

# The International Unconventional Gas Conference & Exhibition

*“Unconventional Gas Resources: Challenges & Opportunities for Sustainable Development”*

Ritz Carlton Al Bustan Palace, Muscat - January 20th - 22nd, 2014

*Supported by*



شركة تنمية نفط عمان  
Petroleum Development Oman



الجمعية العمالية للخدمات النفطية  
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**Sultanate of Oman**

**Ministry of Oil & Gas**

**Office of the Under Secretary**



سلطنة عمان  
وزارة النفط والغاز  
مكتب الوكيل

**No : MOG/US/MPI/002-02/2013**

**Date : June 3, 2013**

**Dear Colleagues,**

On behalf of the Executive & Technical Committee of The International Unconventional Gas Conference & Exhibition, it gives me a great pleasure to invite you to be a part of this prestigious gathering of professionals organized by Knowledge Expansion in Sultanate of Oman, the event will take place at the Ritz Carlton Al Bustan Palace, Muscat from 20<sup>th</sup> - 22<sup>nd</sup> January 2014.

Middle East as region holds substantial resources of unconventional gas, especially tight gas and shale gas which is hard to extract and requires advanced technologies and expertise. The three day conference will unite global industry and stakeholders to tackle the opportunities and challenges that need to be overcome to maximize the potential from unconventional gas.

Regardless of existence of highly productive conventional gas fields in this region, tight gas related exploration and appraisal activities in several countries such as Sultanate of Oman, Kingdom of Saudi Arabia, United Arab Emirates, Kuwait, Algeria, Egypt & Libya have increased and expected to pick up pace as time goes on. This will ultimately strengthen energy security, unlocking new economical energy sources.

This year's conference brings together international experts to share emerging findings from groundbreaking research, real successes and lessons learned from international developments.

The event will highlight, focus and showcase the opportunities for oil and gas companies to transfer skills and knowledge to take advantage of the unconventional developments planned in Middle East and further afield.

I would like to welcome you all and encourage you to join hands in this initiative to transfer knowledge and build relationships, And enjoy the beautiful city of Muscat Oman.

**Regards**

**Nasser bin Khamis Al Jashmi**  
**Undersecretary**  
**Executive Conference Chairman**



## Executive Committee



**H.E. Nasser bin Khamis Al Jashmi (Chairman)**

Undersecretary  
Ministry of Oil and Gas Oman



**Dr. Saleh Al Anboori**

Director General of Management of  
Petroleum Investments  
Ministry of Oil and Gas Oman



**Dr. Zaid Al Siyabi**

New Venture Director  
CC Energy



**Mr. Menahi Al Anzi**

Deputy C.E.O Exploration and Gas  
Kuwait Oil Company



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Exploration Director  
PDO



**Dr. Elaine Leith**

Technology Manager Oman  
SHELL



**Mr. Graham Walker**

VP Reservoir Development  
BP, M.E Region



**Mr. Hasan Al Marzooqi**

Sr. Vice President  
Adgas



**Mr. Manaf W. Arnous**

Sales Director MENA  
Weatherford



**Mr. Suleiman Al Zakwani**

Upstream Assets Director  
Oman Oil Exploration & Production



**Mr. Ross Clark Moore**

Country Director  
Baker Hughes



**Mr. Azhar Ahmed Al Kindi**

E&P Chief Operating Officer  
Petrogas



**Mr. Sultan Al-Ghaithi**

Country Manager  
Weatherford

## Technical Committee

**Dr. Qassim Al Riyami**

Tight Gas Development Manager  
Petroleum Development Oman (PDO)

**Mr. Mohammed Al-Otaibi**

Manager Support Services Group (WK)  
Kuwait Oil Company

**Mr. Mahmoud AL-Hashmi**

Well Delivery Manager  
Oman Oil Exploration & Production

**Mr. Muneer Al Naamani**

Planning & Supporting Leader  
PDO

**Dr. Klaus Mueller**

Technology Manager JVs  
SHELL

**Mr. Alberto Casero**

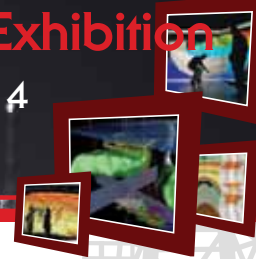
Sr. Specialist Fracturing & Stimulation  
BP America

