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ABOUT US

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose members are engaged in energy resources development and production. SPE serves more than 110,000 members in 141 countries worldwide. SPE is a key resource for technical knowledge related to the oil and gas exploration and production industry and provides services through its publications, events, training courses, and online resources at www.spe.org

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If you have read this issue and would like to join the SPE and receive your own copy of SPE review, as well as many other benefits - or you know a friend or colleague who would like to join - please visit **www.spe.org** for an application form.

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www.spe-uk.org | in







SPE conference season gathers pace

The number of events that SPE organises increases with each year, as does their profile, not least at the inaugural risk conference in Aberdeen this month.



Anthony Onukwu SPE Aberdeen Chair 2013/14



Arnaud Mille SPE London chair 2013/14

If ever there was one person who could be described as being a force for good within the oil gas industry in the UK, it is surely Lord Cullen of Whitekirk.

His seminal report into the Piper Alpha tragedy and the host of recommendations and regulations that emerged from Lord Cullen's inquiry have shaped and defined how individuals and corporations conduct themselves for the past 25 years and will continue to do so long into the future.

His attendance at the Another Perspective on Risk – The Next Tipping Point conference in Aberdeen this month is a major coup for the organisers and we have been given an exclusive insight on his views on how to mitigate the 'human factor' in oil and gas – which is both blessing and curse when it comes to ensuring the working environment is as safe as it can be.

Meanwhile, SPE London is pulling together its Annual Conference, which takes place in the capital in June. The symbiotic relationship between oil producers and the City underpins this year's theme – Opportunities and Investment in Upstream Oil and Gas – and the calibre of delegates, speakers and visitors is sure to be extremely high. Like siblings, both sides don't always see eye to eye, but neither can live without the other and talking things through face–to–face ensures that everyone remains part of the family.

This month's edition also focuses on some of the technical challenges some of us face in our working lives, in particular we look at sand management - the subject of another conference, the Sand Management Forum in Aberdeen.

London's Young Professionals have also been busy working closely with student chapters at various universities whilst in the Granite City, we look forward to the DEVEX 2014 conference in May, which is co-organised by SPE Aberdeen and which brings together the industry's leading reservoir development specialists.

This is the third edition of the new look SPE Review and we are keen to hear what you, the members, make of how the new publishers are performing. To that end, we will be issuing an online survey in the coming weeks to gauge what is working, and just as importantly, what we can do to make the magazine even better.



This month's edition also focuses on some of the technical challenges some of us face in our working lives

Sifting through the major issues of sand management



The gritty issue of how to effectively manage sand production will be the focus of the Sixth European Sand Management Forum to be held in Aberdeen on March 26-27, 2014.

chair, SPE SMN Sand Management Forum steering committee

The conference organised by SPE Aberdeen and the Sand Management Network (SMN) takes place at the Aberdeen Exhibition and Conference Centre.

The diversity of reservoirs in the North Sea and surrounding areas has meant that the issue of sand management has been a perennial problem for this region. However, as more challenging plays are exploited around the globe, the question of how to manage sand has become a bigger issue for the industry as a whole.

"Some of the reserves now being developed are more sand prone," said Robbie Allam, who, along with Colin Jones, are chair and co-chair of the SPE SMN Sand Management Forum steering committee.

"Globally, sand management is becoming a more important issue. We are now accessing areas with weaker rock, poorer reservoir quality and new challenges such as shallower reservoirs and heavy oil developments. I think the greater focus on sand management is probably a reflection of where we are as an industry, in terms of the efforts to maximise recovery while maintaining integrity and longevity of the infrastructure. It's down to what fields are left to develop, extending the lifetime of existing assets and the geological horizons that we have to explore," he added.

The question of when to remove sand is crucial – whether it be downhole, subsea or topsides, and while many things subsea appear to be growing in popularity Allam believes there will continue to be focus on all three areas in the future.

He anticipates up to 150-200 delegates will attend the Aberdeen event to discuss this highly topical subject and view the exhibition of tools and technologies.

"Sand management in itself is a challenging topic for the industry right now. It covers such a wide variety of disciplines and has relevance in a range of sectors," he said.

"In recent years there has been a great focus on integrity, whether that relates to topside platform equipment for production and separation, subsea equipment or downhole technology – integrity from the sandface to export is very important today.

"The sand management techniques chosen depend on the operator's sand management strategy, the infrastructure, environment and the geological location of the field.

