

COURSE OVERVIEW DE0617

**Drilling Practices
(E-Learning Module)**

Course Title

Drilling Practices (E-Learning Module)

Course Reference

DE0617

Course Format & Compatibility

SCORM 1.2. Compatible with IE11, MS-Edge, Google Chrome, Windows, Linux, Unix, Android, IOS, iPadOS, macOS, iPhone, iPad & HarmonyOS (Huawei)

Course Duration

30 online contact hours
(3.0 CEUs/30 PDHs)



Course Description



This E-Learning is designed to provide participants with a detailed and up-to-date overview of drilling practices. It covers the drilling data review and planning the well; incorporating completion plans into the drilling plan; drilling a well cost effectively and maximizing penetration rate; evaluating stuck pipe problems; avoiding potential problems and evaluating and maintaining the drilling fluids; the petroleum process, oil exploration, team work communications, drilling services and drilling sequence; the BHA design and components; the drilling rig, well types, site preparation, drilling sequence and cementing equipment; the logging services, open hole logging, drill pipe, motor, stuck pipe, fishing operations & tools; the side track operations (including whip stock technique), sticking mechanisms and solids induced pack-off; and the slow pump rate data, conductor hammering collapse, shallow gas kick, seepage losses, bit and stabilizers bailing.

During this interactive course, participants will learn the wash out in drill string components; the completions, workovers, casing and tubular completion configurations; the proper planning, well evaluation, injection test and gas lift system; well workovers, workover/service rigs, coiled tubing units (CTU), snubbing units, wireline units, slickline, braided wireline and electric wireline; and the well abandonment, capital vs expense workovers, casing and tubular completion configurations, completion techniques, artificial lift and workovers and service rigs.

Course Objectives

After completing the course, the employee will:-

- Apply systematic techniques on drilling practices
- Review drilling data and plan the well
- Incorporate completion plans into the drilling plan
- Drill a well cost effectively and maximize penetration rate
- Evaluate stuck pipe problems and avoid potential problems
- Evaluate and maintain drilling fluids
- Illustrate petroleum process, oil exploration, team work communications, drilling services and drilling sequence
- Identify the BHA design and components as well as drilling rig, well types, site preparation, drilling sequence and cementing equipment
- Recognize logging services, open hole logging, drill pipe, motor, stuck pipe, fishing operations & tools
- Apply side track operations (including whip stock technique), sticking mechanisms and solids induced pack-off
- Describe slow pump rate data, conductor hammering collapse, shallow gas kick, seepage losses, bit and stabilizers bailing
- Identify wash out in drill string components as well as carryout completions, workovers, casing and tubular completion configurations
- Employ completion techniques, typical configuration, casing review, completion configurations, perforating and well stimulation
- Apply proper planning, well evaluation, injection test and gas lift system
- Discuss well workovers, workover/service rigs, coiled tubing units (CTU), snubbing units, wireline units, slickline, braided wireline and electric wireline
- Determine well abandonment, capital vs expense workovers, casing and tubular completion configurations, completion techniques, artificial lift and workovers and service rigs

Who Should Attend


This course provides an overview of all significant aspects and considerations of drilling practices for drilling engineers, production engineers, reservoir engineers, completion engineers, drilling and facilities engineers and field operators.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course.

Certificate Accreditations


Certificates are accredited by the following international accreditation organizations: -

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USA International Association for Continuing Education and Training (IACET)

Haward Technology is an Authorized Training Provider by the International Association 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 1-2013 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 1-2013 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 Association 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

As per proposal

Training Methodology

This Trainee-centered course includes the following training methodologies:-

- Talking presentation Slides (ppt with audio)
- Simulation & Animation
- Exercises
- Videos
- Case Studies
- Gamification (learning through games)
- Quizzes, Pre-test & Post-test

Every section/module of the course ends up with a Quiz which must be passed by the trainee in order to move to the next section/module. A Post-test at the end of the course must be passed in order to get the online accredited certificate.

