

COURSE OVERVIEW DE0751
Wireline Operations & Techniques
(Slickline & E-Wireline)

Course Title

Wireline Operations & Techniques
(Slickline & E-Wireline)

Course Reference

DE0751

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	May 12-16, 2024	Oryx Meeting Room, Doubletree By Hilton Doha- Al Sadd, Doha, Qatar
2	August 25-29, 2024	Kizkulesi, Crown Plaza Istanbul Asia Hotels & Convention Center, Istanbul, Turkey
3	December 08-12, 2024	The Kooh Al Noor Meeting Room, The H Dubai Hotel, Sheikh Zayed Rd - Trade Centre, Dubai, UAE

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.



Many of today's most vital oilfield operations depend directly on the use of wireline. Wireline is particularly important during completion and production. Field operators can run anything from a basic downhole directional survey to the most delicate gamma ray formation log on wireline. They can fire perforating charges at precisely determined downhole locations, back off a string of stuck pipe, retrieve a wrench, or manipulate complex subsurface well pressure and flow controls.



Wireline operations can be done inside the tubing without killing the well, by means of a lubricator connected to the wellhead. Operations can be carried out under pressure and even without stopping production. Further, wireline operations are performed quickly due to the use of lightweight, highly mobile equipment and run by two or three specialized operators. As a result, wireline operations can be readily implemented at relatively low cost.

Wireline technology has been modernized steadily, along with significant improvements in wireline capability. During the past decades, Wireline Formation Testing has emerged as one of the critical formation evaluation means in the upstream hydrocarbon exploration activities. The wireline formation test is a quick, inexpensive means of measuring pressures at precise depths in the wellbore. Wireline tests are performed mostly in open hole using a cable-operated formation tester and sampling tool anchored at depth while reservoir communication is established through one or more pressure and sampling probes.

This comprehensive and up-to-date course covers the development of wireline operations and techniques. It describes wireline equipment in details and discusses the various operations performed using such equipment including diagnostic, troubleshooting, completion and production maintenance. Further, the course covers the openhole wireline testing, the wireline sampling techniques and the drawdown & buildup mobilities from wireline testers. The course ends up with a useful demonstration of the various wireline test interpretation software.

Course Objectives

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

- Apply an up-to-date knowledge on wireline equipment, techniques and operations during well completion, servicing, workover and production
- Identify different types of packers and methods of conveyance, ISO & API standards, packer rating envelopes and flow control accessories, cased hole applications and multilateral completions (TAML levels)
- Discuss the impact of length and force changes to the tubing strings, perforating methods & perforating design,
- Describe perforating equipment & operations and the method of setting a plug or packer
- Employ fishing operations and logging with CT (stiff wireline)
- Explain the planning, logistical constraints, selection of equipment, monitoring and recording equipment, considerations and safety issues of mechanically removing scale, cutting tubulars, operating sliding sleeves and running a completion with CT

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 essential for field operational and technical staff such as engineers, supervisors, foremen, technicians and operators who are in charge of wireline operations and for other personnel who have frequent interfaces with wireline operations. This is also beneficial for production engineer, wireline supervisor, district engineer, drilling engineer and operation engineer.

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 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. Mohamed El-Sayed is a **Senior Petroleum & Production Engineer and Well Service Consultant** with over **35 years** of extensive experience in **Drilling/Reservoir/Petroleum Engineering** and **Well Service Operations** within the **Oil and Gas** industries. He is a **recognized authority** in “**Hands On**” **Service and Drilling Operations** and **Well Completions (Riggless Operations)**. Further, his expertise covers the areas of **wellhead operations, Wellbore Interventions, Well Testing, Wire/Slickline Equipment and Operations, Coil Tubing, Water Flooding, Electric Submersible Pumps (ESPs), SMART well completion technology, X-mas trees, well intervention, well control, wireline, slickline & fishing operations, well completion & workover, coiled tubing technology and pipeline pigging**. He is as well **recognized & respected** for his process, procedural expertise, modus operandi as well. He is currently working as the **Well Intervention Division Manager of GUPCO**.

Mr. Mohamed has handled various positions during the past three decades in his career. He worked in **production, drilling, workover, complex wellbore interventions** in both **drilling & servicing** and **wellhead operations** where he served as an important engineer and manager in these areas. He has indeed exhibited sheer diligence in his field. He was in-charge of setting **subsurface safety valves** and in **troubleshooting and testing all types of valves tubing and wireline retrievable SSSV** for renowned companies such as **Halliburton, Schlumberger, Baker Hughes** and **Weatherford**. He has also worked and evaluated the advanced measuring system in one of PDO’s oil fields thru Halliburton. Further, he has very good experience in the set-up and commissioning, maintenance & troubleshooting of wireline equipment. As **Wellhead and Wireline Manager**, he was primarily responsible of planning the wellhead and wireline daily activities and spearheaded the solving of problems encountered during daily operations. This also covered the **installation, operation, troubleshooting and testing of the wellheads** and the supervision of **electric line operations** and **coiled tubing** jobs.

