COURSE OVERVIEW DE0068
Advanced Sand Control Techniques

Course Title
Advanced Sand Control Techniques

Course Date/Venue
August 10-14, 2025/TBA Meeting Room, The H Hotel, Dubai, UAE

Course Reference
DE0068

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

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

Effective elimination of sand from the production stream is a key element of production optimization and one that requires an engineered approach. Sand causes a wide variety of costly problems when oil and gas are produced from unconsolidated reservoirs. The most costly problem is usually the loss of production resulting from formation damage caused by poorly planned and/or executed sand control applications.

This course is designed to enable participants to understand the key factors that need to be accounted for when managing the risk of sand production and how these are integrated into developing an effective and economical sand control process. The course will identify the parameters that must be considered when selecting the sand control technique to be used. Examples, problems and case studies will be examined to illustrate key points.

Sand control failures will be used to illustrate the types of problems that can lead to early well failures. This course will teach you how to perform quality control checks during the sand control application to help insure successful wells. Because Sand Control in horizontal wells often proves to be short-lived when incorrectly applied, examples and exercises will focus on correctly choosing successful completion techniques for horizontal wells. In this course, participants will learn the causes of sand production and formation damage and how they can reduce production. Methods and procedures will be presented to guide participants in decision making with regard to completing a well with optimum control of formation sand while incurring minimal damage to the well or production zone.

Several new promising sand control technologies have been introduced in the last few years such as expandable screens. The proper application of these new technologies will also be thoroughly covered. Attendees will leave this course with a thorough understanding of what is necessary to design and implement cost-effective sand control in producing and injection wells. Participants will also learn why certain practices should either be employed or strictly avoided. Finally the very latest in the use of forecasting methods, tools, techniques and personal experiences will be presented. The course will use lecture and class discussion. Video clips and PowerPoint slides will serve as visual aids and as the lecture outline. Hands-on participation will be included in the form of problem solving exercises and learning helps.

Course Objectives

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

- Apply advanced techniques in sand control
- Identify the nature of sandface and its behavior
- Determine the causes of sand production and formation damage
- Implement proven techniques and practices of formation damage treatment
- Predict formation behavior and choose the best sandface completion that maximizes flow
- Apply the correct well completion practices that make the highest productivity

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 advanced sand control techniques for production, completion and drilling supervisors and engineers, reservoir engineers, geologists and workover and well service supervisors.

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. Konstantin Zorbalas, MSc, BSc, is a **Senior Petroleum Engineer & Well Completions Specialist** with over **25 years** of **offshore** and **onshore** experience in the **Oil** & **Gas**, **Refinery** & **Petrochemical** industries. His wide expertise includes **Workovers & Completions**, **Petroleum Risk & Decision Analysis**, Electrical Submersible Pumps Application, **ESP** Assembly & Disassembly Techniques, **ESP** Modeling & Design, **ESP** Construction & Operational Monitoring, **ESP** Troubleshooting & Maintenance, **Acidizing Application** in **Sandstone** & **Carbonate**, **Well Testing Analysis**, **Stimulation Operations**, **Reserves Evaluation**, **Reservoir Fluid Properties**, **Reservoir Engineering & Simulation Studies**, **Reservoir Monitoring**, **Artificial Lift Design**, **Gas Operations**, **Workover/Remedial Operations** & **Heavy Oil Technology**, **Applied Water Technology**, **Oil & Gas Production**, **X-mas Tree** & **Wellhead Operations** & **Testing**, **Artificial Lift Systems** (**Gas Lift**, **ESP**, and **Rod Pumping**), **Well Cementing**, **Production Optimization**, **Well Completion Design**, **Sand Control**, **PLT Correlation**, **Slickline Operations**, **Acid Stimulation**, **Well testing**, **Production Logging**, **Project Evaluation** & **Economic Analysis**. Further, he is actively involved in **Project Management** with special emphasis in production technology and field optimization, performing conceptual studies, economic analysis with risk assessment and field development planning. He is currently the **Senior Petroleum Engineer & Consultant** of **National Oil Company** wherein he is involved in the mega-mature fields in the Arabian Gulf, predominantly carbonate reservoirs; designing the acid stimulation treatments with post-drilling rigless operations; utilizing CT with tractors and DTS systems; and he is responsible for gas production and preparing for reservoir engineering and simulation studies, well testing activities, field and reservoir monitoring, production logging and optimization and well completion design.

