

COURSE OVERVIEW DE0442
Well Prognosis

Course Title
 Well Prognosis

Course Date/Venue
 Session 1: October 07-11, 2024/Fujairah
 Meeting Room, Grand Millennium Al
 Wahda Hotel, Abu Dhabi, UAE or,
 Session 2: 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 “Howard 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: -


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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

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, Stanford 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

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

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

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

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

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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