"In terms of operational efficiency, sanding can limit production or injection which means less up-time for wells so it really is a multidiscipline area. We have to look at a range of aspects including location of

SPE Aberdeen & Sand Management Network



6th European
Sand Management
Forum

26-27 March 2014 Aberdeen

development wells, field types, geology, rock strength, drilling and completion designs and economics, whether to control sand downhole or separate on the platform or on the sea bed... there are lots of things to consider

"Globally, I think subsea sand management is becoming a bigger area of growth, but in the North Sea and West of Shetland areas there is a real mix of sand management strategies given the diverse portfolio of fields and developments."

Key points that will be discussed at the forum include: Sanding Prediction; Monitoring; Topside and Subsea Management; Sand Control; Intelligent Systems; and focus on global sand management issues.

Session themes include: sand management and asset integrity; rock and fluids testing; sand monitoring, handling and remediation; and downhole sand control selection.

In addition, the networking opportunities that this biennial event generates are also recognised as extremely important.

Allam said: "One of the main aims is to allow networking. It's a great chance for people to hear about developments in their own disciplines but also for them to gain a greater understanding of the wider picture because it really is a cross discipline issue. The problems and challenges of sand management will not be solved individually – it is much better to apply a multi-discipline effort to find the most effective solutions."

Launched in 2004, the Sand Management Network is comprised of companies honing their expertise to tackle sand management related issues in the North Sea and elsewhere. Open to all corporate organisations who can add value and benefit from membership, the network currently consists of 15 operators, 15 service companies, four universities and the UK Department of Environment and Climate Change (DECC).

Information about attending the forum can be viewed on www.spe-uk.org – or contact the event managers, Rodger and Co, telephone 01224 495051.



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SPE YP London visits Schlumberger Abingdon Technology Centre

SPE London YP technical team continued its endeavour of providing learning opportunities to young professionals and students by organising a visit to Abingdon Technology Centre (AbTC), the Schlumberger Centre of Excellence for Reservoir Engineering, in January.





Upcoming Training Highlights for E&P Professionals

Apr 15-17, 2014 – Istanbul, Turkey
Petroleum Systems of North Africa and the Eastern Mediterranean (GG08)

Apr 15-17, 2014 – Vienna, Austria Fundamentals of Coalbed Methane (CBM) Development (IC08)

May 4-8, 2014 – Abu Dhabi, UAE Wellsite and Operations Geology (GG13)

May 4-7, 2014 – Abu Dhabi, UAE Digital Core Analysis (RE40)

May 5-9, 2014 – Vienna, Austria Special Core Analysis (RE14) Management Skills for Excellence (SSM26) Effective Bid Tender Strategies for Oil & Gas (SSM44)

May 11-15, 2014 – Abu Dhabi, UAE
Pore Pressure, Fracture Pressure and Wellbore Stability Management (GG21)

May 19-23, 2014 – Istanbul, Turkey Production Chemistry for Non-Production Chemists (ICO7)

May 20-23, 2014 – Vienna, Austria Integrated Reservoir Studies: The Project Management Approach (PBM07) Rock Typing - Reservoir Characterisation and Quality from Drill Cuttings (GG33)



Visit www.hoteng.com for further information and registration.

SPE Young Professionals at their recent visit to Schlumberger's Abingdon Technology Centre in Oxfordshire

A group of 15 SPE young professionals was greeted by Suhas Bodwadkar (Technical services Manager) and Daniel Dias (Senior Reservoir Engineer) who accompanied the group until the end of visit *writes Abrar Pewekar*, *Reservoir Engineer*, CGG.

A series of presentations were kicked off by David Rowan, Technology Centre manager who introduced and welcomed everyone to AbTC. This was followed by a very interesting presentation by Marie Ann Giddins, principal reservoir engineering, highlighting the history of reservoir simulation and transition from physical and analogue methods to today's numerical simulators.

Principal reservoir engineer Alan Thomson gave an insight into the future of reservoir simulation by introducing INTERSECT, Schlumberger's high resolution reservoir simulator which is fast and capable of performing fine grid modelling, eliminating the need to upscale the model. This was followed by a visit to AbTC's cluster room containing powerful CPUs where Steve Messenger (Senior Systems Engineer) explained the importance of parallel computing to run faster simulations.