Course Contents

- Petroleum Process
- Oil Exploration
- Team Work Communications
- Drilling Services
- Drilling Sequence
- BHA Design & Components
- Drilling Rig
- Well Types
- Site Preparation
- Drilling Sequence
- Cementing Equipment
- Logging Services
- Open Hole Logging
- BHA Design (Components)
- Shock Sub (SS)
- Drill Collar (DC)
- String Stabilizers (S.STB) & Near Stabilizers (NB.STB)
- Roller Reamer (RR) – (String & Near Bit)
- Jar (H/M & Fully Hydraulic)

- Heavy Weight Drill Pipe (HWDP)
- Drill Pipe (DP)
- Motor
- Stuck Pipe
- Fishing Operations & Tools
- Side Track Operations (Including Whip Stock Technique)
- Understanding Makes Difference
- Sticking Mechanisms
- Solids Induced Pack-Off
- First Actions
- Kill Sheet
- Slow Pump Rate Data
- Different Problems Linked with Actual Case Studies
- Conductor Hammering Collapse
- Hammered Conductor Double Shoe Dropped in Open Hole
- Wash Out Below the Hammered Conductor
- Shallow Gas Kick
- Seepage Losses (Possible to be Propagated till have Sever Losses)
- Bit & Stabilizers Bailing (High Over Pull While Tripping & Possible Stuck)
- Sever to Complete Loss Situation
- Cave Shale
- Wash Out in Drill String Components
- Twist Off in Drill String Components
- Well Neal 21 - Drilling Practices – Actual Drilling Well Case Study
- Alamein Field
- Well NEAL-21 Summary
- Lithology Column – CSG Design
- NEAL #21 Drilling History
- NEAL # 21 Drilling Parameters (12 ¼” OH)
- NEAL # 21 Drilling Parameters (8 ½” OH)
- NEAL # 21 OHL, 7” Liner W/ CMT & CBL-VDL-GR-CCL
- NEAL # 21 (WBS, CSG & CMT Summary) 9 5/8” CSG Shoe @ 3798’ MD
- NEAL # 21 Progress Charts (Time Vs Depth)

- NEAL # 21 Progress Charts (Cost Vs Depth)
- Completions & Workovers
- Casing and Tubular Completion Configurations
- Completion Techniques
- Artificial Lift
- Workovers and Service Rigs
- Typical Configuration
- Casing Review
- Tubing and Downhole Equipment
- Packers
- Blast Joint
- Sliding Sleeve
- Nipples
- Completion Configurations
- Single Zone Completion
- Tubing and Packer Completion
- Multiple Zone Completion
- Tubing-less Completion
- Pumping Well (with sucker rods and a bottomhole pump)
- Tubing and Completion Configurations
- Wellhead
- Casing Head
- Casing Hanger
- Casing Spool
- Tubing Head
- Tubing Hanger
- Master Valve
- Flow Tee
- Wing Valves
- Swabbing or Crown Valve
- Cross Section View of Wellhead
- Completion Techniques
- Information for Completion

- Drill Stem Tests (DST)
- Drill Cuttings
- Core
- Perforating
- Advantages of the Open-Hole Completion
- Disadvantages of the Open-Hole Completion
- Well Stimulation
- Hydrostatic Pressure
- Multiple Zone Completions
- Equipment
- Planning
- CONS
- PROS
- Well Evaluation
- Evaluation of Reserves
- IP Test
- Single Rate Test
- AOFPP
- Injection Test
- The Completion Program
- Pumpjack Unit
- Bottom Hole Pump
- Pumps
- Electric Submersible Pumps
- Progressive Cavity Pump
- Gas Lift System
- Well Workovers
- Workover/Service Rigs
- Coiled Tubing Units (CTU)
- Snubbing Units
- Wireline Units
- Slickline
- Braided Wireline



- Electric Wireline
- Well Abandonment
- Capital vs Expense Workovers
- Casing and Tubular Completion Configurations
- Completion Techniques
- Artificial Lift
- Workovers and Service Rigs