SPE Middle East

Unconventional Resources Conference and Exhibition
26–28 January 2015

Muscat, Oman

Ritz Carlton, Al Bustan Palace Hotel
Muscat, Sultanate of Oman

The Journey of Unconventional Resources:
From Exploration to Successful Development

Titanium Sponsor

bp

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SCHEDULE OF EVENTS

Sunday, 25 January 2015
0800–1700 hours  SPE Training Course: Unconventional Resources—Making them Work
0800–1700 hours  SPE Training Course: Hydraulic Fracturing for Unconventional Reservoirs
0800–1700 hours  SPE Training Course: Best Practices for Analysing Unconventional Reservoirs
1400–1800 hours  Registration and Speaker Check-In

Monday, 26 January 2015
0730–1700 hours  Registration and Speaker Check-In
0830–0930 hours  Opening Ceremony
0930–1000 hours  Exhibition Opening/Coffee Break
1000–1830 hours  Exhibition
1000–1130 hours  Panel Session 1: Potential of Unconventional Resources in the MENA Region
1130–1230 hours  Special Project Session: Logistics
1230–1330 hours  Luncheon and Prayers
1300–1500 hours  Session 1: Exploration and Assessment for Unconventional Resources
1300–1500 hours  Session 2: Geomechanics for Drilling and Stimulation
1500–1530 hours  Coffee Break/Knowledge Sharing ePoster Sessions
1530–1700 hours  Session 3: G&G Assessment
1730 hours  Welcome Reception

Tuesday, 27 January 2015
0730–1700 hours  Registration and Speaker Check-In
0900–1700 hours  Exhibition
0830–1000 hours  Session 5: From Core to Reservoir
0830–1000 hours  Session 6: Fracturing and Stimulation Strategies
1000–1030 hours  Coffee Break/Knowledge Sharing ePoster Sessions
1030–1200 hours  Panel Session 2: Challenges and Opportunities for Regional Collaboration
1200–1300 hours  Luncheon and Prayers
1300–1430 hours  Session 7: Reservoir Characterisation
1300–1430 hours  Session 8: Well Testing and Appraisal for Unconventional Resources
1430–1500 hours  Coffee Break/Knowledge Sharing ePoster Sessions
1500–1630 hours  Session 9: Reservoir Modelling and Simulation for Development Solutions
1500–1630 hours  Session 10: Sharing Lessons Learnt—Technical

Wednesday, 28 January 2015
0730–1900 hours  Registration and Speaker Check-In
0900–1700 hours  Exhibition
0830–1000 hours  Session 11: Sharing Lessons Learnt—Economic Viability
0830–1000 hours  Session 12: Future Challenges
1000–1030 hours  Coffee Break/Knowledge Sharing ePoster Sessions
1030–1200 hours  Panel Session 3: Optimising Developments—Balancing Cost, Efficiency and Effectiveness
1200–1300 hours  Luncheon and Prayers
1300–1430 hours  Special Project Session
1430 hours  Raffle Prize Draw and Closing

Opening Ceremony
Opening remarks by:
- Saleh Al-Anboori, Director General of Petroleum Management & Investment, Ministry of Oil & Gas, Sultanate of Oman
- Ahmed Hashmi, Head of Technology for BP Exploration & Production (Upstream), BP
- Nathan Meehan, 2016 SPE President
- Raoul Restucci, Managing Director, Petroleum Development Oman

Panel Session 1: Potential of Unconventional Resources in the MENA Region
Moderators: Nihat Gurmen, Schlumberger; Qassim Riyami, Petroleum Development Oman

Despite the wealth of hydrocarbon resources, the countries of the Middle East and North Africa (MENA) region are beginning to experience a shortfall of energy, and are struggling to fuel their expanding economies and rising power consumption. Inspired by the American energy renaissance, the MENA region is increasingly exploring the potential to turn its own unconventional reserves into the biggest boom in the energy market in decades.

Decreasing reserves, commitment to long-term gas export contracts, and increasing domestic demand are driving accelerated interest in unconventional resources. The growth in domestic energy need is becoming a common problem among MENA countries and a driving force behind increasing efforts to unlock shale reserves in the region. Hydrocarbons from unconventional sources will play an increasingly important part in the energy mix of future and will bring about significant changes in the oil, gas and petrochemicals industries. That is why it is critical that the leading industry players learn from the North American experience and stay up-to-date with the latest developments so that they can make informed decisions about development of the substantial opportunities that exist in the MENA region.