Advance capabilities were demonstrated with presentations by Rong XU (Product Analyst) on optimising well design under uncertainty and chemical EOR modelling by Anthony Milner (reservoir engineer).

Rob Marsden (geomechanics product champion) delivered a very informative presentation on the importance of geomechanics during the entire field life-cycle and how software helps to model and plan mitigation for geomechanical phenomena. The event concluded with a talk by David Rossi (Scientific Advisor) on digital oilfield enabling asset optimisation.

The SPEYP London Committee thanked Schlumberger's staff for organising such a dynamic and informative event and is hoping to visit the centre again next year.



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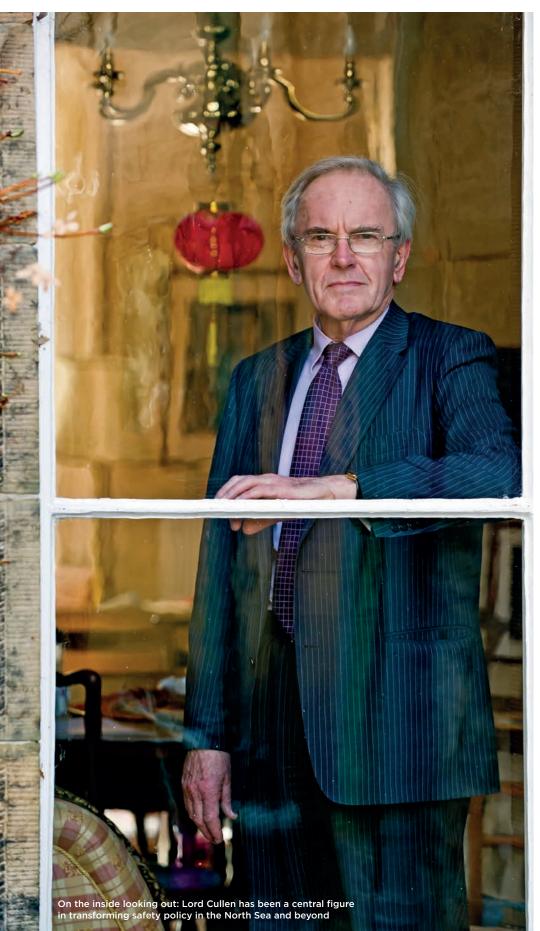


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A unique perspective



On March 5, Lord Cullen will deliver the keynote address at a unique conference focusing on the issue and impact of human risk in the oil and gas industry. Speaking exclusively to SPE Review, he explains why he still believes that addressing the 'human factor' can lead to further significant safety improvements.

The first international conference of its kind in the world and proudly organised by SPE Aberdeen, it will see an impressive list of international speakers and up to 400 delegates attend the Aberdeen Exhibition and Conference Centre to take part in Another Perspective on Risk – The Next Tipping Point.

Lord Cullen's name will forever be synonymous with the North Sea oil and gas industry. Lest we need reminding, he chaired the public inquiry into the Piper Alpha disaster; the outcomes of that inquiry have transformed HSE operational procedures in the North Sea and the offshore oil and gas industry worldwide.

The 25th anniversary of Piper Alpha was marked last year, but Lord Cullen remains as emphatic as ever in his determination to ensure the oil and gas industry provides as safe an environment as possible for those working in it.

He believes that key to a safe environment is a thorough understanding of the part which human risk factors can play in operations.

"I think it is well known that human risk factors feature as an element in the majority of accidents and incidents, but to say that it features does not mean at all that it is the whole story," he said.

"Investigations into accidents and incidents very often demonstrate an underlying problem, something deeper than a technological breakdown or human error, for example in the working environment such as shortcomings in design, procedures, practices, or training. Past accidents have demonstrated that the working environment

can lend itself to human error and sometimes may lead to human error, so it has to avoid that and be robust enough to enable accidents to be avoided if such error occurs.

"The physical and organisational elements of the working environment have to be designed so that individuals are not exposed to danger, and designed with human frailties in mind, so that the system can stand being challenged."

Lord Cullen believes the time is right to tackle the human risk factor head on through Another Perspective and hopes to see some clear outcomes from the conference.

"The element of human risk is a long standing one but I think what is outstanding about this conference is the fact that it is aiming to highlight this issue and tackle it. People do make errors or mistakes but if we can devise means by which these are avoided through making them error wise and alert to spotting things that are amiss I think this will help greatly. I would be very pleased to see positive conclusions come from the conference.