Mr. Mohamed has participated in various hydrocarbon and production engineering conferences and **presented papers** on **multilateral wells** for the **Society of Petroleum Engineers (SPE)** and has taken specialized trainings on production technology, safety management, gas lift design, wireline and **wellhead operations** with **Schlumberger, Halliburton** and **AMA** in the **USA**.

Mr. Mohamed has a **Bachelor’s** degree in **Petroleum Engineering** and is also a well-regarded member of the Society of Petroleum Engineers (**SPE**). Further, he is a **Certified Instructor/Trainer**.

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

Doha	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.
Istanbul	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.
Dubai	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 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 & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Packers & Methods of Conveyance <i>Retrievable Tension/Compression Set-Versatile Landing • Retrievable Hydraulic-Set single-String Packer • Dual-String Packers • Permanent and Retrievable Sealbore Packers • Landing Conditions • Through-Tubing Operations • Casing Clean-up Operations • Other Casing Consideration</i>
0930 - 0945	<i>Break</i>
0945 – 1100	ISO and API Standards <i>Grade V6 Supplier/Manufacturer Defined • Grade V5 Liquid Test • Grade V4 Liquid Test + Axial Loads • Grade V3 Liquid Test = Axial Loads + Temperature Cycling • Grade V2 Gas Test + Axial Loads • Garde V1 Gas Test + Axial Loads + Temperature Cycling • Special Grade V0 Gas Test + Axial Loads + Temperature Cycling + Bubble Tight Gas Seal</i>



1100 – 1230	Packer Rating Envelopes & Flow Control Accessories Wireline Re-entry Guides • Profile Seating Nipples • Top No-Go Profile Seating Nipple • Bottom No-Go Profile Seating Nipple • Selective Profile Seating Nipple • Sliding Sleeves • Blast Joints • Flow Couplings • Blanking Plugs • Bottomhole Choke • Subsurface Safety Systems
1230 – 1245	Break
1245 – 1420	Cased-Hole Applications Single-String LP/LT Wells • Single-String-Medium-Pressure/Medium-Temperature Wells • Single-String HP/HT Wells • Multiple-Zone Single-String Selective Completion • Dual-Zone Completion Using Parallel Tubing Strings • Big-Bore/Monobore Completions
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	Multilateral Completions TAML Level 1 • TAML Level 2 • TAML Level 3 • TAML Level 4 • TAML Level 5 • TAML Level 6
0930 – 0945	Break
0945 – 1100	Impact of Length and Force Changes to the Tubing String Piston Effect • Buckling Effects • Ballooning and Reverse Ballooning • Temperature Effect • Net Results of Piston, Buckling, Ballooning and Temperature Effects • Combination Tubing/Packer Systems
1100 – 1230	Perforating Methods & Basic Perforating Design Bullet Gun perforating • Abrasive Perforating Methods • Variables of Flow Through a Perforation • Temperature Effect • What is Necessary for the Optimum Flow Path • Improving Flow Capacity
1230 – 1245	Break
1245 – 1420	Perforating Methods & Basic Perforating Design (cont'd) Cement and Casing Damage • Perforating Multiple Strings and Thick Cement • Perforating for Different Stimulations • Perforating in Highly Deviated Wells
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	Perforating Equipment & Operations Detonator Systems • Conveyance Systems • Getting On Depth • Perforating Fluid • Limited Penetration charges • Planning a Perforating Job • Job Plan Inputs • Depth Control • Firing Mechanism • Gun and Carrier Selection • High Temperature and Pressure • H2S and Acids • Computer Simulator Modeling • Job Plan Outputs
0930 – 0945	Break





