Future of Heavy Oil: Challenges and Opportunities
**SCHEDULE OF EVENTS**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Al-Dorra Ballroom 1</th>
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<tr>
<td>Monday, 5 December 2016</td>
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<tr>
<td>1300–1700 hours</td>
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<tr>
<td>0900–1500 hours</td>
<td>One-Day Training Course: Solving the Challenges of Field Scale Heavy Oil and Oil Sands Simulation</td>
<td>One-Day Training Course: Introduction to Sand Control</td>
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<td>1000–1100 hours</td>
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<td>Session 2: Drilling and Completion Optimisation</td>
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<tr>
<td>1500–1545 hours</td>
<td>Coffee Break and Knowledge Sharing ePoster Sessions</td>
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<td>1545–1715 hours</td>
<td>Session 3: Reservoir Development and Performance</td>
<td>Session 4: Emerging Technologies and R&amp;D</td>
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<td>1900–2100 hours</td>
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<td>Session 5: Water Treatment and Facility Optimisation</td>
<td>Session 6: EOR—Non-Thermal</td>
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<td>1245–1415 hours</td>
<td>Session 7: Reservoir Modelling</td>
<td>Session 8: Well Integrity and Flow Assurance</td>
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<tr>
<td>1415–1500 hours</td>
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<td>1500–1630 hours</td>
<td>Session 9: Reservoir Optimisation</td>
<td>Session 10: Fluid Characterisation</td>
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<td>0800–0930 hours</td>
<td>Session 11: Reservoir Characterisation</td>
<td>Session 12: Efficiency Enhancement and Dynamic Productivity</td>
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<td>Exhibition</td>
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<tr>
<td>1015–1145 hours</td>
<td>Session 13: Reservoir Monitoring</td>
<td>Session 14: Heavy Oil Best Practices Processes</td>
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<td>1145–1315 hours</td>
<td>Panel Session 2: Heavy Oil—Projects in the Region</td>
<td>Luncheon</td>
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<td>Luncheon</td>
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Updates after 6 September 2016 are not reflected in this preview.
OPENING CEREMONY
Tuesday, 6 December 2016

Opening Remarks by:

His Excellency Anas Al-Saleh
Deputy Prime Minister, Minister of Finance, Acting Minister of Oil, State of Kuwait

Nizar Al-Adsani
Chief Executive Officer
Kuwait Petroleum Corporation

Jamal Jaafar
Chief Executive Officer
Kuwait Oil Company

Badria Abdul Raheem
SPE International Heavy Oil Conference Chairperson
Deputy Chief Executive Officer (NK)
Kuwait Oil Company

EXECUTIVE PLENARY SESSION
Future of Heavy Oil—Challenges and Opportunities
Tuesday, 6 December 2016

Moderator:

Emad M. Sultan
Conference Advisor
Deputy Chief Executive Officer (Planning & Commercial)
Kuwait Oil Company

Panelists:

Bernard Duroc-Danner
Chief Executive Officer
Weatherford

John Gallagher
Executive Vice President
Upstream Development
Shell

Jamal Jaafar
Chief Executive Officer
Kuwait Oil Company

Rod MacGregor
President and CEO
GlassPoint Solar

Daniel Palmer
Vice President Sales
GlassPoint Solar

Darcy Spady
Managing Director
Broadview Energy

The oil industry has constantly targeted heavy oil development with a vision of the inevitable future. The days of “easy oil” are bound to be limited, since fossil fuels cannot be replenished. Development of this challenging resource is a necessity to meet the gap between strategic requirements and the available production from “easy oil” resources. The development of heavy oil is always associated with challenges of high development costs leading to longer development cycle time, lower oil rates, etc. being some of the well-known challenges faced while developing heavy oil resources.

The good news is that the industry has learned through time to manage many of these challenges effectively, with many successful heavy oil projects all over the globe. The solutions vary from place to place, depending on project goals and reservoir set up. Heavy oil development is viewed as an opportunity that can bridge the gap between strategic targets and what “easy oil” can deliver.

PANEL SESSION 1
Heavy Oil Economics—Challenges and Opportunities
Wednesday, 7 December 2016

Moderators:

Walid Nader
General Manager
Shell Kuwait

Martin White
Senior Area Manager
Halliburton

Shaima Al Ghunaim
DMD Planning
Kuwait Petroleum Corporation

Colby Fuser
Vice President of Business Development
Middle East and North Africa
Halliburton

Daniel Palmer
Vice President Sales
GlassPoint Solar

Darcy Spady
Managing Director
Broadview Energy

Heavy oil field development challenges increasingly require new approaches to provide attractive returns whilst accommodating rising external pressures on development pace and impact. Resource volumes and growing refining capacity continue to provide an attractive long-term potential investment. However, increasing pressure on initial capital expenditures and requirements to minimise sustaining capital and operating expenses may require new strategies for key elements such as development phasing, technology integration, product upgrading and supply chain considerations.

