Haward Technology Middle East

COURSE OVERVIEW DE0442
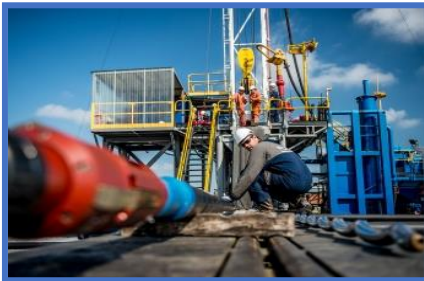**Well Prognosis**

Course Title
Well Prognosis

Course Date/Venue
December 08-12, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
DE0442

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 Well Prognosis. It covers the role and importance of well prognosis in the petroleum industry; the wellbore stability, porosity, permeability and reservoir characteristics; the geological factors impacting well prognosis; the types of rock formations, fault lines and sedimentary structures; the geophysical data analysis; and drilling fluids and their role in well prognosis; the well logging techniques, well design and trajectory planning; and utilizing petrophysical data to optimize well placement and design.

Further, the course will also discuss the advanced imaging techniques for subsurface mapping and risk assessment in well planning; integrating geological and geophysical data to improve prognosis accuracy; the advanced log interpretation and the role of core samples in well prognosis; the software tools that model well behavior under various scenarios; and the drilling operations, real-time data acquisition and monitoring and managing drilling uncertainties.

During this interactive course, participants will learn the predictive modelling and decision support systems; the safety and environmental considerations in drilling; the well prognosis tools and techniques; the challenges and limitations in current well prognosis practices; the emerging technologies and their potential impact that can transform well prognosis practices; and the cost implications and economic benefits of effective well prognosis.

Course Objectives

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

* Apply and gain an in-depth knowledge on well prognosis

* Discuss the role and importance of well prognosis in the petroleum industry

* Explain wellbore stability, porosity, permeability and reservoir characteristics

* Recognize the geological factors impacting well prognosis covering types of rock formations, fault lines and sedimentary structures

* Carryout geophysical data analysis and discuss the basics of drilling fluids and their role in well prognosis

* Apply well logging techniques, well design and trajectory planning

* Utilize petrophysical data to optimize well placement and design

* Employ advanced imaging techniques for subsurface mapping and risk assessment in well planning

* Integrate geological and geophysical data to improve prognosis accuracy and apply advanced log interpretation

* Identify the role of core samples in well prognosis including the software tools that model well behavior under various scenarios

* Apply drilling operations, real-time data acquisition and monitoring and managing drilling uncertainties

* Recognize predictive modelling and decision support systems as well as discuss safety and environmental considerations in drilling

* Carryout well prognosis tools and techniques and discuss the challenges and limitations in current well prognosis practices

* Identify the emerging technologies and their potential impact that can transform well prognosis practices

* Explain the cost implications and economic benefits of effective well prognosis

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, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.*

Who Should Attend

This course covers systematic techniques and methodologies on well prognosis for well and senior petroleum engineers, consultants and advisors, drilling and senior drilling supervisors, reservoir and senior reservoir engineers, geologists, production and completion engineers, risk managers and supervisors needing a practical understanding and an appreciation of well completion design and operation, well stimulation and work over planning.

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: -

- 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

This course will be conducted by the following instructor. However, we have the right to change the course instructor prior to the course date and inform participants accordingly:

