COURSE OVERVIEW DE1086

Real-Time Drilling Specialist: Real-Time Data Analysis & Decision

Course Title

Real-Time Drilling Specialist: Real-Time Data Analysis & Decision

Course Date/Venue

Please see page 3

Course Reference

DE1086

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive workshop includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Real-Time Drilling Specialist: Real Time Data Analysis & Decision. It covers the real-time drilling, drilling data acquisition systems, key drilling parameters and downhole measurement tools; the data quality control, health, safety and environment (HSE) in real-time drilling and data management in real-time drilling; the real-time data visualization, trend analysis and pattern recognition and hydraulic and mechanical models; and the gamma ray and resistivity interpretation, lithology determination, real-time pore pressure prediction and geosteering decisions.

Further, the course will also discuss the operational decision workflows, wellbore stability monitoring, kick and loss detection and optimization of drilling parameters; the harmful downhole vibrations and root causes of stick-slip and whirl, data-based mitigation strategies and tool failure prevention; and the real-time drilling automation, predictive analytics for drilling and geosteering in real time.

During this interactive course, participants will learn the structure and function of remote operations centers (ROC), communication between ROC and rig site, multi-well monitoring from a central hub and benefits and limitations of remote control; the drilling management systems and performance benchmarking, multi-well data management and emergency decision making; the real-time reporting standards and visual dashboards for management, event logging and incident tracking; and the post-well analysis reports.

Course Objectives

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

- Apply and gain an in-depth knowledge on real-time data analysis and decision
- Discuss the real-time drilling, drilling data acquisition systems, key drilling parameters and downhole measurement tools
- Carryout data quality control, health, safety and environment (HSE) in real-time drilling and data management in real-time drilling
- Apply real-time data visualization, trend analysis and pattern recognition and hydraulic and mechanical models
- Carryout gamma ray and resistivity interpretation, lithology determination, real-time pore pressure prediction and geosteering decisions
- Illustrate operational decision workflows, wellbore stability monitoring, kick and loss detection and optimization of drilling parameters
- Identify harmful downhole vibrations and apply root causes of stick-slip and whirl, data-based mitigation strategies and tool failure prevention
- Employ real-time drilling automation, predictive analytics for drilling and geosteering in real time
- Recognize the structure and function of remote operations centers (ROC), communication between ROC and rig site, multi-well monitoring from a central hub and benefits and limitations of remote control
- Integrate with drilling management systems and apply performance benchmarking, multi-well data management and emergency decision making
- Discuss real-time reporting standards and apply visual dashboards for management, event logging and incident tracking and post-well analysis reports

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 real- time data analysis and decision for drilling engineers and supervisors, well engineers, real-time operations center (RTOC) personnel, data analysts, well planners, petroleum engineers involved in drilling operations, wellsite geologists, geosteering specialists, operations managers, service company technical staff, oil and gas data analysts, digital transformation officers and other technical staff

Course Date/Venue

Session(s)	Date	Venue
1	April 12-16, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
2	May 31-June 04, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
3	July 12-16, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
4	August 17-21, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
5	October 26-30, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
6	November 23-27, 2026	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
7	January 04-08, 2027	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
8	February 07-11, 2027	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
9	March 21-25, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

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 H-STK® (Haward Smart Training Kit), 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.
London	**US$ 8,800** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Seville	**US$ 8,800** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Cairo	**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.

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

Haward's certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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.

- 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.

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:

Dr. Chris Kapetan, PhD, MSc, is a **Senior Petroleum Engineer** with over **30 years** of international experience within the **onshore** and **offshore oil** & **gas** industry. His wide experience covers **Asset Management** Principles, Risks & Economics, **Petroleum Economics**, **Decision Analytic Modelling Methods** for **Economic Evaluation**, **Probabilistic Risk Analysis** (**Monte Carlo Simulator**) **Risk Analysis Foundations**, **Global Oil Demand**, Crude Oil Market, Global Oil Reserves, Oil Supply & Demand, Governmental Legislation, Contractual Agreements, **Financial** Modeling, **Oil Contracts**, **Project Risk Analysis**, **Feasibility Analysis** Techniques, **Capital Operational Costs**, Oil & Gas Exploration Methods, **Reservoir** Evaluation, **Extraction of Oil & Gas**, **Crude** Oil Types & Specifications, Sulphur, Sour Natural Gas, **Natural Gas Sweeting**, **Petroleum Production**, Field Layout, **Production** Techniques & Control, **Surface Production** Operations, **Oil Processing**, Oil Transportation-Methods, **Flowmetering & Custody Transfer** and **Oil Refinery**. Further, he is also well-versed in Enhanced Oil Recovery (**EOR**), Electrical Submersible Pumps (**ESP**), **Oil Industries Orientation**, **Geophysics**, Cased Hole **Formation Evaluation**, Cased Hole **Applications**, Cased Hole **Logs**, Production **Operations**, Production **Management**, Perforating **Methods & Design**, Perforating **Operations**, **Fishing** Operations, **Well & Reservoir** Testing, **Reservoir Stimulation**, **Hydraulic Fracturing**, **Carbonate** Acidizing, **Sandstone** Acidizing, **Drilling Fluids Technology**, Drilling **Operations**, **Directional** Drilling, **Artificial Lift**, **Gas Lift Design**, **Gas Lift Operations**, **Petroleum Business**, **Field Development Planning**, **Gas Lift Valve** Changing & Installation, **Well Completion** Design & Operation, Well **Surveillance**, Well **Testing**, Well **Stimulation** & **Control** and **Workover Planning**, **Completions** & **Workover**, **Rig Sizing**, **Hole Cleaning** & **Logging**, **Well Completion**, **Servicing** and **Work-Over Operations**, Practical **Reservoir Engineering**, **X-mas Tree & Wellhead** Operations, Maintenance & Testing, **Advanced Petrophysics/Interpretation** of **Well Composite**, **Construction Integrity** & **Completion**, **Coiled Tubing Technology**, **Corrosion Control**, **Slickline**, **Wireline & Coil Tubing**, **Pipeline Pigging**, **Corrosion Monitoring**, **Cathodic Protection** as well as Root Cause Analysis (**RCA**), Root Cause Failure Analysis (**RCFA**), **Gas Conditioning & Process Technology**, **Production Safety** and **Delusion of Asphalt**. Currently, he is the **Operations Consultant** & the **Technical Advisor** at **GEOTECH** and an independent **Drilling Operations Consultant** of various engineering services providers to the international clients as he offers his expertise in many areas of the **drilling & petroleum discipline** and is well **recognized & respected** for his process and procedural expertise as well as ongoing participation, interest and experience in continuing to promote technology to producers around the world.

Throughout his long career life, Dr. Chris has worked for many international companies and has spent several years **managing** technically **complex wellbore interventions** in both **drilling** & **servicing**. He is a **well-regarded** for his **process** and **procedural expertise**. Further, he was the **Operations Manager** at **ETP Crude Oil Pipeline Services** where he was fully responsible for optimum operations of crude oil pipeline, **workover** and **directional drilling**, **drilling rigs** and equipment, drilling of various geothermal deep wells and **exploration wells**. Dr. Chris was the **Drilling** & **Workover Manager** & **Superintendent** for **Kavala Oil** wherein he was responsible for supervision of **drilling operations** and **offshore exploration**, quality control of performance of **rigs**, **coiled tubing**, crude oil transportation via pipeline and abandonment of **well** as per the API requirements. He had occupied various key positions as the **Drilling Operations Consultant**, **Site Manager**, **Branch Manager**, **Senior Drilling** & **Workover Manager** & **Engineer** and **Drilling** & **Workover Engineer**, **Operations Consultant**, **Technical Advisor** in several petroleum companies responsible mainly on an **offshore** sour oil field (under water flood and gas lift) and a gas field. Further, Dr. Chris has been a **Professor** of the **Oil Technology College**.

Dr. Chris has **PhD** in **Reservoir Engineering** and a **Master's** degree in **Drilling & Production Engineering** from the **Petrol-Gaze Din Ploiesti University**. Further, he is a **Certified Surfaced BOP Stack Supervisor** of **IWCF**, a **Certified Instructor/Trainer**, a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management** (**ILM**) and has conducted **numerous short courses**, **seminars** and **workshops** and has published several technical books on **Production Logging**, **Safety Drilling Rigs** and **Oil Reservoir**.