"It is good that this conference is focusing on this aspect of work. A lot has been said and discovered about the human element in operations over the years without it ever being completely dealt with. But it remains an important subject. It is a considerable problem that should be dealt with from an organisational point of view and from the point of view of the individual.

"Individuals certainly have a responsibility and they have to be made

alive to that. Whilst we are experiencing advances in technology we have to remember that it is still being operated by humans – humans designed it, humans set up the processes and humans at the end of the line have to do their jobs. Often with human error we focus on the person at the end of the line but there can be examples of human error everywhere at every level."

Being able to report matters of concern freely and without fear is key to the development of a truly effective system. Lord Cullen said there was still a concern with regard to the "not wanted back" syndrome. Employees needed to be able to feel confident enough to highlight matters to their supervisors.

"Management attitudes are important for the conditions in which people work, and for passing on of the message of the commitment to safety at all levels. So to it is bound up to some extent with the culture."

Piper Alpha was clearly a watershed in the history of health and safety in the North Sea and the wider international oil and gas industry. Lord Cullen believes that we do have a safer oil and gas industry today, thanks to a focus more on a systematic way of handling the issue than a purely prescriptive one.

"I am not judging it by outcomes, I am judging it by intent and my general impression is that the industry has moved on in terms of safety. What it has now is more robust than it was.

"The angle of this conference is so valuable and I'm looking forward to it delivering some good insights that can be translated into good practice."



6th European Sand Management



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- Challenging convention in sand control for deepwater developments, Senergy
- Surface sand handling removal strategies, NOV Merpro
- Sand monitoring systems, techniques and applications, SMS
- Sand control selection procedure case study from BP

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Young Professionals strengthen links with students



SPE Young Professionals have hosted a series of events over the past 12 months, offering insight, knowledge and experience to students prior to entering the world of work

During the second half of 2013, SPEYP London hosted a number of exciting university events. The focus was on giving the students an opportunity to learn about careers in the oil and gas industry, expand their professional networks and meet their peers from other universities across the UK.

The season kicked off with the first ever UK Student Paper Contest, where the finalists - from Imperial College London and universities of Manchester, Leeds and Coventry - presented their project work to an audience of SPE members and a judging panel. The winner, Benjamin Pickles from Leeds University is representing SPE London at the European Student Paper Contest.

Following on from the success of the paper contest, four Young Professionals visited Imperial College London for the annual Ambassador Lecture Programme (ALP), giving the students from Imperial and London South Bank University a chance to learn about the differences in working for a super major, medium independent operator and service company, each of which has its particular idiosyncrasies.

In another ALP event, SPE Board member Alejandro Primera, and Jesus Aponte of Primera Reservoir, visited the London South Bank University (LSBU) student chapter to give a seminar entitled Numerical Reservoir Simulation: State of the Art and Future.

This guided students through the fundamentals of Numerical Simulation, the latest innovations and how to integrate Asset Modelling in the process. It was followed by a well received Q&A session, allowing an opportunity for the Bachelors and Masters Student from LSBU to

quiz the presenters and develop their understanding of Reservoir engineering and Reservoir simulation – from engineering specifics to use of multiple applications.

For spring 2014, the ALP heads north to visit Manchester and Leeds Universities.

Alejandro Primera said: "As young professionals, we believe that it is important to engage with the next generation and to help young people in making the informed choices for their careers – we would like to thank all the volunteers that continue to make this possible."

Shale on the menu at March dinner

The current state of the shale gas industry in the UK is the subject for discussion at the SPE London dinner on March 25.

Serious shale gas prospecting in the UK entered its fourth year in 2014, yet it remains at an early stage in its development. Why is this?

Speaker William Hazel will attempt to explain why during his presentation, Normalising the Unconventional. He examines what the industry must do to move to a better footing in terms of its future growth.

The viability of shale gas as an economically viable resource remains to be proven but there are also other issues impeding the normalisation of the sector. There is an obligation on operators to engage and raise understanding in an unbiased way; this has been very limited so far. Mr Hazel considers the changing stakeholder attitudes to shale gas and the way in which developers have handled issues of public concern. He will consider what a normalized sector needs to do, how it needs to behave and the challenges this poses.

Mr Hazell is a principal consultant with Environmental Resources Management, a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services. He has over 12 years professional experience focused on providing Environmental Impact Assessment, sustainability and stakeholder requirements to deliver projects of national significance.