Technically recoverable shale gas resources in the MENA region are estimated at over 1,500 trillion cubic feet (tcf). Algeria, Libya, Saudi Arabia, Egypt, Oman, Kuwait and Jordan are looking to develop their unconventional resources to supply both the petrochemical industry and domestic power generation needs. While the estimates for unconventional oil resources are still unknown, their potential lies similarly across the region where activities are increasing in exploring and piloting to assess them.

Bridging the energy supply gap will be vital to the region’s political, economic and social sustainability. However, this creates a lot of commercial, logistical, environmental and even political challenges, for example water will be an issue for many, requiring the use of newer technologies that use less or no water, and increased pressure on desalination.
This panel discussion will address the following questions:

• What is the potential for unconventional oil and gas in MENA?
• What role could these resources play in the region’s energy mix?
• What are the potential short, medium and long-term solutions?
• What are the implications of the gas shortfall for MENA’s role as a global energy supplier?
• What is the optimum commercial, policy and regulatory environment needed to attract and ensure “international investment” in the development of these difficult resources?
• What are the challenges and solutions to reducing the energy intensity of the economies of the MENA region?

Panelists:

• Blaise Fremaux, General Manager (Middle East), Gaffney, Cline and Associates
• Daniel Palmer, Vice President, GlassPoint Solar
• Hans van Marle, General Manager, Shell Emerging Ventures
• Robert Fryklund, Vice President and Chief Upstream Strategist, IHS
• Representative from Shell

Panel Session 2: Challenges and Opportunities for Regional Collaboration

Moderators: Ahmed Al-Kharusi, Swift Technical Solutions; Michael D. Volcko, Allied Petroleum Exploration

Unconventional resource deposits are, in general, characterised by a large hydrocarbon resource base dispersed over wide areas. The development of these deposits requires significantly more production wells than typical conventional reserves and advanced well completion and stimulation technologies.

The high level of activity and success of unconventional resource development in North America can be attributed, in part, to: 1) the large number of operating companies, big and small, in the various plays, 2) a large population of technical professionals, and 3) a competitive drilling, hydraulic fracturing and related services industry to drive technical innovation while reducing costs. The service industry in conjunction with operating companies develop new technologies and practises, followed by early adoption by the industry, and rapid widespread use of those technologies that provide better performance and/or lower overall cost.

The Middle East region is characterised by relatively: 1) few operating companies, 2) small number of service companies, and 3) small indigenous populations of technical professionals. The large number of production wells required to develop unconventional plays and the corresponding high level of industry activity will be beyond the capacity of available services in the region.

With the development of unconventional resources, which are knowledge and resource intensive projects compared to the conventional plays, a regional collaboration between the Gulf countries becomes unavoidable. This collaboration includes sharing technical information between the countries and also the development of a regional service industry, in which resources can easily be shared across borders. With most of the unconventional plays being in the early exploration and appraisal phase, the available knowledge of the unconventional resources in the region is short and limited. At present, the Gulf countries lack the availability of the required resources each country individually needs to be commercially attractive. Current market and business needs dictate the requirement for resources integration between the Gulf countries to enhance the development of the unconventional resources.

Panelists:

• Dave Campbell, General Manager, BP Oman; Vice President Operations, BP
• Jim McKee, Senior Vice President, Corporate Development, Trican Well Service
• Kirk M. Bartko, Senior Petroleum Engineering Consultant and Team Leader for North Arabia Unconventional Gas Operations, Saudi Aramco
• Mo Cordes, Vice President, Schlumberger
• Mohammed Mazrui, Team Leader, Unconventional Oil & Gas Exploration, Petroleum Development Oman

Panel Session 3: Optimising Developments—Balancing Cost, Efficiency and Effectiveness

Moderators: Andy Marshall, Halliburton; Steve Rainey, BP

Many countries in the Gulf region aspire to have sufficient sources of natural gas to meet their needs for power generation and desalination. However, this is not the reality today, with demand greatly outstripping supply. On the back of the US unconventional gas boom, many countries in the region are embarking on programmes to evaluate their tight or shale gas resource potential.

