COURSE OVERVIEW DE0900
Completion Design Practices and Perforation

Course Title
Completion Design Practices and Perforation

Course Date/Venue
Session 1: April 13-17, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar
Session 2: September 07-11, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar

Course Reference
DE0900

Course Duration/Credits
Four 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 completion design practices and perforation. It covers the basic well completion design, practices and strategies; developing a high level completion strategy for wells in a variety of situations; the packer selection and tubing forces; the selection of tubing, packers and completion flow control equipment; the wellheads/chokes/subsurface safety valves and flow control equipment; and the appraisal/designing a suitable flow barrier strategy and suitable intervention strategy.

Further, this course will also discuss the recommendations on installation and retrieval practices for tubing, packers, etc. in different well types; the corrosion and erosion inflow and tubing performance; the tubing design, packer setting, retrieval and material selection; the key design features for horizontal, multilateral, HPHT wells, etc; the deviated/multiple zone/ subsea/horizontal/multilateral and HPHT completion considerations; the selection of an appropriate intervention strategy/equipment; and the key features/applicability of the main sand control, fracpack and well stimulation options.

During this interactive course, participants will learn the fluids chemicals and acidizing techniques, sandstone acidizing and carbonates acidizing; the well candidates for stimulation; the perforation process, factors affecting charge performance and perforating techniques; the types of guns, perforating damage pressure, control equipment and safe rig up; how to assess/specify concerns/remedial measures for formation damage/skin; the wireline/coiled tubing/snubbing operations; developing and outline overall strategy for a completion program; and the HSE related issues.

Course Objectives

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

- Apply and gain an in-depth knowledge on completion design practices and perforation
- Develop a high level completion strategy for wells in a variety of situations as well as select tubing, packers, and completion flow control equipment
- Appraise/design a suitable flow barrier strategy and make recommendations on installation and retrieval practices for tubing, packers, etc.
- Identify key design features for horizontal, multilateral, HPHT wells, etc.
- Select an appropriate intervention strategy/equipment and identify key features/applicability of the main sand control, fracpack and well stimulation options
- Assess/specify concerns/remedial measures for formation damage/skin removal as well as develop and outline overall strategy for a completion program
- Discuss the basic well completion design, practices and strategies
- Develop a high level completion strategy for wells in a variety of situations
- Illustrate packer selection and tubing forces as well as selection of tubing, packers and completion flow control equipment
- Identify wellheads/chokes/subsurface safety valves and flow control equipment
- Appraise/design a suitable flow barrier strategy and suitable intervention strategy
- Recommend installation and retrieval practices for tubing, packers, etc. in different well types
- Recognize corrosion and erosion inflow and tubing performance and apply tubing design, packer setting, retrieval and materials selection
- Determine key design features for horizontal, multilateral, HPHT wells, etc. and deviated/multiple zone/subsea/horizontal/multilateral and HPHT completion considerations
- Define the selection of an appropriate intervention strategy/equipment
- Identify the key features/applicability of the main sand control, fracpack and well stimulation options, fluids chemicals and acidizing techniques, sandstone acidizing and carbonates acidizing

- Carryout well candidates for stimulation and perforation process
- Discuss perforation process, factors affecting charge performance, perforating techniques, types of guns and perforating damage pressure
- Review control equipment and safe rig up and how to assess/specify concerns/remedial measures for formation damage/skin
- Identify the wireline/coiled tubing/snubbing operations, develop and outline overall strategy for a completion program and HSE related issues

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 completion design practices and perforation for senior engineers, drilling, reservoir, well, production, completion and petroleum engineers & supervisors and geologists who need a practical understanding and appreciation of completion design.

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$ 8,500 per Delegate. 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:

- 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.