The panel session will examine a range of current situations for which senior leaders aim to present options to capture opportunities and ensure resilient investments. The session will cover a broad range of topics, from technical considerations such as production enhancement techniques, low impact production technologies, next generation facilities or in-field product upgrading.

Further topics might include commercial and development planning considerations such as small reusable facility modules, mixed ownership of utility focused facilities (steam, electricity generation) or novel execution contracting arrangements.

PANEL SESSION 2
Heavy Oil—Projects in the Region
Thursday, 8 December 2016

Moderator:

Musleh Al-Otaibi
Manager Operations—Heavy Oil
Kuwait Oil Company

Panelists:

Shaima Al Ghunaim
DMD Planning
Kuwait Petroleum Corporation

Colby Fuser
Vice President of Business Development
Middle East and North Africa
Halliburton

Musleh Al-Otaibi
Manager Operations—Heavy Oil
Kuwait Oil Company

Musleh Al-Otaibi
Manager of Subsurface
Tatweer Petroleum

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Heavy oil in the region has been discovered some thirty years ago, in places such as Oman, Bahrain and Kuwait, however, projects have not been scaled up to appear as distinct as conventional oil projects. Ever since Kuwait’s heavy oil mega projects have been signed, the technical side of the region has been exposed to various regional projects. Handling such projects has led to a host of challenges all the way from exploring, field developments and its uncertainties, evaluating, budgeting, FEED, up to processing and transporting. Technology plays a vital role at each stage of these challenges while many existing significant concerns need to be addressed. Sharing relevant and proven methods of executing projects, exchanging them while consequently acquiring and developing specialised and new skills is an optimum goal for upstream operating companies in their endeavour to reach higher recovery efficiencies and improved economics when managing heavy oil resources. Nonetheless, for the middle and downstream companies, the optimum objective would be to achieve refining and processing efficiencies with higher value that counts at the cash flow balance sheets. A potential solution to the equation in such projects would be the application of technologies that would adopt a more efficient process, less operating expenses, and an improved quality of heavy oil. This panel session addresses the question of how the industry has executed its heavy oil projects by learning from gaps and shortfalls along the lifecycle of each project. The panel would also cover small-scale projects and pilots, the implementation of technologies embedded in ongoing projects, and case studies, essentially shedding light on projects under high risk and uncertainties.
COMMITTEES

EXECUTIVE COMMITTEE

Badria Abdul Raheem, (Conference Chairperson)
Kuwait Oil Company

Emad M. Sultan, (Conference Advisor)
Kuwait Oil Company

Musleh Al-Otaibi, (Co-Chairperson)
Kuwait Oil Company

Ziad Jeha, (Co-Chairperson)
Schlumberger

Abdulla Hindi Alajmi, Kuwait National Petroleum Company
Emad Al-Ajmi, Baker Hughes
Haifa Al-Ajmi, Kuwait Oil Company
Khaled Mohd Al-Awadi, Kuwait National Petroleum Company
Misad Al-Harbi, Kuwait Gulf Oil Company-Chevron
Abdul Hamid Al-Hashim, Kuwait Institute for Scientific Research
Mohammad Al-Maragi, Kuwait Foreign Petroleum Exploration Company
Walid Al Nader, Shell Kuwait
Anwar Al-Sharqawi, Kuwait Gulf Oil Company
Faisal Ayesh, AlKhoryayef
Nouri BenSalamah, Kuwait Petroleum Corporation
Roberto Ceccarelli, Baker Hughes
Yacoub Dashti, Kuwait Oil Company
Issam Halal, WorleyParsons
Lionel Levha, Total Kuwait
Adel Malallah, Kuwait University
Daniel Palmer, GlassPoint
Mohammad Qleibo, Weatherford
Darcy Spady, Broadview Energy
Martin White, Halliburton

PROGRAMME COMMITTEE

Waleed Al-Khamees, (Programme Chairperson)
Kuwait Oil Company

Fatma Mohamed Abdulsamad, (Co-Chairperson)
Kuwait Oil Company

Saad Alatefi, College of Technological Studies
Mubarak Al-Banwan, Kuwait Petroleum Corporation
Mohammad Al-Basri, Kuwait Oil Company
Ali Al-Harbi, Halliburton
Faisal Al-Humaidan, Kuwait Institute for Scientific Research
Sadoun Al-Khalidi, Kuwait Oil Company
Ahmed Alkouh, Middle East Oilfield Services
Ahmed Al-Majed, Kuwait National Petroleum Company
Bader Al-Matar, Kuwait Oil Company
Mohammad Al-Matrook, Kuwait Oil Company
Feras Al-Ruhaimani, Kuwait University