**Mr. Wael El Mofty**

Area Manager M.E  
Packers Plus

**Mr. Mohammed Al-Masroori**

New Gas Team Leader  
(Gas Directorate - PDO)



## Conference Agenda Day 1

### 20<sup>th</sup> January 2014, Qantab Ballroom

- 07:30 09:00 Welcome and Registration
- 09:00 09:10 Guest of Honor Speech (TBC)  
*H.E. Mohammed bin Hamad Al Rumhy*  
*Minister of Oil and Gas, Sultanate of Oman*
- 09:10 09:35 Key Note Speech  
*Mr. Raoul Restucci*  
*Managing Director, PDO*
- 09:35 10:00 Key Note Speech  
*Mr. Menahi Al Anzi*  
*Deputy CEO Exploration & Gas, KOC*
- 10:00 10:25 Key Note Speech  
*Mr. David Dalton*  
*Middle East Regional President, BP*
- 10:25 10:50 Key Note Speech  
*Mr. Jerome Ferrier*  
*President, International Gas Union (IGU)*
- 10:50 11:00 Distribution of Appreciation Plaques (Sponsors)
- 11:00 12:00 Exhibition Tour & Coffee Break (Marjan Ballroom)
- 12:00 13:00 Official Luncheon Sponsor-CCED



## Session 1 - Technology


- 13:00 14:00 **Panel Discussion**  
Panelist 1: Baker Hughes (Chairman)  
Panelist 2: PDO, Panelist 3: Weatherford
- 14:00 14:30 Tight Reservoir Microseismic Hydraulic Fracture Monitoring in Extreme Conditions; Examples from Oman, **PDO**
- 14:30 15:00 Unconventional Technology: The difference between successful application and unsuccessful application (North America and Overseas). **BP**
- 15:00 15:30 Official Coffee Break Sponsor - Baker Hughes  
- 15:30 16:00 Innovative Fracturing approach for Tight Deep Gas Reservoir in Central Oman, **PDO**
- 19:30 22:00 Gala Dinner

### Alternate/POSTERS

- A comprehensive approach for predicting hydraulic fracture inflow performance - an example from a HPHT formation, **PDO**
- Innovative techniques to restore integrity on PDOs gas wells, **PDO**

## Conference Agenda Day 2 - Qantab Ballroom

### Session 2 - What makes a successful Unconventional Gas Development

- 09:00 10:00 **Panel Discussion**  
Panelist 1 : Kuwait Oil Company (Chairman)  
Panelist 2: Ministry of Energy, Hungary, Panelist 3: PDO
- 10:00 10:30 Deep Gas Field: Well Cost Reduction Initiative, **PDO**
- 10:30 11:00 Coffee Break
- 11:00 11:30 Comprehensive Multiple Data-fracturing Tests to Develop and Appraise Unconventional, Organic-Rich Carbonaceous Shales in North Kuwait - **KOC**
- 11:30 12:00 Monetising Coal Bed Methane in Australia: some challenges and lessons, **Australia**
- 12:00 13:00 Official Luncheon Sponsor-CCED 

### Alternate/POSTERS

- Assessment of the Lower Amin Formation: Hydraulic Fracturing in Cased Vs Open Hole, **PDO**
- Sweetspotting of the First Appraisal Campaign of Unconventional Resource Play in Kuwait, **KOC**
- Maturation of an HPHT Tight Gas Fields in North Oman, **PDO**

## Session 3 - Resources Sustainability

13:00 14:00

### Panel Discussion

Panelist 1: PDO (Chairman)

Panelist 2: E&Y, Panelist 3: CONTAX Partners

14:00 14:30

Unconventional - fast track to localization opportunities, **Ernest & Young**

14:30 15:00

Unconventional Oil and Gas Regulation and Policy Relating to Local Environmental Impacts and Climate Change, **TBD America**

15:00 15:30

Coffee Break

15:30 16:00

The Fracking Triangle is it worth not to regulate fracking?  
A European perspective, **RISKCOM**

### Alternate/POSTERS

■ US Energy Renaissance Shifts Power Away from the Middle East, **BREITLING**

■ Preparing for the upcoming challenges in project execution when the next market boom hits the region, **CONTAX Partners**

## Conference Agenda Day 3 - Qantab Ballroom

### Session 4 - Case histories success through challenges

09:00 10:00

### Panel Discussion

Panelist 1: BP (Chairman)