During his career life, Mr. Zorbalas worked as a **Senior Production Engineer**, **Well Completion Specialist**, **Production Manager**, **Project Manager**, **Technical Manager**, **Technical Supervisor** & **Contracts Manager**, **Production Engineer**, **Production Supervisor**, **Production Technologist**, **Technical Specialist**, **Business Development Analyst**, **Field Production Engineer** and **Field Engineer**. He worked for many **world-class oil/gas companies** such as **ZADCO**, **ADMA-OPCO**, **Oilfield International Ltd**, **Burlington Resources** (later acquired by **Conoco Phillips**), **MOBIL E&P**, **Saudi Aramco**, **Pluspetrol E&P SA**, **Wintershall**, **Taylor Energy**, **Schlumberger**, **Rowan Drilling** and **Yukos EP** where he was in-charge of the **design and technical analysis** of a gas plant with capacity **1.8 billion m3/yr gas**. His achievements include **boosting oil production 17.2% per year** since 1999 using **ESP** and **Gas Lift systems**.

Mr. Zorbalas has **Master** and **Bachelor** degrees in **Petroleum Engineering** from the **Mississippi State University**, **USA**. Further, he is an **SPE Certified Petroleum Engineer**, **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**), an active member of the Society of Petroleum Engineers (**SPE**) and has numerous scientific and technical publications and delivered innumerable training courses, seminars and workshops worldwide.

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.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Sunday, 10th of August 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Causes & Effect of Sand Production*** *The Geology of Sedimentary Formations ● The Nature of Cohesive Failure and Contributing Issues ● Terms that Describe Sanding Formations*
0930 – 0945	*Break*
0945 – 1100	***Prediction of Formation Behavior*** *Formation Properties Logs to Predict Sand Propensity to Produce ● Understanding each Element of Darcy's Law ● Drawdown Issues, Predictions and Calculations ● Time Dependence and Multiphase Flow*
1100 – 1230	***Productivity & Flow Efficiency*** *The Concept of Radial vs. Linear Flow ● Issues Related to Near Wellbore Restrictions*
1230 – 1245	*Break*
1245 – 1420	***Formation Damage Issues*** *Drilling the Well ● Cementing Operations ● Damage Due to Perforating ● Chemistry of Formation Clays ● Damage Due to Mishandling of Clays ● Treatments to Minimize Clay Damage*
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:	Monday, 11th of August 2025
0730 – 0900	***Continuation of Formation Damage Issues*** *Well Treatment Chemicals: Surfactants ● In-Situ Damage Compounds: Scales, Paraffin and Asphaltene ● Use and Misuse of HCl and HF Acids*
0900 – 0915	*Break*
0915 – 1100	***Evolution of Sand Management Techniques***
1100 – 1230	***Cased -Hole Sandface Completions*** *Drill-In and Completion Fluids ● Mechanical Devices*
1230 – 1245	*Break*
1245 – 1420	***Cased -Hole Sandface Completions (cont'd)*** *Planning a Gravel Pack*
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:	Tuesday, 12th of August 2025
0730 – 0930	***Cased-Hole Sandface Completions (cont'd)*** *Fluid Filtration Techniques ● Cartridge vs. D.E. Filtration ● Quantifying Filtration Results ● Beta Ratings*
0930 – 0945	*Break*
0945 – 1100	***Perforating*** *Gun Design and Deployment ● Perforation Sizing and Shapes ● Perforation Cleaning Methods*
1100 – 1215	***Types of Gravel Packs*** *Water Packs ● Slurry Packs ● Polymers Used to Viscosify Gravel Pack Fluids ● Carrier Fluid Selection ● Chemical Breakers*
1215 – 1230	*Break*
1230 – 1420	***Gravel Placement Techniques*** *Over-the-Top Method ● Through-Tubing Gravel Packs ● Inside Pressure Pack ● Perforation Packing ● How Fluids Selection Relates to Tool Design*
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:	Wednesday, 13th of August 2025
0730 – 0930	***Tool Designs to Achieve Void-Free Packing*** *Gravel Packing Tool String ● Multi-Position Gravel Pack Packers ● One-Trip Perf & Pack System*
0930 – 0945	*Break*
0945 – 1100	***Frac Packing in Cased Completions*** *Comparing Frac-Packs with Other Methods ● Dusterhoft Application Selection Chart ● Hydraulic Fracturing Concepts ● Measuring In-Situ Stresses*