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.

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	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Real-Time Drilling*** *Objectives & Benefits of Real-Time Monitoring • Role of a Realtime Drilling Specialist • Data Flow from Rig to Monitoring Center • Common Operational Challenges in Data Acquisition*
0930 – 0945	*Break*
0945 – 1030	***Drilling Data Acquisition Systems*** *Surface & Downhole Data Sources • WITS & WITSML Data Standards • Sensors & Telemetry Systems • Data Transmission & Storage*
1030 – 1130	***Key Drilling Parameters*** *Weight on Bit (WOB) • Rate of Penetration (ROP) • Torque & Rotational Speed (RPM) • Pump Pressure & Flow Rate*
1130 – 1230	***Downhole Measurement Tools*** *MWD (Measurement While Drilling) Basics • LWD (Logging While Drilling) Basics • Directional Drilling Sensors • Formation Evaluation Tools*
1230 - 1245	*Break*
1245 - 1330	***Data Quality Control*** *Identifying Sensor Malfunctions • Noise & Signal Filtering Techniques • Calibration & Verification Procedures • Ensuring Data Integrity*
1330 - 1420	***Health, Safety & Environment (HSE) in Real-Time Drilling*** *Hazard Identification in Real-Time Monitoring • Safety Protocols for Data Rooms • Remote Decision-Making & Safety Impact • Compliance with Drilling Regulations*
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 – 0845	***Data Management in Real-Time Drilling*** *Data Collection Workflows • Data Tagging & Storage Methods • Cloud-Based versus On-Premises Solutions • Access Control & Security*
0845 – 0930	***Real-Time Data Visualization*** *Interpreting Drilling Parameter Plots • 3D Well Trajectory Visualization • Time-Based versus Depth-Based Plotting • Dashboard Customization for Operations*
0930 – 0945	*Break*
0945 – 1100	***Trend Analysis & Pattern Recognition*** *Identifying Drilling Trends • Detecting Anomalies & Deviations • Correlating Multiple Parameters • Using Historical Offset Well Data*
1100 - 1230	***Hydraulic & Mechanical Models*** *Real-Time ECD (Equivalent Circulating Density) Calculation • Pressure Loss Modeling • Torque & Drag Analysis • Bit Wear Prediction Models*
1230 – 1245	*Break*
1245 – 1330	***Formation Evaluation in Real Time*** *Gamma Ray & Resistivity Interpretation • Lithology Determination • Real-Time Pore Pressure Prediction • Geosteering Decisions*
1330 - 1420	***Case Study Review*** *Successful Real-Time Interventions • Lessons from Drilling Failures • Impact of Timely Data Interpretation • Best Practices from Industry Leaders*
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 – 0845	***Operational Decision Workflows*** *Decision-Making Frameworks • Communication Protocols with Rig Crews • Role Allocation Between Engineers & Geologists • Escalation Procedures for Critical Events*
0845 – 0930	***Wellbore Stability Monitoring*** *Identifying Early Signs of Instability • Monitoring Cavings & Cuttings Trends • Adjusting Drilling Parameters • Preventing Stuck Pipe Incidents*
0930 – 0945	*Break*
0945 – 1100	***Kick & Loss Detection*** *Real-Time Pit Volume Monitoring • Flow-Out & Return Flow Sensors • Early Influx Indicators • Immediate Actions to Prevent Blowouts*
1100 - 1230	***Optimization of Drilling Parameters*** *ROP Optimization Techniques • Minimizing Bit Wear • Reducing Non-Productive Time (NPT) • Adjusting WOB, RPM & Mud Properties*
1230 – 1245	*Break*
1245 – 1330	***Vibration & Shock Monitoring*** *Identifying Harmful Downhole Vibrations • Root Causes of Stick-Slip & Whirl • Data-Based Mitigation Strategies • Tool Failure Prevention*