Panelist 2: PDO, Panelist 3: Kuwait Oil Company

10:00 10:30

Integrated subsurface workflow to appraise tight gas, **BP**

10:30 11:00

Official Coffee Break Sponsor-BP



11:00 11:30

Shale Play Drilling Challenges: Case Histories and Lessons Learned, **NOV**

11:30 12:00

X - Gas field Performance step change, **PDO**



12:00 13:00

Official Luncheon Sponsor-CCED

### Alternate/POSTERS

■ HPHT Gas Exploration Wells Cementing Issues in **PDO**

■ Application of Multiple seismic attributes in formulating the Appraisal Strategy of deep unconventional resource play, **KOC**

■ Creating value through permanent down hole gauges in central Oman tight gas appraisal, **BP**



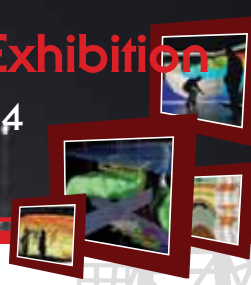
## Session 1 Technology

The oil and gas industry has seen significant changes in the supply of hydrocarbons, primarily due to gas and oil production from unconventional reservoirs in North America, often referred to as the Shale Gas Revolution or Shale Gas Boom. Whilst these plays are very diverse in terms of mineralogy, burial depth, pressure, stress regime, temperature and hydrocarbon content, they all exhibit extremely low permeability, most often in the nano-Darcy region, such that some form of fracturing stimulation is required to produce from them. The two keys to unlocking these resources are horizontal drilling and hydraulic fracturing, combined with multi-stage completions.

These North American developments were achieved through a trial and error approach by small independent operators, a factory drilling development philosophy, and a reliance on service sector collaboration to generate the required technological advances to improve the productivity and commerciality of these plays whilst, at the same time, reducing drilling and total well costs. Development of these tight gas and source rock oil and gas resources is however still commercially challenging, even with attractive fiscal regimes in place. The need for further significant technical advances is even more evident to ensure a commercial success and minimize environmental impact of the global development of these unconventional resources,

*These technical challenges are expected include, but not be limited by,*

- Rapid characterization of the source rock and tight gas reservoirs, and identification of the unique suite of sub-surface properties which combine to define the most productive intervals and areas (sweetspots)
- Improving well construction and drilling technologies
- Ensuring all of the well length (fracture stages) completed contributes to production compared to the current 40-60% in North America
- Novel stimulation technologies, to optimize the surface area contact and drainage from the reservoir
- Efficient and robust permanent production monitoring
- Ensuring the all of the wells are commercially successful compared to the 30% rates currently quoted from North America plays.
- Managing the water cycle for drilling, stimulation, including re-use, recycling and disposal options, whilst integrating this into the existing water resource management, and ensuring no negative impacts to the pre-development environment.
- Ensuring highest levels of safety, with improved barriers to reduce the probability of occurrences and mitigation plans.



## Session 3 Sustainability

Substantial resources of unconventional gas, especially tight gas are held in the Middle East region as indicated per results from recent gas exploration and appraisal activities. Regardless of the existence of highly productive conventional gas fields in this region, tight gas related exploration and appraisal activities in several countries have increased and is expected to pick up pace as time goes on.

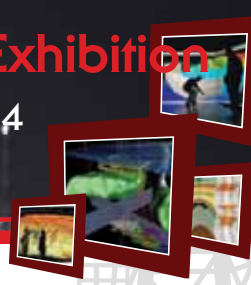
The Brundtland Commission definition of Sustainable Development is meeting the needs of the present without compromising the ability of future generations to meet their own needs. This will determine the criteria, challenges, and environment required for successful unconventional gas production and how it implicates the long term Middle East supply of natural gas.

This session will focus on the MENA area basic sustainability principles which should be considered for the future of our Gas industry.

### *Some of these challenges include:*

- Requirement for protection of the environment including fresh water supplies.
- Lack of sufficient water and water treatment facilities.
- Establishing the necessary infrastructure for large-scale drilling and hydraulic fracturing operations as well as produced hydrocarbons export routes.
- Establishing a framework for different operators to share information to accelerate the learning cycle.
- Incentivizing operators and service providers through government initiatives to address unconventional resources, which are commercially challenged.
- Deploying and adapting drilling, stimulation and hydraulic fracture technology to meet MENA reservoir needs.