By the very nature of the resource, the flow rates from unconventional wells are lower and decline more rapidly than from conventional wells. Consequently, well numbers and well productivity are often key drivers in unconventional developments. Technology can be deployed to overcome some of these technical challenges but this comes at additional cost. These factors combine to make unconventional developments economically challenged from the start. Overcoming this requires a different approach through all phases of exploration, appraisal, development and production.

As with all aspects of oil and gas development, over time the industry has demonstrated a remarkable ability to meet and overcome the challenges of the day. Technical achievements that were unthinkable 40 years ago are common place today. What does that say for the next 40 years?
The unconventional gas industry has gone through a remarkable learning curve in recent years linked with rapid experimentation, technology deployment and strong peer comparison and competition. Along the way there have been failures as well as successes as the industry has climbed the learning curve – succeeding through overcoming challenges and repeatedly finding the optimum balance of effectiveness, efficiency and cost. Can this be replicated here in the Gulf region?

The challenges are many and varied. In the subsurface, can identification of sweet spot areas help to eliminate drilling sub-economic wells? To what extent can drilling times and costs be reduced by developing and deploying hard rock drilling technologies? And in terms of fracking, can we increase stimulated rock volume to increase effectiveness whilst reducing costs and do this ever more efficiently? Above the ground, some of the greatest challenges relate to building the required infrastructure, developing local talent, agreeing incentivized commercial regimes, establishing sales markets and efficiently sharing people and equipment across borders. Only by finding the optimum blend of technology, infrastructure, services, people, equipment, market incentive, workflows and processes will we succeed in building a sustainable unconventional industry in the Region. In this session we invite participants to share stories and case histories that typify how we have overcome such challenges to create success both here in the Region and from further afield. We also invite participants to look to the future and to explore some of the challenges that await us in that space.

Panelists:
- Alfredo Mendez, Director, Business Development Unconventional Resources, Baker Hughes
- Brady Murphy, Senior Vice President Business Development & Marketing, Halliburton
- Mary Ann Clark, East Asset Director, Taqa
- Shree Vikas, Head of Supply Chain Excellence, ConocoPhillips

PROGRAMME HIGHLIGHTS

Sponsors and Exhibitors
The Society of Petroleum Engineers gratefully acknowledges the generous contribution and support of the following companies towards the SPE Middle East Unconventional Resources Conference and Exhibition.

Panelists:

Unconventional Resources—Making them Work
Instructors: Harris Cander and David Spain, BP

Hydraulic Fracturing for Unconventional Reservoirs
Instructor: Ibrahim S. Abou-Sayed, i-Stimulation Solutions

Best Practices for Analysing Unconventional Reservoirs
Instructor: David Anderson, Martin Santo, Silvia Rey, IHS

Exhibitors
- Baker Hughes
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Please fill in the form in capital letters and fax it to +971.4.457.3164, or email it to formsdubai@spe.org. Alternatively, you can register online at www.spe.org/events/urme. Call +971.4.457.5800 for more information.

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**Full Registration: Three-Day Registration**

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**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 Registration (please select)**

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**Visitor (Exhibition Only)—3 days**

Complimentary

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### DELEGATE INFORMATION

- **Registrant's Last Name (Family Name)**
- **Registrant's First Name (Forename)**
- **Company Name**
- **SPE Member**: Yes [ ] No [ ]
- **Member Number**
- **Job Title**
- **Street Address or P.O. Box**
- **Country**
- **State/Province**
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- **Zip/Postal Code**
- **Email**
- **Facsimile (include country/area/city code)**

### PAYMENT AND CANCELLATION POLICY

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

### CANCELLATION POLICY

- **If you cancel before 29 December 2014, you will receive a full refund less USD 100.**
- **If you cancel after 29 December 2014, 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 29 December 2014, by fax on +971.4.457.3164, or by email to formsdubai@spe.org.**

### TRAINING COURSES (Sunday, 25 January 2015) **|** Time: 0800–1600 hours **|** Venue: Ritz Carlton, Al Bustan Palace Hotel

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**TOTAL USD**

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### ADDITIONAL TICKETS

- **Luncheon Ticket**
  - Monday, 26 January: USD 70 × (______ tickets)
  - Tuesday, 27 January: USD 75 × (______ tickets)
  - Wednesday, 28 January: USD 75 × (______ tickets)

- **Gala Dinner**: Monday, 26 January
  - USD 200 (SPE Member) × (_____ )
  - USD 300 (Nonmember) × (_____ )

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**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.

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**Exp Date:**

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