COURSE OVERVIEW DE0221
Management of Gas Condensate Reservoirs

Course Title
Management of Condensate Reservoirs

Course Date/Venue
Please see page 3

Course Reference
DE0221

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 gas condensate reservoirs management. It covers the reservoir-type classification criteria including the issues in gas condensate reservoir management for hydrocarbon asset valuation and production operation issues; the fluid phase behavior covering black oil model, EOS and PVT lab experiments for phase modeling; the formation characterization of general core analysis, special core analysis and determination of fluid-initially-in-place (FIIP); and the multiphase fluid flow consisting of Pc-curves, reservoir initialization, relatively permeability curves with the end-point scaling due trapping number changes and non-darcy flow effect.

Further, this course will also discuss the recovery mechanisms and production operations that include natural depletion, water drive supported by aquifer, gas recycling and oil production from oil rim; the well deliverability reduction due to condensate buildup, non-darcy flow, coning or high perm streaks, or production problems with thin oil leg, well type, well spacing and flow rate; and the simple methods for tank-model analysis and simple well deliverability calculation.

During this interactive course, participants will learn the effective total skin, non-darcy flow effect, general compositional reservoir simulation, single-well model, mechanistic model and general field scale model; the simulator-based class projects covering compositional reservoir simulation, input data preparation, simulation quality control and predictions runs; the production-related issues of sand production, hi-perm streaks and remediation of condensate build-up; the well testing and single-well simulation, field surveillance and fluid sampling; and the uncertainties in gas condensate fields management from exploration to abandonment.

Course Objectives

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

- Apply and gain a good working knowledge on gas condensate reservoirs management
- Identify the types of hydrocarbon reservoirs based on phase behavior of reservoir fluid and the based on reservoir structure
- Recognize the reservoir-type classification criteria including the issues in gas condensate reservoir management for hydrocarbon asset valuation and production operation issues
- Discuss fluid phase behavior covering; black oil model, EOS and PVT lab experiments for phase modeling
- Describe formation characterization of general core analysis, special core analysis and determination of fluid-initially-in-place (FIIP)
- Discuss multiphase fluid flow consisting of Pc-curves and the reservoir initialization, relatively permeability curves with the end-point scaling due trapping number changes and non-darcy flow effect
- Recognize recovery mechanisms and apply production operations that include natural depletion, water drive supported by aquifer, gas recycling and oil production from oil rim
- Identify well deliverability reduction due to condensate buildup, non-darcy flow, coning or high perm streaks, or production problems with thin oil leg and well type, well spacing, flow rate, etc.
- Employ simple methods for tank-model analysis and simple well deliverability calculation
- Determine effective total skin, non-darcy flow effect, general compositional reservoir simulation, single-well model, mechanistic model and general field scale model
- Prepare simulator-based class projects covering compositional reservoirs simulation, input data preparation, simulation quality control and predictions runs
- Identify production-related issues of sand production, hi-perm streaks, remediation of condensate build-up, etc
- Carryout well testing and single-well simulation, field surveillance and fluid sampling
- Uncertainties in gas condensate fields management from exploration to abandonment

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 management of gas condensate reservoirs for geologists, geophysicists, petro-physicists, engineers and other geoscientists personnel.

Course Date/Venue

Session(s)	Date	Venue
1	April 05-09, 2026	Pierre Lotti Meeting Room, Movenpick Hotel Istanbul Golden Horn, Istanbul, Turkey
2	June 15-19, 2026	Ruben Boardroom, The Rubens at The Palace, Buckingham Palace Road, London, United Kingdom
3	August 16-20, 2026	Meeting Plus 9, City Centre Rotana, Doha, Qatar
4	September 27- October 01, 2026	Meeting Room 4, Four Seasons Hotel Cairo at Nile Plaza, Corniche El Nil, Garden City, Cairo, Egypt
5	November 09-13, 2026	Salon Expo, NH Hotel Plaza de Armas, Seville, Spain
6	December 13-17, 2026	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
7	January 17-21, 2027	Meeting Plus 9, City Centre Rotana, Doha, Qatar
8	March 14-18, 2027	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

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 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.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