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Gearing up for London's 2014 Annual Conference



Leading figures from the oil and gas industry and the financial sector will come together for the SPE London Annual Conference themed Opportunities and Investment in Upstream Oil and Gas.

High-level speakers and participants drawn from Government, international oil and gas companies, financial institutions, advisory firms and energy research companies will gather at The Royal Institution in London on June 4-5, to discuss the global and regional opportunities landscape and major elements of the investment decision-making process.

This year's programme featuring representatives from the likes of BG Group, Centrica, Citi, Deloitte, the Department of Energy & Climate Change, ERM, Halliburton, IGas, KPMG, Oil & Gas UK and Riverstone is invaluable to professionals working in:

- Mergers, acquisitions, and divestitures
- Investment analysis
- Due diligence
- Joint ventures
- Finance and investment
- Portfolio management
- Valuation of oil and gas assets
- Asset management
- Business development

The opening session on day one will look at the global upstream opportunities landscape and investment trends in the sector with two other sessions focusing on North Africa and the UK. Participants will hear how the opportunities landscape is shaping up in North Africa following the Arab Spring and also of the challenges facing companies operating within key countries in the region. Another session will also explore the openings, challenges, and threats to the future of the industry in the UK and will look at how UK Government initiatives and fiscal incentives are benefiting oil and gas companies and E&P activity in the UK.

The final session on day one will look at the global merger and acquisition (M&A) landscape and the role of joint venture and private equity partnerships in the advancement of E&P projects. This session is designed to provide a variety of opinions on the future of the M&A landscape from a range of involved organisations culminating in a panel session. Day one will end with an evening reception in the Library, allowing delegates the opportunity to network with colleagues.

In the keynote session on day two, participants will hear about upstream cost trends and the interplay between capital investment and costs. They will also hear from an oil company about the challenge of managing investment, cash flow, and shareholder expectations. Day two will also reflect on the process of due diligence focusing on technical, economical, legal and environmental factors, and the integration of these elements into the overall process. The day will close with an insight into the valuation of investment opportunities and a look at the investment decision–making process.

The event will close with a drinks reception and Gala Dinner at Claridge's, in Mayfair. Spaces for this event are limited so advanced booking is recommended.

For more information on the conference or dinner and to register, please visit: www.spe.org/events/lond

SPE London looks to expand its communications team

The SPE London section is looking for additional volunteers to join the communications committee.

Those interested will work with the rest of the London section on maximising exposure for the various activities.

Communications chair Pamela Tempone said: "This is a great opportunity for anyone wishing to utilise their communication and marketing skills. We have set three priorities for this position: creating web advertisements, generating online reports for email and website activity; and championing the application of social media (LinkedIn, Facebook and Twitter platforms)."

Volunteers will receive training on the SPE London email system and website portal. Anyone interested in helping the SPE London section should contact: spelondon.communications@spe-uk.org

Discussing joint ventures

Head of KPMG's Global Joint Ventures Practice, Dr Marc van Grondelle, will examine the role of joint ventures in the oil and gas sector at the March 25 dinner.

Based on recent international experience working with international oil & gas companies, he will point out that whatever their bad press, good JVs do exist, they're just the ones you never hear about.

Though all JVs are different, the bad ones often have things in common. He will also highlight that many ugly situations can be foreseen – and therefore avoided. Even where the prognosis looks bleak, recovery can be achieved.

Marc joined KPMG in 2011, following nearly 20 years' hands on experience setting up and operating joint ventures in the oil & gas industry.

London Calendar - 2014

25 March

Dinner Meeting (sponsored by ERM)

 $17\hbox{:}00\mbox{-}18\hbox{:}30$ – Before dinner topic: Environmental aspects of shale gas, Alistair Fulton, partner, ERM

18:30-19:30 - Networking & Drinks.

19:30-21:00 - After-dinner topic: Competitive strategies of oil and gas. After-dinner Speaker: Dr Marc van Grondelle, head of the Global Joint Ventures practice, partner, KPMG

21 May

Continuing The Journey Through The Glass Ceiling: Increasing the Numbers of Women in Senior Roles

22 May

Making Good Decisions Under Uncertainty

Presentations and sessions:

- Handling Uncertainty: From subsurface to surface
- Making and Framing Decisions
- Reservoir Modelling Outlines and Work-flows
- Understanding uncertainty. Basic and advanced statistical analysis for complex decisions
- About samplers and proxies. Why and how to use experimental design
- Case studies: success and lessons learnt
- Uncertainty from the geoscientist perspective, how to define ranges and distributions
- Case study: integrated subsurface/surface uncertainty analysis
- Case study: other
- Panel (four expert panellists)

4-5 June

SPE conference with gala dinner at Claridge's, Mayfair

Please, go to: http://london.spe.org/events/ for more info on the events.