Dr. John Petrus, PhD, MSc, BSc, is a **Senior Process & Petroleum Engineer** with over **30 years** of **onshore & offshore** experience within the **Oil & Gas**, **Refinery** and **Petroleum** industries. His wide experience covers in the areas of **Well Prognosis**, **Well Design & Trajectory Planning**, **Risk Assessment Well Planning**, **Log Interpretation**, **Managing Drilling Uncertainties**, **Safety & Environmental Consideration in Drilling**, **Well Testing**, **Advance Imaging Techniques for Subsurface Mapping**, **Well Completions**, **Well Logs**, **Well Stimulation** & **Production Logging**, **Well Completion** Design & Operation, Well Surveillance, **Gas Sweetening Process** at Upstream Oil & Gas, **De-Sulfurization** Technology, **Process Troubleshooting**, **Distillation Towers**, **Fundamentals of Distillation** for Engineers, **Distillation** Operation and Troubleshooting, **Advanced Distillation** Troubleshooting, **Distillation** Technology, Vacuum **Distillation**, **Distillation Column** Operation & Control, **Oil Movement** Storage & Troubleshooting, **Process Equipment** Design, Applied **Process Engineering** Elements, **Process Plant** Optimization, **Revamping & Debottlenecking**, **Process Plant** Troubleshooting & Engineering Problem Solving, **Process Plant** Monitoring, **Catalyst** Selection & Production Optimization, Operations Abnormalities & Plant Upset, **Process Plant** Start-up & Commissioning, **Clean Fuel** Technology & Standards, Flare, Blowdown & Pressure Relief Systems, **Oil & Gas Field Commissioning** Techniques, **Pressure Vessel** Operation, **Gas Processing**, **Chemical** Engineering, **Process Reactors** Start-Up & Shutdown, **Gasoline Blending** for Refineries, **Urea Manufacturing** Process Technology, Continuous Catalytic Reformer (**CCR**), Advanced Operational & Troubleshooting Skills, Principles of Operations Planning. Further he is also well versed in **Formation Damage & Acid Stimulation**, **Production Technology** & Engineering, **Well Stimulation** & Control and **Workover** Planning, **Completions & Workover**, Hole Cleaning & Logging, Servicing and **Work-Over** Operations, **Wellhead** Operations, Maintenance & Testing, Petrophysics/Interpretation of Well Composite, **Reservoir & Tubing** Performance, Practical **Reservoir** Engineering, Clastic **Exploration & Reservoir Sedimentology**, **Carbonate Reservoir Characterization** & Modeling, **Seismic Interpretation**, **Mapping & Reservoir** Modelling, **Reservoir Geology**, Integrating **Geoscience** into **Carbonate Reservoir** Management, **Reservoir** Engineering Applied Research, **Play Assessment & Prospect Evaluation**, **Formation** Evaluation, **Geomodeling**, **Structural Geology**, **Applied Structural Geology** in Hydrocarbon Exploration, **Petrophysics** and **Geology** of the Oil & Gas Field.. Further, he is also well-versed in **seismic interpretation**, **mapping** & **reservoir modelling tools** like **Petrel** software, **LandMark**, **Seisworks**, **Geoframe**, **Zmap** and has extensive knowledge in MSDos, Unix, **AutoCAD**, MAP, Overlay, Quicksurf, 3DStudio, **Esri ArcGIS**, Visual Lisp, Fortran-77 and Clipper. Moreover, he is a world **expert** in **analysis** and **modelling** of **fractured prospects** and **reservoirs** and a **specialist** and **developer** of **fracture modelling software tools** such as FPDM, FMX and DMX Protocols.

During his career life, Dr. Petrus held significant positions and dedication as the **Executive Director**, **Senior Geoscience Advisor**, **Exploration Manager**, **Project Manager**, **Manager**, **Process Engineer**, **Mechanical Engineer**, **Maintenance Engineer**, **Chief Geologist**, **Chief** of **Exploration**, **Chief** of **Geoscience**, **Senior Geosciences Engineer**, **Senior Explorationist**, **Senior Geologist**, **Geologist**, **Senior Geoscientist**, **Geomodeller**, **Geoscientist**, **CPR Editor**, **Resources Auditor**, **Project Leader**, **Technical Leader**, **Team Leader**, **Scientific Researcher** and **Senior Instructor/Trainer** from various international companies and universities such as the Dragon Oil Holding Plc., ENOC, MENA, ENI Group of Companies, Ocre Geoscience Services (OGS), Burren RPL, Ministry of Oil-Iraq, Eni Corporate University, Standford University, European Universities, European Research Institutes, NorskHydro Oil Company, Oil E&P Companies, just to name a few.

Dr. Petrus has a **PhD** in **Geology** and **Tectonophysics** and **Master** and **Bachelor** degrees in **Earth Sciences** from the **Utrecht University**, **The Netherlands**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management (ILM)**, a Secretary and Treasurer of Board of Directors of Multicultural Centre, Association Steunfonds SSH/SSR and Founding Member of Sfera Association. He has further published several scientific publications, journals, research papers and books and delivered numerous trainings, workshops, courses, seminars and conferences internationally.