## Session 4

## Case histories success through challenges

Whilst there is an aspiration across many countries in the Gulf Region to have sufficient sources of natural gas to meet their needs for power generation and desalination this is not the reality today. On the back of the US shale gas boom many countries in the Region are embarking on programmes to evaluate their tight gas or shale gas resource potential.

By the very nature of the resource the flow rates from these unconventional wells is lower than from conventional wells and will see faster decline rates. Technology can be deployed to overcome some of these technical challenges but this comes at additional cost. These factors can combine to make such developments economically challenged from the start. Overcoming this requires a different approach through all phases of exploration, appraisal, development and production. Such developments are particularly driven by well numbers and well productivity and so the drilling and completion aspects are key.

As with all aspects of oil and gas development over time the industry has a remarkable ability to meet the challenges of the day and overcome these. 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. Along the way there have been failures as well as successes as the industry has climbed the learning curve succeeding through meeting their Challenges. Can this be repeated in the Gulf Region?

Challenges can come in many forms including the subsurface, infrastructure, technology, commercial regimes, sales markets, knowledge transfer and the challenge to efficiently use people and equipment across several countries. In this session we invite participants to share stories and case histories that typify how we have overcome challenges to create success. We will also invite participants to look to the future and to explore some of the challenges that await us in this space.

The session includes a panel discussion followed by 3 further technical presentations and Q&A session. It is anticipated that the session will lend itself to establishing knowledge transfer among attendees as case histories are discussed and future technology needs are outlined.

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UGCE 2014 provides the opportunity to meet leading E&P companies, government and regulators, equipment manufacturers, utilities, service companies, analysts and economists, geologists, environmentalists, law firms and investors to analyse new global challenges and opportunities in this sector.

## Who Should Attend

- Geologists/geophysicists
- Completions engineers
- Exploitation engineers
- Petroleum engineers
- Technical consultants
- Reservoir engineers
- Drilling engineers
- Government agencies
- Oil service companies
- Drilling companies
- Fracking technology providers
- Drilling equipment providers
- Geophysical companies
- Seismic technology providers
- Completions engineers
- Production engineers
- Operations engineers
- Shale gas E&P companies
- CBM E&P companies
- Tight Gas E&P companies
- Natural gas power generations
- Water treatment companies
- Pressure pumping companies
- Gas logistic companies
- Automation companies
- Flow control system providers
- Pipeline construction companies

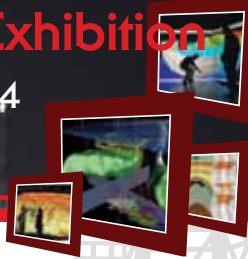
## Why Should You Attend ?

- You can acquire the first hand information of the ME unconventional gas industry
- One on one meetings/networkings with potential clients/vendors
- Interactive Q&A sessions
- Update yourself with news and views of recent developments
- You can learn about the state-of-the-art Unconventional E&P technologies
- Exhibition opportunities to showcase the latest technological innovations
- Know the major players. Wheres demand headed?
- You can meet and learn from the leading unconventional gas players
- Exclusive Networking opportunity with key decision makers
- Bench Mark the best practices & Standards Implemented in Middle East



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## Call for Papers - Topics:

- Well completion/configuration
- Drilling Operations
- Well Stimulation
- Productivity index/Well deliverability
- Well Testing & Interpretation
- Log Analysis
- Data Gathering & Evaluation
- Economics of Unconventional Resources
- Technology Transfer
- HSE
- Reservoir Simulation
- Geological Modelling
- Optimum Facilities Design
- Seismic
- Geochemistry
- Play Maturation
- Early Production Systems
- Appraisal Program
- Imaging & Seismic Techniques R&D
- New Technologies
- In Country Value/CSR
- Employment
- Human Capital Development
- Licensing Terms for Unconventional Resources
- Field Development Planning
- Case Histories
- Gas Supply & Purchase Contracts
- Exploration & Production Contracts  
Applicable for Unconventional Resources