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. George Basta, MSc, BSc, is a **Senior Reservoir Engineer** with extensive experience within the **Oil & Gas**, **Refinery** and **Petrochemical** industries. His wide expertise covers in the areas of **Reserve Calculation**, **Reservoir** Engineering, **Petroleum** Engineering & **Reservoir** Management, **Sandstone & Fractured Carbonate Reservoir**, **Reservoir Productivity**, Enhanced Oil Recovery (**EOR**), Thermal Enhanced Oil Recovery (**TEOR**), **Reservoir Pressure** Maintenance (**Water Flooding**), **Reservoir** Modelling, **Reservoir Surveillance**, **Steam Flood Reservoir** Management, Integrated **Carbonate Reservoir** Characterization, Applied **Reservoir Engineering** & Management, **Reservoir Surveillance** & Management, Applied **Production Logging & Reservoir Monitoring**, **Reservoir Management**, **Reservoir Geomechanics**, **Reservoir** Engineering, **Reservoir Characterization**, **Reservoir** Characterization, **Reservoir Fluid** Characterization & Management, **Fractured Carbonate Reservoir**, **Reservoir** Geophysics, **SCAL**, **Rocks & Fluids Properties**, **Production & Injection**, **Heavy Oil Recovery**, **Well Production** Engineering, **Well** Modelling, **Nodal Analysis**, **Well Data** Results Interpretation, **Well** Tests, Enhancing **Well Productivity**, **Injection Logging**, Original Hydrocarbon in Place (**OHIP**), **Reserve** Estimation, **Reserve** Evaluation, **Steam** Injection, **Polymer** Injection, Steam Pulsing Injection (**SPI**), Cyclic Group Steaming of Wells (**CGSW**), Quality Management System, **Volumetric** Analysis, **Monte Carlo** Techniques, **Material Balance** and Decline Curve Analysis (**DCA**). He is also well-versed in **PVTi**, **PVTP**, **PVTsim**, **PETREL** Software, **MBAL** Software, **Prosper** Software, CMG, OFM, Saphir/Ecrin, Advanced Excel, EORgui, IMEX, Thermal STARS, EXOTHERM, Eclipse, KAPPA Software and PETEX.

During Mr. George's career life, he has gained his thorough and practical experience through his various positions as the **Reservoir Surveillance Engineer**, **QA/QC Engineer**, **Field Engineer**, **Reservoir Surveillance Petroleum Consultant Engineer** and **Senior Instructor/Lecturer** for various companies like OPEC (Offshore Protection Engineering Company), Scimitar Production Egypt Ltd and the Business Development in Africa and MENA Regions.

Mr. George has **Master** and **Bachelor** degrees in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer**, an active member of the Society of Petroleum Engineer (**SPE**) and Canadian Society of Petroleum Geologists (**CSPG**). Moreover, he published various books and scientific journals and has delivered numerous trainings, courses, seminars, conferences and workshops globally.

Course Fee

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.
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.
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.
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.
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.
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.

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	***Types of Hydrocarbon Reservoirs*** *Based on Phase Behavior of Reservoir Fluid ● Based on Reservoir Structure*
0930 – 0945	*Break*
0945 – 1045	***Reservoir-Type Classification Criteria***
1045-1200	***Issues in Gas Condensate Reservoir Management*** *Hydrocarbon Asset Valuation ● Production Operation Issues*
1200 –1215	*Break*
1245 – 1420	***Fluid Phase Behavoirs*** *Black Oil Model ● EOS Model ● PVT Lab Experiments for Phase Modeling*
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 – 0830	***Formation Characterization*** *General Core Analysis ● Special Core Analysis ● Determination of Fluid-Initially-In-Place (FIIP)*
0930 - 0945	*Break*

1945 – 1100	***Multiphase Fluid Flow*** *Pc-Curves and the Reservoir Initialization ● Relatively Permeability Curves with the End-Point Scaling due to Trapping Number Changes ● Non-Darcy Flow Effect*
1110 - 1230	***Recovery Mechanisms***
1230 - 1245	*Break*
1245 - 1420	***Production Operations*** *Natural Depletion ● Water Drive Supported by Aquifer ● Gas Recycling ● Oil Production from Oil Rim*
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	***Well Deliverability Reduction due to Condensate Buildup, Non-Darcy Flow, etc.*** *Coning, or High Perm Streaks, or Production Problems with thin Oil Leg, etc ● Well Type (Horizontal vs. Vertical), Well Spacing, Flow Rate, etc.*
0930 - 0945	*Break*
0945 - 1045	***Simple Methods*** *Tank-Model Analysis (Black-Oil-Based Material Balance with Rvo) ● Simple Well Deliverability Calculation*
1045 – 1130	***Effective Total skin, Non-Darcy Flow Effect, etc.***
1130 - 1230	***General Compositional Reservoir Simulation***
1230 - 1245	*Break*
1245 - 1420	***Single-Well Model***
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	***Mechanistic Model***
0930 - 0945	*Break*
0945 - 1045	***General Field Scale Model***
1045 – 1130	***Preparation for Simulator-based Class Projects*** *Overview on Compositional Reservoir Simulation ● Input Data Preparation ● Simulation Quality Control ● Prediction Runs*
1130 - 1230	***Class Project 1: Single-Well Model Example (Grid-size Effect, etc.)***
1230 - 1245	*Break*
1245 - 1420	***Class Project 2: Gas Recycling Case Example***
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	***Production-Related Issues (Sand Production, Hi-Perm Streaks, Remediation of Condensate Build-up etc.)***
0930 - 0945	*Break*
0945 - 1100	***Well Testing & Single-Well Simulation***
1100 - 1200	***Field Surveillance, Fluid Sampling, etc.***
1200 - 1215	*Break*
1215 - 1345	***Uncertainties in Gas Condensate Fiels Management (from Exploration to Abandonment)***
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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