Course Program

The following program is planned for this course. However, the course instructor 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, 08th of December 2024**

0730 – 0800	*Registration & Coffee*
0800 - 0815	*Welcome & Introductions*
0815 – 0830	**PRE-TEST**
0830 – 0930	**Introduction to Well Prognosis:** *Understanding its Role & Importance in the Petroleum Industry*
0930 – 0945	*Break*
0945 – 1030	**Basic Concepts & Terminology:** *Key Concepts Such as Wellbore Stability, Porosity, Permeability & Reservoir Characteristics*
1030 - 1115	**Geological Factors Impacting Well Prognosis:** *Types of Rock Formations, Fault Lines & Sedimentary Structures*
1115 – 1230	**Geophysical Data Analysis:** *How Seismic & Other Geophysical Data Inform Well Location & Design*
1230 – 1245	*Break*
1245 – 1330	**Drilling Fluids & their Role in Well Prognosis:** *Basics of Fluid Dynamics that Affect Drilling Operations*
1330 - 1420	**Overview of Well Logging Techniques:** *How Logging Tools are Used to Make Prognostic Assessments*
1420 – 1430	**Recap**
1430	*Lunch & End of Day One*

Day 2:   **Monday, 09th of December 2024**

0730 – 0830	**Well Design & Trajectory Planning:** *Techniques for Designing Well Paths & Choosing Drilling Targets*
0830 - 0930	**Role of Petrophysics in Well Planning:** *Utilizing Petrophysical Data to Optimize Well Placement & Design*
0930 – 0945	*Break*
0945 – 1100	**Advanced Imaging Techniques for Subsurface Mapping:** *Tools Like 3D Seismic Imaging that Enhance Understanding of Subsurface Geology*
1100 – 1230	**Risk Assessment in Well Planning:** *Identifying & Evaluating Risks Associated with Well Trajectory & Location*
1230 – 1245	*Break*
1245 – 1330	**Case Studies: Successful Well Design:** *Analysis of Successful Well Design & What Made Them Successful*
1330 - 1420	**Workshop: Creating a Well Design:** *Participants Design a Well Trajectory Using Simulated Data*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Two*

Day 3:   **Tuesday, 10th of December 2024**

0730 – 0830	**Integrating Geological & Geophysical Data:** *Methods for Synthesizing Data to Improve Prognosis Accuracy*
0830 - 0930	**Advanced Log Interpretation:** *In-Depth Analysis of Log Data & its Implications for Well Prognosis*

0930 – 0945	*Break*
0945 – 1100	**Role of Core Samples in Well Prognosis:** *How Core Sampling Complements Geophysical Data*
1100 – 1230	**Utilizing Computer Simulations in Well Prognosis:** *Software Tools that Model Well Behavior Under Various Scenarios*
1230 – 1245	*Break*
1245 – 1330	**Interactive Session: Geophysical Data Integration:** *Hands-On Practice in Integrating & Interpreting Geophysical Data*
1330 - 1420	**Group Discussion: Overcoming Geological Challenges:** *Strategies to Handle Unexpected Geological Conditions*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Three*

Day 4:   **Wednesday, 11ᵗʰ of December 2024**

0730 – 0830	**Overview of Drilling Operations:** *Key Drilling Techniques & their Prognostic Implications*
0830 – 0930	**Real-Time Data Acquisition & Monitoring:** *Technologies & Methods for Live Data Collection During Drilling*
0930 – 0945	*Break*
0945 – 1100	**Managing Drilling Uncertainties:** *Techniques to Adapt & Respond to Real-Time Drilling Conditions*
1100 – 1230	**Predictive Modelling & Decision Support Systems:** *Using Predictive Models to Guide Drilling Decisions*
1230 – 1245	*Break*
1245 – 1330	**Safety & Environmental Considerations in Drilling**: *Ensuring Compliance with Environmental & Safety Regulations*
1330 – 1420	**Case Study: Real-Time Monitoring Success:** *Review of a Case Where Real-Time Data Significantly Altered Well Prognosis*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Four*