0945 – 1100	Perforating Equipment & Operations (cont'd) Selecting Equipment for Perforating • Generic Procedure for Perforating • Preparing the Wellbore • Preparing the Equipment • Assembling and Deploying the Gun • Correlating Depth and Perforating • Gun Recovery • Monitoring a Perforating Job • Safety Issues for Perforating • Before the Operation • During the Operation • After Firing
1100 – 1230	Setting a Plug or Packer Planning to Set a Plug or Packer • Job Plant Inputs • Operating Temperature • Operating Pressure • Fluid Compatibility • Setting Mechanism • Recoverability • Computer Simulator Modeling • Job Plan Outputs • Selecting Equipment for Setting a Plug or Packer • CT Equipment • Pressure Control Equipment • Downhole Tools
1230 – 1245	Break
1245 – 1420	Setting a Plug or Packer (cont'd) Pumping Equipment • Monitoring and Recording Equipment • Generic Procedure for Setting a Plug or Packer • Preparing the Wellbore • Preparing the Equipment • Setting the Plug or Packer • Unsetting the Packer and Recovering the Tool String • Monitoring a Plug or Packer Job • Safety Issues for Setting a Plug or Packer
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	Fishing Operations Planning a Fishing Job • Job Plan Inputs • Fish Properties • Condition of the Fish • Wellbore Geometry • Surface Equipment • Logistical Constraints • Computer Simulator Modeling • Job Plan Outputs • Selecting Equipment for Fishing • CT Equipment
0930 - 0945	Break
0945 – 1100	Fishing Operations (cont'd) Pressure Control Equipment • Downhole Tools • Pumping Equipment • Monitoring and Recording Equipment • Generic Procedure for Fishing • Preparing the Wellbore • Preparing the Equipment • Safety Issues for Fishing
1100 – 1230	Logging with CT (Stiff Wireline) Planning a CT Logging Job • Job Plan Inputs • Logistical Constraints • Installing Electric Cable Inside CT • Computer Simulator Modeling • Selecting Equipment for CT Logging • CT Equipment • Pressure Control Equipment • Downhole Tools • Pumping Equipment • Cable Injector
1230 – 1245	Break
1245 – 1420	Logging with CT (Stiff Wireline) (cont'd) Monitoring and Recording Equipment • Generic Procedure for CT Logging • Preparing the Wellbore • Preparing the Equipment • Correlating Depth • Performing the Logging Operation • Monitoring a CT Logging Job • Safety issues for CT Logging
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

0730 – 0930	<p>Stuck Pipe & Removing Scale Mechanically <i>Planning to Remove Scale Mechanically • Job Plan Inputs • General Considerations • Scale/Deposit Characteristics • Hole Cleaning • Logistical Constraints • Drilling/Milling/Underreaming with a Downhole Motor • Impact Drilling • Bit Selection • Circulating Fluid • Scale Inhibition • Computer Simulator Modeling • Job Plan Outputs • Selecting Equipment for Removing Scale Mechanically • CT Equipment • Pressure Control Equipment • Downhole Tools • Pumping Equipment • Auxiliary Equipment • Monitoring and Recording Equipment • Generic Procedure for Removing Scale Mechanically • Preparing the Wellbore • Preparing the Equipment • Preparing Fluids • Removing the Scale • Monitoring a Mechanical Scale Removal Job • Safety Issues for Removing Scale Mechanically</i></p>
0930 - 0945	Break
0945 – 1100	<p>Cutting Tubulars Mechanically <i>Planning to Cut Tubulars Mechanically • Job Plan Inputs • Depth Control • Milling with a Downhole Motor • Explosive Cutters • Computer Simulator Modeling • Job Plan Outputs • Milling with a Downhole Motor • Selecting Equipment for Mechanically Cutting Tubulars • CT Equipment • Pressure Control Equipment • Pumping Equipment • Downhole Tools • Monitoring and Recording Equipment • Generic Procedure for Mechanically Cutting Tubulars • Preparing the Wellbore • Preparing the Equipment • Making the Cut • Monitoring for Mechanically Cutting Tubulars • Safety Issues for Mechanically Cutting Tubulars</i></p>
1100 – 1230	<p>Operating a Sliding Sleeve <i>Planning to Operate a Sliding Sleeve • Job Plan Inputs • Planning Considerations • Computer Simulator Modeling • Selecting Equipment for Operating a Sliding Sleeve • CT Equipment • Pressure Control Equipment • Downhole Tools • Pumping Equipment • Monitoring and Recording Equipment • Generic Procedure for Operating a Sliding Sleeve • Preparing the Wellbore • Preparing the Equipment • Operating the Sleeve • Monitoring for a sliding Sleeve Operation • Safety Issues for Operating a Sliding Sleeve</i></p>
1230 – 1245	Break
1245 – 1345	<p>Running a Completion with CT <i>Planning to Run a Completion • Job Plan Inputs • Planning Considerations • Computer simulator Modeling • Job Plant Outputs • Selecting Equipment for Running a Completion • CT Equipment • Pressure Control Equipment • Downhole Tools • Pumping Equipment • Monitoring and Recording Equipment • Generic Procedure for Running a Completion • Preparing the Wellbore • Preparing the Equipment • Running the Completion • Monitoring Running a Completion • Safety Issues for Running a Completion</i></p>
1345 – 1400	<p>Course Conclusion <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i></p>
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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