## Call for Papers

**Abstract Submission Deadline - November 21<sup>st</sup>**

**Final Presentation Submission - December 6<sup>th</sup>**

Keynote Speakers



**Mr. Raoul Restucci**  
Managing Director  
PDO



**Mr. David Dalton**  
Middle East Regional President  
BP



**Mr. Menahi Al Anzi**  
Deputy CEO Exploration & Gas  
KOC



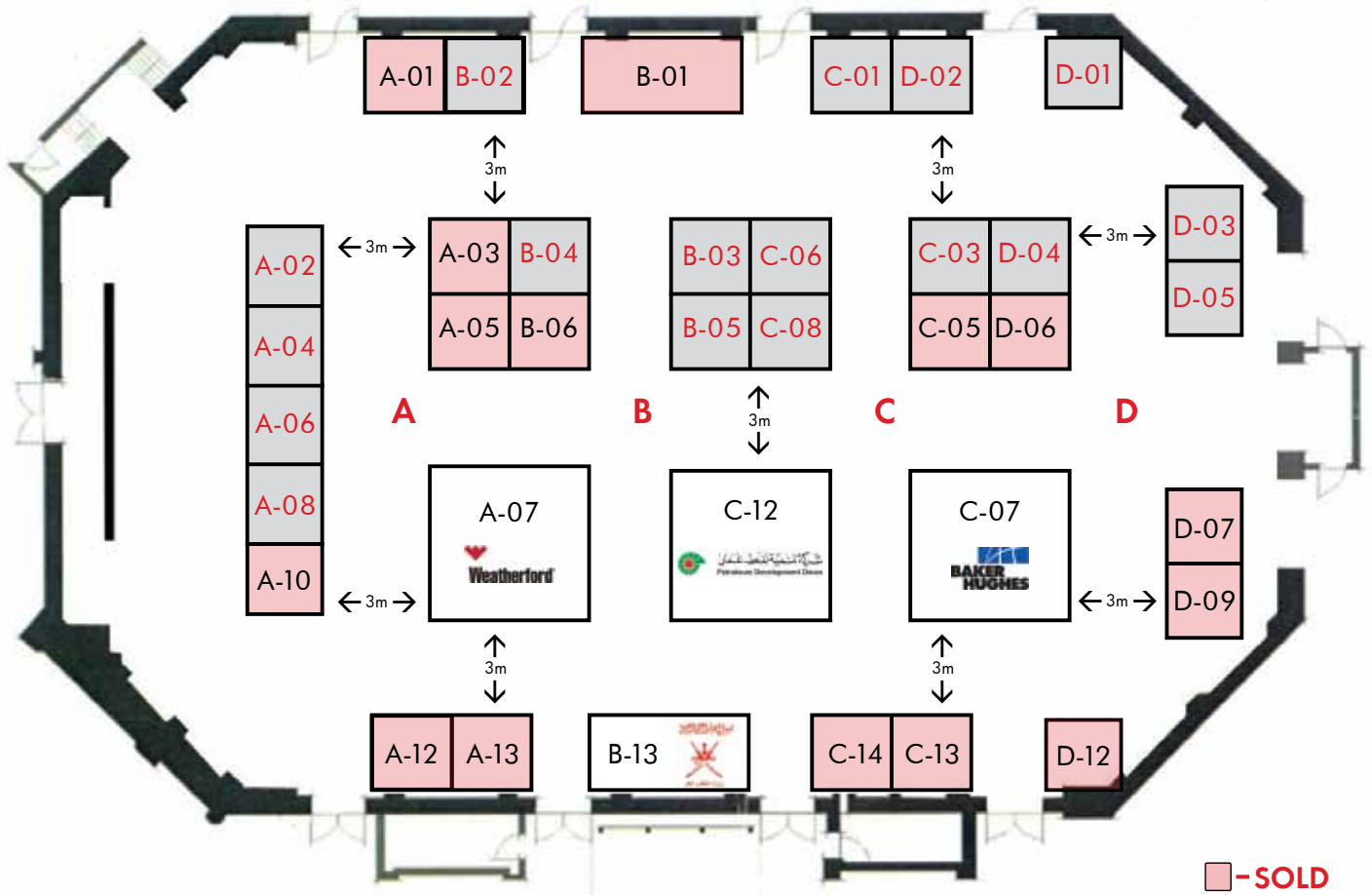
**Mr. Jerome Ferrier**  
President  
International Gas Union (IGU)