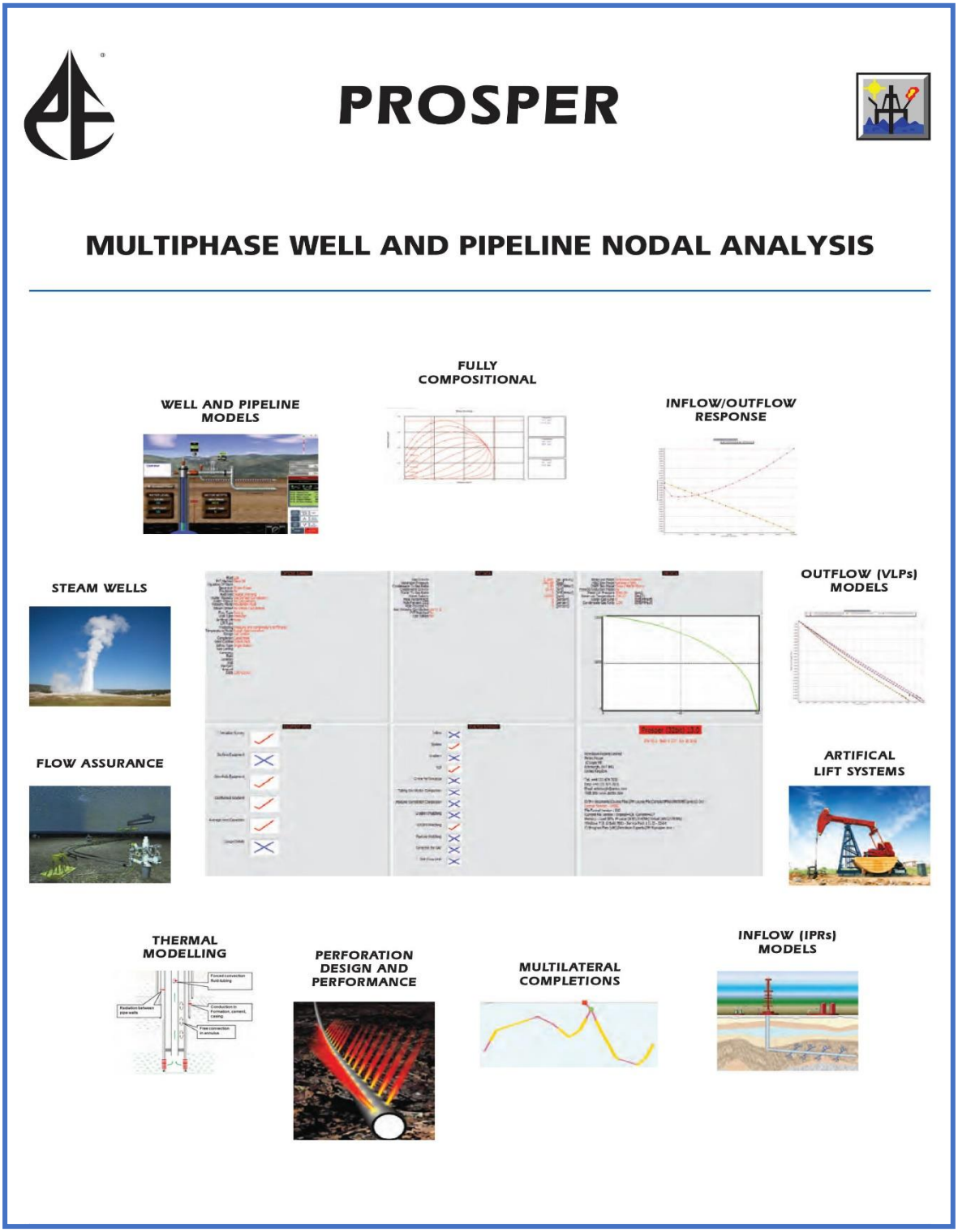
1100 – 1215	***Fracturing Fluid Systems*** *Water Packs ● HEC ● HP Guars ● Crosslinkers and Breakers ● Oil Gels ● Foams*
1215 – 1230	*Break*
1230 – 1420	***Sand Control in Open-Hole Completions*** *Fluids Related to Drill-In (Fluid Loss Control) ● Sand Exclusion Devices ● Vertical Open-Hole Completions*
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: ***Thursday, 14th of August 2025***

0730 – 0930	***Chemical Consolidation Methods*** *Consolidation Resins Used in Pre-Pack Screens ● Epoxy Resin Consolidation Systems ● Furan Resin Consolidation Systems*
0930 – 0945	*Break*
0945 – 1100	***Combination Packing/Consolidation Systems***
1100 – 1215	***Their Applications in Frac Packing***
1215 – 1230	*Break*
1230 – 1345	***Surface Operations & Equipment***
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*

Simulators (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 our state-of-the-art simulator "PROSPER" software.



Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org