To book: www.katemcmillan.co.uk

Contact: Kate McMillan katespe@aol.com (07736 070066)

DEVEX 2014 explores field development challenges

The leading conference for upstream technical professionals returns to Aberdeen for its 11th edition on May 6-7. The theme for this year's conference is Adding Value by Accelerating Activity, a reference to the fact that as infrastructure ages, less time remains for the industry to achieve what it can in the North Sea.

The two-day conference and exhibition features two parallel sessions showcasing approximately 40-50 presentations on topics ranging from exploration to well completion, technologies from 4D seismic to production chemistry and including lab research as well as the long-term outlook for the North Sea.

It is a must-visit event for geologists, geophysicists, petrophysicists, reservoir engineers, petroleum engineers, production technologists, well engineers, drilling engineers and those with an interest in these challenging disciplines.

The conference is a key knowledge-sharing event for the oil and gas industry, allowing industry experts and thought leaders to pass on their experience and knowledge of projects, innovation and entrepreneurship.

DEVEX is run jointly by SPE, the Petroleum Exploration Society of Great Britain (PESGB) and the Aberdeen Formation Evaluation Society (AFES) and is supported by the Department for Energy and Climate Change (DECC).

Keynote speakers are Pete Jones, managing director TAQA in the UK, and Crawford Anderson, vice president UK Geomarket, at Baker Hughes.

2014 conference chair Peter Brand said: "DEVEX appeals to a broad cross section of field development professionals. Since its foundation 10 years ago by the three societies and DECC, it has led the industry in providing an event where cross-discipline understanding and collaboration are encouraged.

"We asked for presentations on a wide range of topics including Mature Fields, HPHT, Marginal Fields and Satellites, Unconventional Resources, Maximising Well Productivity and Gas Storage. I'm very pleased with the quality of the abstracts that the committee have had to select from and I think we've got something for everyone. I'd like to thank the committee, the authors, AECC, the exhibitors and the sponsors without whom we could not put this all together."

The best presentation at this year's event will receive the Gert de Jonge Award, in honour of the former DEVEX chairman who died in 2010.

The associated DEVEX exhibition will feature approximately 35 stands and specific measures are being put in place to ensure maximum interaction between exhibitors and delegates.

In addition to the main conference, a Young Professionals (YP) event and a networking session are also planned. Another new initiative at this year's conference will be a combined core workshop and field trip. A visit to one of the reservoir core collections held in Aberdeen will be followed by an afternoon field trip at a coastal location, where delegates can examine rocks in situ.

It is anticipated at least 400 delegates will attend this major reservoir development conference and exhibition.

Sponsorship opportunities are available and registration is open. For more information visit **www.devex-conference.org**

DEVEX2014

workshops and field trip

The DEVEX core workshop offers the opportunity to view cores from different parts of the North Sea and from different reservoirs. Specialists will guide visitors through the specific features of the selected samples of cores in three rooms at Iron Mountain's core store in Aberdeen.

Room A will be CNS Triassic (Neil Meadows),

Room B will be CNS Chalk (Graham Aplin) and

Room C will be SNS Carboniferous & Leman Sst. (Roddy McGarva & Stuart Buck).

Examples of cores from turbidite and injectite reservoirs will be included, subject to availability. There is a maximum capacity of 20 people per workshop.

The workshop takes place at either 10:00-12:00 or 13:30-15:30 on Thursday, May 8. As the core stores tend to be dusty appropriate clothing is recommended and strong footwear is required.

The workshop costs \angle ,50 + VAT.

For those delegates who wish to see field examples of various reservoir types, including turbidites and injectites, the field trip to Banff is recommended. This outing will be taking place during the afternoon and evening of May 8. The coach will pick up from the core store at 12:30pm.

Appropriate walking boots with ankle support and good tread and waterproof clothing (a set of waterproof coat/jacket and trousers) are required. The excursion involves fairly easy walking on path and shore but participants should be aware that it may be slippery in the intertidal zone.