Nawaf Al-Salim, Kuwait Foreign Petroleum Exploration Company
May Alzanki, GlassPoint
Simon Bennett, Shell
Alfredo Escalona, WorleyParsons
Ahmed Fouad Elayaat, Schlumberger
Noha Najem, Kuwait Oil Company
Marcos Roberto, Total
Rick Stahl, Northern Blizzard

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INTRODUCTION TO SAND CONTROL
Monday, 5 December 2016 | 0900–1500 hours

Course Instructor: Samyak Jain, Sand Control Consultant, DuneFront

This course discusses the fundamental sand control considerations involved in completing a well and introduces the various sand control techniques commonly used across the industry, including standalone screens, gravel packs, high rate water packs and frac-packs.

Topics include:
• Fundamental sand control concepts, including when and why it is necessary
• The various sand control techniques used across the industry, including their advantages and limitations
• Remedial sand control
• The basics of sand control design and installation

Why You Should Attend:
The course is intended for drilling, completion and production personnel with little or no sand control experience who are looking to gain a better understanding of each technique’s advantages, limitations and application window for use in their upcoming completions.

Who Should Attend:
Field engineer/specialist/technician, completions engineer, production engineer, drilling engineer, product development engineer, research engineer.

SOLVING THE CHALLENGES OF FIELD SCALE HEAVY OIL AND OIL SANDS SIMULATION
Monday, 5 December 2016 | 0900–1500 hours

Course Instructor: Shawket Ghedan, Reservoir Simulation Advisor, CMG

The emphasis of this 1-day course will be on providing practical guidance and understanding in building efficient simulation models for different thermal recovery processes.

Topics include:
• Fundamentals of reservoir simulators
• Building a simulation friendly geomodel
• Sensible relative permeabilities
• PVT modelling; component selection; solvents
• Types and use of wellbore modelling
• Numerical tuning, parallelisation issues, and dynamic gridding
• Sensitivity Analysis and Optimisation

Why You Should Attend:
You’ll learn the underlying principles of reservoir simulation and how these drive the construction of geological models and the modelling of recovery processes.

Who Should Attend:
Reservoir engineers and geologists who are involved in the modelling of thermal processes to recover heavy oil and bitumen.

To find out more or register for the training courses, email registrationdubai@spe.org
### Registration Information and Costs

**NOT AN SPE MEMBER?** Become an SPE member for USD 110 (which includes: one-year membership + one-time entrance fee), or renew your membership for USD 90. As an SPE member you pay the lower member registration fee.

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**One-day conference registrations include all conference sessions, coffee breaks, and luncheon on the specified day. Student registrations (with valid IDs only) include all conference sessions, technical exhibition, and coffee breaks.**

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**Additional Tickets**

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**TOTAL USD**

**IMPORTANT:** All fees paid to SPE are net of taxes. The registration fees in this form do not include any local or withholding taxes. All such taxes will be added to the above-mentioned registration fees in the invoice.

All SPE sessions are protected by US copyright laws. Photography and video/audio recording of any kind are strictly prohibited in the sessions and throughout the exhibition area except for authorised personnel.

**Payment can be made by credit cards or bank transfers. All payments should be made in USD.**

**Cancellation Policy**

- If you cancel before 6 November 2016, you will receive a full refund less USD 100.
- If you cancel after 6 November 2016, you will not be eligible for a refund.
- No refund will be given if a registered delegate fails to attend the conference.
- SPE must receive cancellation requests in writing by 6 November 2016 by fax on +971.4.457.5800, or by email to registrationdubai@spe.org.

**Credit Card**

- Visa
- American Express
- MasterCard

**Name (as it appears on card)**

**Credit Card Number**

**Security Code**

**Exp. Date**

**Authorised Signature**

**Billing Address of Charge**

**DELEGATE INFORMATION**

**How did you first become aware of this event?**

- Colleague (word of mouth)
- Section or Student Chapter
- Industry Publication
- SPE Website
- Other Industry Website
- Brochure Received by Mail
- I am a Committee Member/Presenter
- Employer
- An Exhibitor
- Others (please specify)________________________________________________________________________________________________________________

**PAYMENT AND CANCELLATION POLICY**

**COST IN USD**

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**IMPORTANT:**

- **AE180200000036217131100**
- **Swift Code:** BBMEAEAD
- **IBAN:** AE180200000036217131100
- **Account:** HSBC Bank Middle East Ltd, Jebel Ali Branch, P.O. Box 66, Dubai, UAE
- **SPE Website:** www.spe.org/events/hoce

Please fill in the form in capital letters and fax it to +971.4.457.3164, or email it to registrationdubai@spe.org. Call +971.4.457.5800 for more information.