- 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 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. Fred Lazor is a **Senior Petrophysicist** and **Consultant** with **40 years** of extensive experience in the **Oil & Gas** industry. His area of expertise includes **AVO, Inversion & Seismic Attributes**, **Production Geology**, **Well Composite**, **Construction Integrity & Completion**, **Special Core Analysis**, **Field Development Planning**, **Cased Hole Log Analysis** of the Spectral Saturation Tool, **Production Logs**, **Sector Cement Bond Logs** and **Multi-finger Calliper Logs** using Warrior and other internal software analysis packages. Currently, he is working as a **Senior Petrophysicist** for **Shell Oil Company** in **Pittsburgh**, **USA**. Moreover, he is a **Trainer** in log analysis for petroleum engineers, geologists, petrophysicists and others involved in such activities.

During his career life, Mr. Lazor has lead various teams of **petroleum engineers**, **geologists**, **reservoir engineers** and **petrophysicists** to conduct **field studies** in **major oil companies** in the **USA**, **Europe**, **South East Asia** and the **Middle East**. One of his many achievements when he was a **Consultant Petrophysicist** at Kuwait Oil Company (**KOC**) was to lead a team of petrophysicists assigned to develop the **South Raqta Field** in to one of the **leading heavy oil producing reservoirs in the world**. Further, he has occupied numerous prime positions in multinational companies including **Vice President** and **Chief Petrophysicist** at the **National Petroleum Technology Company** in Saudi Arabia and **Chief Petrophysicist** & **Consultant** in **Shell Oil Company**, **Southwestern Energy Company, Schlumberger, TEXACO** and **Simon Geolithic**.

Mr. Lazor has a **Bachelor** degree in **Petroleum Engineering** & **Physics** from the **University of Texas**, **USA**. He is a **Fellow** of **SPE** and has various publications presented over the years and **circulated worldwide**. Further, he is a **Certified Instructor/Trainer**.

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	***Basic Well Completion Design, Practices & Strategies***
0930 – 0945	*Break*
0945 – 1030	***How to Develop a High Level Completion Strategy for Wells in a Variety of Situations***

1030 – 1130	***Packer Selection & Tubing Forces***
1130 - 1230	***Selection of Tubing, Packers & Completion Flow Control Equipment***
1230 – 1245	*Break*
1245 – 1420	***Wellheads/Chokes/Subsurface Safety Valves & Flow Control Equipment***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 - 0930	***How to Appraise/Design a Suitable Flow Barrier Strategy & Suitable Intervention Strategy***
0930 – 0945	*Break*
0945 – 1100	***Recommendations on Installation & Retrieval Practices for Tubing, Packers, Etc. in Different Well Types***
1100 – 1230	***Corrosion & Erosion Inflow & Tubing Performance***
1230 – 1245	*Break*
1245 – 1330	***Tubing Design & Packer Setting & Retrieval & Materials Selection***
1330 - 1420	***Key Design Features for Horizontal, Multilateral, HPHT Wells, etc.***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 - 0930	***Deviated/Multiple Zone/Subsea/Horizontal/Multilateral & HPHT Completion Considerations***
0930 – 0945	*Break*
0945 – 1100	***Selection of an Appropriate Intervention Strategy/Equipment***
1100 – 1230	***Key Features/Applicability of the Main Sand Control, Fracpack & Well Stimulation Options***
1230 – 1245	*Break*
1245 – 1330	***Fluids Chemicals & Acidizing Techniques***
1330 - 1420	***Sandstone Acidizing & Carbonates Acidizing***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 - 0830	***Well Candidates for Stimulation***
0830 – 0930	***Perforation Process***
0930 - 0945	*Break*
0945 – 1100	***Factors Affecting Charge Performance***
1100 – 1230	***Perforating Techniques***
1230 – 1245	*Break*
1245 – 1330	***Types of Guns***
1330 - 1420	***Perforating Damage Pressure***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0830	***Control Equipment & Safe Rig Up***
0830 - 0930	***How to Assess/Specify Concerns/Remedial Measures for Formation Damage/Skin***
0930 – 0945	*Break*

0945 – 1100	***Wireline/Coiled Tubing/Snubbing Operations***
1100 – 1230	***Develop & Outline Overall Strategy for a Completion Program***
1230 – 1245	*Break*
1245 - 1345	***HSE Related Issues***
1345 – 1400	***Course Conclusion***
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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