Day 5:   **Thursday, 12ᵗʰ of December 2024**

0730 – 0830	**Review of Well Prognosis Tools & Techniques:** *Recap of Tools & Techniques Covered During the Course*
0830 - 0930	**Challenges & Limitations in Current Well Prognosis Practices:** *Discussion on Current Challenges & How to Address them*
0930 – 0945	*Break*
0945 – 1100	**Emerging Technologies & their Potential Impact:** *Innovations that Could Transform Well Prognosis Practices*
1100 – 1200	**Economic Aspects of Well Prognosis:** *Understanding Cost Implications & Economic Benefits of Effective Well Prognosis*
1200 – 1215	*Break*
1215 – 1300	**Workshop: Full Cycle Well Prognosis Project:** *Participants Work Through a Full-Cycle Prognosis from Planning to Operational Feedback*
1300 - 1345	**Closing Discussion & Feedback Session:** *Summarize Key Learnings, Discuss Potential Implementation Strategies & Gather Feedback*
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:-
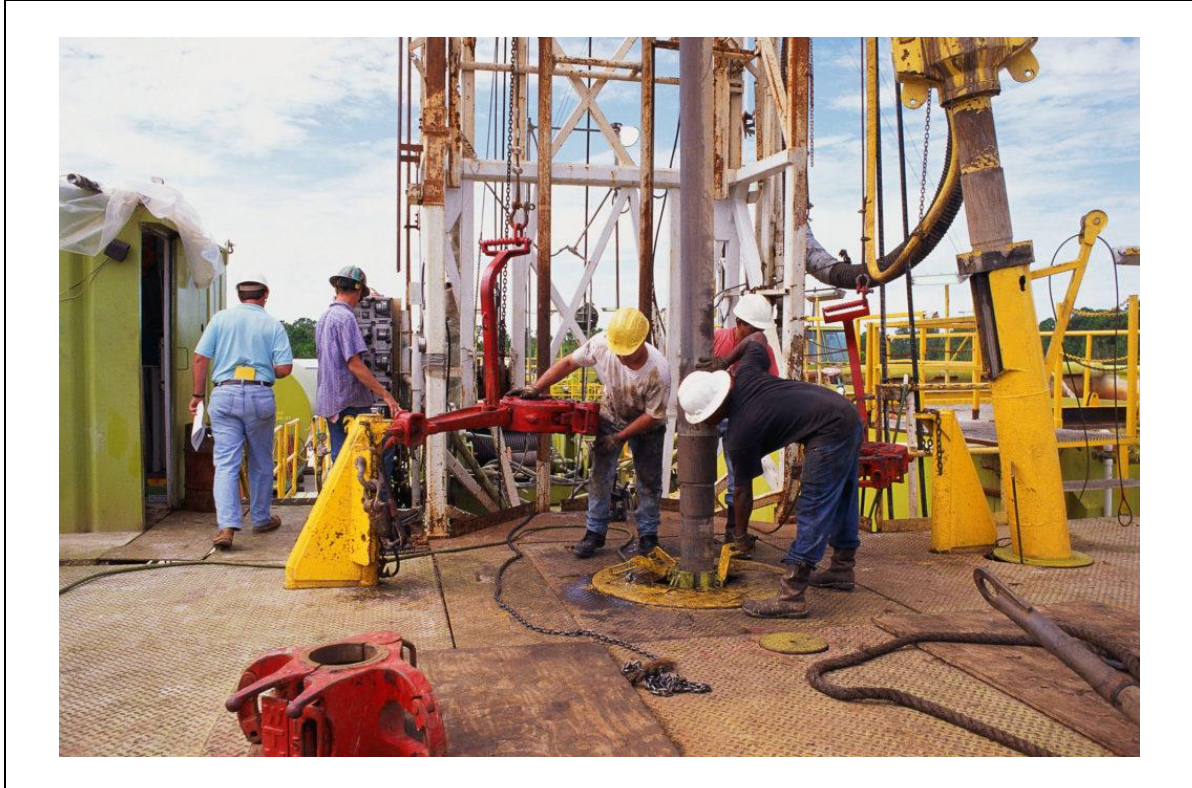
Course Coordinator

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