Following the guided field visit, a three-course dinner will be held at the Banff Springs Hotel. The field trip costs £70 plus VAT (includes dinner). Student rate: £30 plus VAT (includes dinner).

There is a maximum of capacity of 20 people for this trip. Due to insurance requirements the field trip is only open to PESGB members who should present their membership cards on arrival.

More information is available at:

http://www.devex-conference.org/events2014.php

RGU papers requested

The Robert Gordon University SPE student chapter in Aberdeen has a number of activities scheduled over the coming weeks.

The chapter's Student Paper Contest focuses on HSE and Social Responsibility and final presentations, before judges and an audience, are scheduled for March 26 and will be held within the framework of SPE Week 2014. Open to Bachelor and Masters level students who are SPE members, the top three winners will receive an iPod or iPod mini.

Topics for paper were required to be relevant to themes such as GHG emissions measurement and management, biodiversity and ecosystem services, protecting workers health, managing culture to drive HSE performance, stakeholder engagement: lessons learned from community participation and engagement, innovative environmental solutions, assessing health risks and impacts, integrating social risks and operations.

The RGU Chapter has also launched a photography competition – The Creative Perception of Energy – for those who are passionate about photography in the energy industry.

The competition is open to young professionals working in hydrocarbons and students. Entry fee is £10.00 for YPs and £5.00 for students.

Photographs should be based on theme: Aberdeen Energy. Submissions must be digital but can be black and white or colour. Pictures must be submitted electronically to **spergu@spemail.org** Maximum file size is 5Mb. The last date for entries is March 16 2014.

Subsea Expo reflects 'golden period'

The UK subsea market is a global leader that is enjoying a golden period of profitability, was the keynote message from the Subsea Expo conference held in Aberdeen last month.

The event, hosted by Subsea UK, which represents the interests of the country's world leading subsea oil and gas supply chain companies, marked its 10th birthday by hosting its largest every annual industry gathering at the Aberdeen Exhibition and Conference Centre from February 5–7. Over 5,300 delegates – a 20% rise on last year – attended.

Subsea UK chief executive, Neil Gordon, said the UK's service companies are leading the way globally, with the industry valued at almost \mathcal{L} 9billion in 2013.

He said: "We are going through a very strong growth period, the service companies are in the driving seat and it's a very good time – long may it last.

"The North Sea has always been the test bed for the rest of the industry. What happens here drives the rest of the world. We pioneer, develop and test technology before exporting it globally. Our skill set is unparalleled. This is a very successful industry."

Mr Gordon added: "The easy oil and gas has been had, we are heading into deeper waters and are trying to squeeze more out of the existing reserves, and this is pushing the technology to new extremes."

Chief executive of Simmons International, Colin Welsh, said UK companies should "make hay while the sun shines" adding: "A new era of oil and gas is dawning, the challenge is how to profit from it."

Mr Welsh added: "Conventional supply is continuing to slide. We are relying on unconventionals to satisfy demand as all the easy to find, big fields were discovered years ago. It is almost impossible for E&P players to grow production, for the oil service community this is good news."

"Companies here are incredibly well placed to control the world stage in subsea," said Mr Welsh, adding that Simmons had given many local companies the financial resources to build in the global industry.

"The 2014 event was the most successful to date, with more delegates, more international visitors, more exhibitors, more speakers and more young people attending than ever before", said Mr Gordon.

High attendance expected at OAA

SPE Aberdeen, organiser of the Offshore Achievement Awards, is expecting a record-breaking attendance at the ceremony, following the introduction of two brand new categories and an increased number of entries.

The awards, supported by principal sponsor TAQA, saw 530 people attend last year, the largest audience to date.

More than 80 entries have been received for this year's awards, which celebrate exceptional performance across a range of categories including safety innovations, company successes and individual achievements. Two new categories – Inspiring Leader and Environmentalist – will also be announced on the night.

Ian Phillips, director of energy business consultancy Pale Blue Dot Energy Limited and the SPE Aberdeen board member responsible for organising the OAAs, said: "With only limited spaces now remaining, we would encourage anyone thinking of attending to secure their place as soon as possible to avoid disappointment."

The 28th awards ceremony takes place on March 20 at the Aberdeen Exhibition & Conference Centre.

Sean Lock, one of the UK's most highly acclaimed comedians and a team captain on popular comedy panel show 8 Out of 10 Cats, will host the evening and present the awards to winners.

