830	Main Phases in Completion
0830 – 0930	Evaluating & Restoring the Cement Job
0930 – 0945	<i>Break</i>
0945 – 1045	Perforating
1045 – 1145	Treating the Pay Zone
1145 – 1230	General Configuration of Flowing Well Equipment
1230 – 1245	<i>Break</i>
1245 – 1330	The Production Wellhead
1330 – 1420	The Production String or Tubing
1420 – 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4: Wednesday, 19th of February 2025

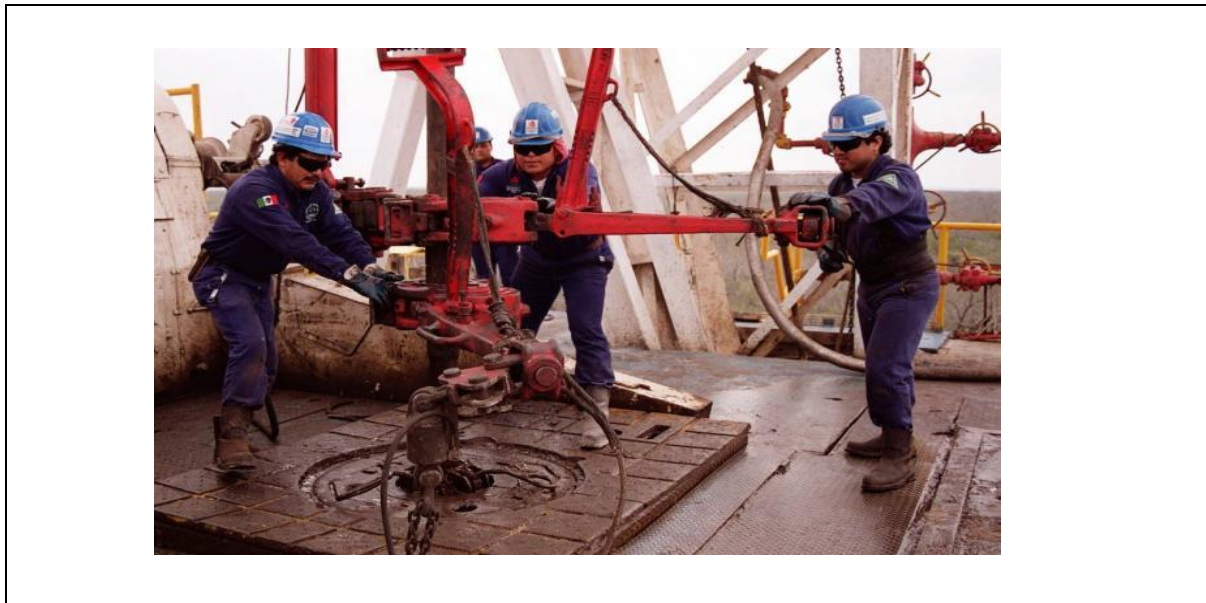
0730 – 0830	<i>Packers</i>
0830 – 0930	<i>Down Hole Equipment</i>
0930 – 0945	<i>Break</i>
0945 – 1045	<i>Subsurface Safety Valves</i>
1045 – 1115	<i>Running Procedure</i>
1115 – 1230	<i>Choosing an Artificial Lift Process</i>
1230 – 1245	<i>Break</i>
1245 – 1330	<i>Down-hole Equipment for Smart Completion</i>
1330 – 1420	<i>Main Types of Well Servicing & Workover</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Four</i>

Day 5: Thursday 20th of February 2025

0730 – 0830	<i>Servicing & Workover Special Cases</i>
0830 – 0930	<i>Well Stimulation Methods</i>
0930 – 0945	<i>Break</i>
0945 – 1045	<i>Carbonate Acidizing</i>
1045 – 1145	<i>Sandstone Acidizing</i>
1145 – 1230	<i>Scales & Paraffin Removal</i>
1230 – 1245	<i>Break</i>
1245 – 1345	<i>Squeeze Cementing</i>
1345 – 1400	<i>Course Conclusion</i>
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & 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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