IUGCE 2014

# Exhibition Layout - Al Marjan

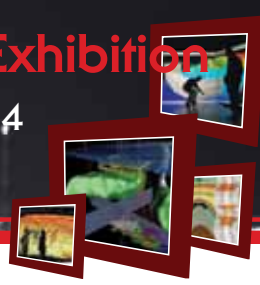
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## 1,700 OMR for 3mx3m booth



# The International Unconventional Gas Conference & Exhibition

Ritz Carlton Al Bustan Palace, Muscat - January 20th - 22nd, 2014



Booth specifications



1,700  
OMR  
for  
3mx3m  
booth

- Shell Scheme Stand in Aluminum white powder coated profile with white infill panel;
- White fascia board with white text displaying exhibitors address of booth;
- Acrylic with curve light box fascia (exhibitor names to be pasted);
- 2 x for aisle booths, 1 x for center booths;
- 2 x Black stackable chairs; ■ 1 x White round top laminated table; ■ 1 x Waste basket;
- 1 x 13 amps power socket (single); ■ 3 x Track spot lights

B-13

Ministry of Oil & Gas

C-12

Petroleum Development Oman

C-13

STS Oman

A-13

BP

C-14

Packers Plus

B-01

FOS Energy

A-07

Weatherford

A-03

Oman Society for Petroleum Services

A-05

Cameron

B-06

Vanguard

D-12

Nabors Drilling

A-01

CCED Oman

A-10

Odin Energy Oman

C-07

Baker Hughes

A-12

United Engineering Services

D-09

TÜV SÜD Middle East LLC

D-07

Worley Parsons

D-06

Libyan Petroleum Institute

C-05

Technical & Administrative Training Institute (TATI)

**For Sponsorship/Exhibition Opportunities Please Contact:**

## Mr. Rafeeq Kunhi

Director Oil and Gas

Email: rafeeq.kunhi@knowledgeexpansion.com

Mbl: +971 55 7374 341

## Mr. Joao Censi

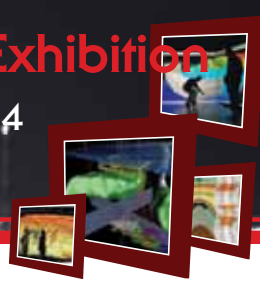
Sponsorship/Exhibition Manager

Email: joao.censi@knowledgeexpansion.com

Mbl: +971 56 397 2095

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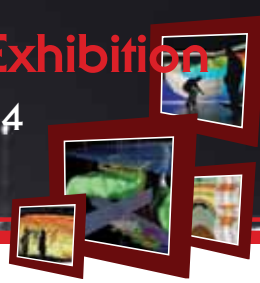
## Sponsorship Packages

### Sponsorship Level

	ELITE PLATINUM	PLATINUM	GOLD	SILVER
	15,000 OMR	12,000 OMR	10,000 OMR	6,000 OMR
<b>Conference Inclusion</b>				
Discount on registrations	20%	15%	10%	5%
Exhibit Space	36sqm	18sqm	9sqm	9sqm
VIP reserved seats & Parking	20	15	10	8
Coffee Break	Day 1	Day 2	Day 3	✗
VIP Majilis	✓	✓	✓	✓
Complimentary VIP Delegate Pass	10	6	4	2
Literature Display Rack	✓	✓	✓	✓
VIP Client Handling	✓	✓	✓	✓
Dedicated Web Page	✓	✓	✓	✓
Four Color Advert	Full Page	Full Page	Full Page	Full Page
Logo on Signage	✓	✓	✓	✓
Press Kit Release	✓	✓	✓	✓
Web Banners	✓	✓	✓	✓
Banner Placement	✓	✓	✓	✓
Tent Card Placement	✓	✓	✓	✓
Lanyard Sponsor	✓	✗	✗	✗
E-mail Signatures	✓	✓	✓	✓
Co-branded E-invite with Logo	✓	✓	✓	✓
Honored With a Plaque by the Conference Patron	✓	✓	✓	✓
Executive Officers will be Treated as VIPs	✓	✓	✓	✓
Company Logo Included in Conference Proceedings	✓	✓	✓	✓

**DINNER SPONSORSHIP 7,000 OMR**

**LUNCH SPONSORSHIP 7,000 OMR**



## Sponsorship Form

# The International Unconventional Gas Conference & Exhibition

To co-sponsor the Conference and Exhibition  
Please complete this form and e-mail to the conference secretary

OUR COMPANY IS GOING TO SPONSOR THE FOLLOWING CONFERENCE EXPENSES	
<input type="checkbox"/> Platinum Elite Sponsor	15,000 OMR
<input type="checkbox"/> Platinum Sponsor	12,000 OMR
<input type="checkbox"/> Gold Sponsor	10,000 OMR
<input type="checkbox"/> Silver Sponsor	6,000 OMR
<input type="checkbox"/> Gala Dinner	7,000 OMR
<input type="checkbox"/> Luncheon	7,000 OMR
<input type="checkbox"/> Exhibition 3 x 3	1,700 OMR

Company .....