For further information about the awards or to book a table at the ceremony, please visit www.spe-oaa.org

Aberdeen upcoming events - 2014

20 March

Scottish Offshore Achievement Awards Host: Award-winning comedian and 8 out of 10 Cats team captain Sean Lock. AECC, Bridge of Don, Aberdeen

26 March

6:00 for 6:30pm to 8:30pm. Presentation and networking buffet. Aberdeen Douglas Hotel, 43-45 Market Street, Aberdeen AB11 5EL

25 March

SPE SMN 6th European Sand Management Forum - Pre-conference Workshop. Book now - places limited.

26-27 March

6th European Sand Management Forum Conference and exhibition. Book delegate places now.

2 April

SPE in Edinburgh - Advances in Avoiding Gas Hydrate Problems Presenter: Professor Bahman Tohidi, Institute of Petroleum Engineering, Heriot-Watt University

6:00 for 6:30pm to 8:30pm. Presentation and networking buffet. Cairn Energy, 50 Lothian Rd, Edinburgh EH3 9BY

23 April

BP Learnings from North Sea Enhanced Oil Recovery Projects - past, present and future.

Presenter: Euan Duncan, BP

6:00 for 6:30pm to 8:30pm. Presentation and networking buffet. Aberdeen Douglas Hotel, 43-45 Market Street, Aberdeen AB11 5EL

6-7 May

DEVEX - Adding Value by Accelerating Activity - two-day conference. Keynote speaker: Pete Jones, MD TAQA UK and Crawford Anderson, VP UK Geomarket, Baker Hughes. AECC, Bridge of Don, Aberdeen

16-18 June

SPE European Artificial Lift Forum
Pre-conference short course and two-day conference and exhibition. Exhibition and sponsorship opportunities.
Booking for delegates – Early Bird discount

Details and link to book on www.spe-uk.org

Fracturing and geomechanics

explored by Professor Couples



A mix of experienced engineers, young professionals and students attended SPE Aberdeen's January dinner to hear from Professor Gary D Couples discuss the latest developments in geomechanics and fracturing.

Professor Couples delivered his presentation, Geomechanics and Fractured Reservoirs: Comforting, Confusing, or Scary? at the event at the city's Douglas Hotel. His geomechanical research activities range from experimental work (and apparatus development)

through to numerical simulation at many scales. His approach links geomechanical effects to their consequences: predicting flow and other properties. Textural analysis and digital rocks play a key role in this activity.

He considered that fractured reservoirs are known to exhibit changes in their characteristics during the production life cycle. Attempts to explain this behaviour using simple rules are usually not successful, and ultimately they are doomed, because the rules are based on assumptions that are physically impossible.

Prof. Couples said that moving to the next level requires a change of mindset that involves abandoning the notion that geomechanical processes are governed by a constant state of stress.

Many real-world fractured reservoirs may have large parts where the fracture distribution and flow conditions never provoke any major surprises. This is a comforting result and sensible predictions can be made. Other parts of those reservoirs, and larger portions in some cases, can exhibit confusing responses that can only be explained by considering the geomechanics/fluid interactions.

He explained: "Some parts of some reservoirs seem determined to scare us by their seemingly-unreasonable behaviours. By gaining an understanding of the process interactions that occur in fractured reservoirs, we can protect ourselves from the fear of the unknown and we may be able to use this knowledge to be more effective in planning our reservoir management tasks.'

Prof. Couples urged the younger members of the audience to challenge the current thinking and take the lead in developing new techniques.

He followed up his Aberdeen presentation by delivering it to the SPE evening meeting in Edinburgh at Heriot-Watt University, where he is Professor of Geomechanics at the University's Institute of Petroleum Engineering, on February 6.

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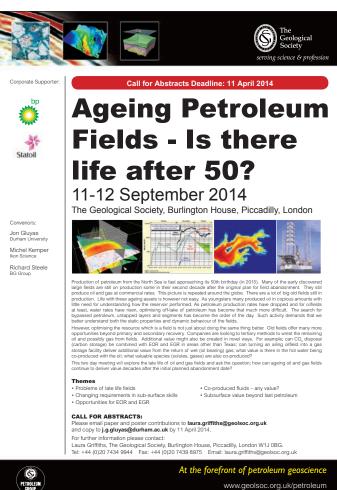






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