1330 - 1420	***Case-Based Decision Exercises*** *Scenario-Based Decision Training • Analyzing Real-Time Data Under Pressure • Group Discussions & Solutions • Lessons Learned Documentation*
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 – 0845	***Real-Time Drilling Automation*** *Automated Parameter Adjustment • AI-Driven Optimization Systems • Drilling Robotics Integration • Human Oversight in Automation*
0845 – 0930	***Predictive Analytics for Drilling*** *Machine Learning in Drilling Data Analysis • Predicting Equipment Failures • Predicting Stuck Pipe & Well Control Events • Real-Time Data Correlation with Historical Wells*
0930 – 0945	*Break*
0945 – 1100	***Geosteering in Real Time*** *Steering Based on LWD Data • Real-Time Trajectory Adjustment • Reservoir Navigation Techniques • Data Exchange Between Geologists & Drillers*
1100 - 1230	***Remote Operations Centers (ROC)*** *Structure & Function of ROC • Communication Between ROC & Rig Site • Multi-Well Monitoring from a Central Hub • Benefits & Limitations of Remote Control*
1230 – 1245	*Break*
1245 – 1330	***Integration with Drilling Management Systems*** *Linking Real-Time Data to Drilling Plans • Updating Well Programs on the Fly • Integration with ERP & Reporting Tools • Decision Traceability & Audit Trails*
1330 - 1420	***Performance Benchmarking*** *KPIs for Drilling Efficiency • Benchmarking Against Offset Wells • Continuous Improvement Loops • Performance Reporting Formats*
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*

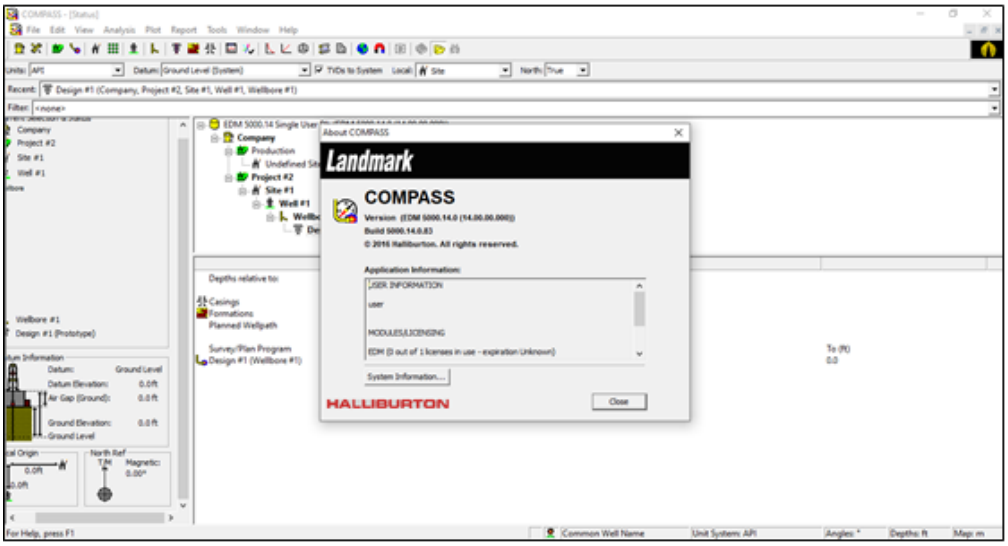
Day 5

0730 – 0845	***Full-Scale Real-Time Drilling Simulation*** *Live Data Feed Simulation • Parameter Adjustments & Consequences • Collaboration Between Roles • Time-Critical Decision-Making Practice*
0845 – 0930	***Multi-Well Data Management*** *Handling Simultaneous Operations • Prioritization of Critical Wells • Data Synchronization Challenges • Cross-Well Learning & Optimization*
0930 – 0945	*Break*
0945 – 1100	***Emergency Decision Making*** *Rapid Analysis Under High-Pressure Situations • Decision-Making Hierarchy in Emergencies • Mitigating High-Risk Operational Failures • Case History of Emergency Interventions*

1100 - 1230	***Reporting & Documentation*** *Real-Time Reporting Standards • Visual Dashboards for Management • Event Logging & Incident Tracking • Post-Well Analysis Reports*
1230 – 1245	*Break*
1245 - 1345	***Best Practices & Lessons Learned*** *Common Pitfalls in Real-Time Drilling • Industry Standards & Guidelines (API, IADC) • Maintaining Data Quality Over Time • Collaboration & Knowledge Sharing*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 - 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "COMPASS" software.



COMPASS

Course Coordinator

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