Contact Person.....

Mailing Address .....

City..... Country ..... Postal Code.....

Telephone ..... Fax ..... Email.....

Signature ..... Date .....

Payment Details Bank Transfer

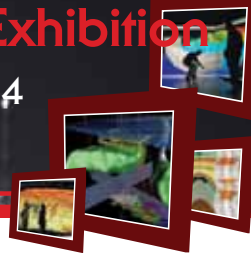
Knowledge Expansion LLC - Bank Name: Emirates Islamic Bank

A/c# 0366723023001 IBAN : AE070340000366723023001 SWIFT : MEBLAEAD

*Media Partner*

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## Registration Page

### DELEGATE DETAILS:

#### Delegate 1:

Name: (Dr/Mr/Mrs/Ms/Miss) .....

Company Name: .....

Job Title: .....

Department: .....

Email: .....

Telephone: ..... Fax: .....

#### Delegate 2:

Name: (Dr/Mr/Mrs/Ms/Miss) .....

Company Name: .....

Job Title: .....

Department: .....

Email: .....

Telephone: ..... Fax: .....

#### Delegate 3:

Name: (Dr/Mr/Mrs/Ms/Miss) .....

Company Name: .....

Job Title: .....

Department: .....

Email: .....

Telephone: ..... Fax: .....

#### Delegate 4:

Name: (Dr/Mr/Mrs/Ms/Miss) .....

Company Name: .....

Job Title: .....

Department: .....

Email: .....

Telephone: ..... Fax: .....

### DATA PROTECTION

The personal information provided by you will be held on a database and may be shared with companies in the Knowledge Expansion Group. Sometimes your details may be made available to external companies for marketing purposes. If you do not wish your details to be used for this purpose please write to: Database Administrator at - info@knowledgeexpansion.com

**VENUE : Al Bustan Palace - Muscat - Oman**

### REGISTERED OFFICE

Knowledge Expansion LLC, P.O. Box 121792, Dubai U.A.E

### 3 EASY WAYS TO REGISTER

- 1 Call us on - +971 55 7374 341
- 2 Fax your completed form to +971 4 4529154
- 3 Email us at rafeeq.kunhi@knowledgeexpansion.com

### PACKAGE OPTIONS

- Oman E&P Companies  
1095 OMR
- Oman Service Companies  
1375 OMR
- Others - 1499 OMR

(Tick Appropriately)

### PAYMENT DETAILS

#### Bank Transfer

Knowledge Expansion LLC

Bank Name: Emirates Islamic Bank

Bank Transfer Account No: 0366723023001

IBAN: AE070340000366723023001

Swift Code: MEBLAED

### BOOKING CONDITIONS\*

Payment in full must be received prior to the event for issuing delegate passes and invites. If payment is not received before the event, the delegate(s) are required to carry a personal / corporate credit card for onsite booking. An additional fee of USD 100 shall be charged for onsite booking. Subsequent to booking a confirmation letter and invoice will be sent to you on the E-mail / P.O.Box addresses that you register with Knowledge expansion. If you are unable to attend the scheduled event, please inform knowledge Expansion within 5 days prior to event scheduled and you may appoint a substitute delegate. Knowledge Expansion do not refund for any cancellations done within 30 days prior to the scheduled event. Knowledge Expansion reserves its rights to issue 50% credit note for the unused event and may accommodate the same for a future event. Knowledge Expansion shall undertake its best efforts to organize this event on the scheduled date. But for reasons beyond its control, including any force majeure crises the organizers may alter the content, timings or venue. This shall be informed to all its delegates through the registered addresses provided. Knowledge Expansion will not accept liability for delegates transport disruption or delays, sickness caused during the conference. Knowledge Expansion shall not be liable for any indirect losses to delegates including business losses, loss of profits or any form of damages.