

SPE review

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of the Society of Petroleum Engineers

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Society of Petroleum Engineers

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GOING GEOTHERMAL!

Eastgate's 'first iteration geothermal spa', in the North East of England, is the fun forerunner to a number of exciting commercial and sustainable development opportunities presented by geothermal energy exploration in the UK – and the petroleum energy industry has much to contribute – were among the upbeat messages experts had to share with those attending the SPE London January technical meeting.

See page 6.

INSPIRATIONAL STUDENT CHAPTER INAUGURATION



RGU Chapter officers and guests (l-r): Franklin Uzokwe, member; Ritika Pawar, Treasurer; Deji Ade-aina (back), Island Offshore; Umar Ibrahim, member; Folawole Sanwoolu (back), Shell; Gerardo Arteaga, Centrica; Deji Adebeshin, President; Chingiz Sargozhin, Vice President; Venkata Muthayala (back), member; Raushan Shakulova, Secretary; Archie Brighton (back), Social Secretary; Qiong Zhang, Schlumberger; Naresh Kumar, Member.

In January, the inauguration of our new 2010-11 officials was combined with our first technical event of the year and attracted more than 70 students, including students from the University of Aberdeen Student Chapter, reports **Deji Adebeshin**, President, SPE RGU Student Chapter, Aberdeen.

Jesse Andrawus, RGU Student Chapter Faculty Sponsor, launched the event with an outline of the Chapter's past achievements, as well as its vision for the future. While appreciating all our external delegates, he further encouraged us to show greater commitment to the Chapter's activities and to come up with new ideas on how to achieve our goals.

A major highlight was the oath-taking by the newly-elected officials which was presided over by SPE Aberdeen Chair, Chris Nussbaum. Chris spoke about the multi-disciplinary nature of the oil and gas industry and how your drive and efforts as a student can help you achieve your career goals in the industry.

continued on page 7.

SPE review

The Society of Petroleum Engineers (SPE), a not-for-profit professional association of 90,000+ members from more than 100 countries worldwide, is a key resource for technical knowledge related to the oil and gas exploration, drilling and production industry.

The SPE provides services through its global events, publications and website at www.spe.org.

SPE review is published 10 times per year by the Aberdeen and London sections of the Society of Petroleum Engineers. It is sent to over 4,500 UK SPE members, and quarterly to an additional 6,000+ European members.

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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The copy deadline for the April 2011 issue is **21 March 2011**, with publication scheduled for **6 April 2011**.

CALL FOR ENTRIES – SPE Aberdeen 2011 Student Bursary Awards

SPE Aberdeen's long-standing Student Bursaries are open to full-time students studying oil and gas industry-related courses while attending Scottish Universities affiliated to the SPE. The Bursaries are funded from SPE-sponsored events and comprise three awards of £3000 and 20 awards of £300 each. Qualifying students are invited to apply.

The deadline for entries for the 2011 round of Bursaries is 25 March 2011.

For further details and to download an entry form, visit:
www.spe-uk.org/aberdeen-students.htm

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60 Seconds with a Young Professional

Stephen Howell is SPE
London YP Co-Chair and a
Reservoir Engineer
with BG Group, Reading.



Where were you educated? Your qualifications?

MEng Chemical Engineering with Business Management, UMIST, Manchester, UK; MSc Petroleum Engineering, Heriot-Watt University (to graduate later this year), Edinburgh, UK

Why did you join the industry?

I grew up in Aberdeen and my parents worked in the industry, so I was quite familiar with what the industry could offer. It was just a question of discovering what I really wanted to do – this took some time!

What do you like most about your job?

The technical variety, as well as the opportunity to innovate and learn from some highly experienced colleagues.

What would you change?

Nothing – although slowing down the clock sometimes would be useful!

What has been the greatest moment of your career so far?

I'm very early into my career, so it's hard to define a truly great moment to date. It's very satisfying when something technical clicks into place and the broader subsurface aspects fit well with the reservoir engineering concept.

What inspires you?

There's quite a strong group of similar experience level Reservoir Engineers working in the company at the moment and I think we take inspiration and ideas from each other.

Which business leader do you most admire and why?

It's difficult to look beyond what Frank Chapman has done for BG Group. He has taken a demerged arm of what was British Gas in the late 1990s and has led it into, arguably, the fastest-growing independent super-major. There seems to be no let-up in the growth of BG and it's great to be a part of it.

How do you like to spend your leisure time?

I always seem to be studying something. When I'm not working on the MSc, I also enjoy swimming and tend to make good use of the gym.

What are the greatest challenges facing the industry?

In my view, the decreasing opportunity for conventional resources represents the biggest challenge at present. That challenge is only likely to intensify in the future.

What value does the SPE offer you?

My role within the YP Committee offers me the opportunity to concentrate on developing my soft skills outside core office time, which means I can concentrate 100% on the technical skills I need to become a well-rounded Reservoir Engineer.

What is your dream job?

It's too early to say. I'm ambitious to learn and develop my technical and soft skills. At the same time, I'm quite content to see which direction it goes.



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Aberdeen



'Shocks & Vibrations – cause of drill string failure' is the stirring subject of the SPE Aberdeen evening meeting, chaired by the Aberdeen Young Professionals, on **23 March, at the Douglas Hotel, Aberdeen.**

Martin Hayes, of Schlumberger, will explain that 'Shocks & Vibrations' in drilling is a term commonly heard, but on many occasions misunderstood. His presentation aims to improve understanding by discussing various vibration modes, potential causes and methods of management to minimise the risk of drillstem failure, enabling drillstem design and application to be further optimised.

Martin's 13-year career in the drilling industry includes various aspects of directional drilling service company support, through to drilling operations. His specialist areas of interest include directional drilling engineering, wellbore surveying and drilling optimisation.

For bookings and enquiries, contact: spe@rodgerandco.com, or visit Aberdeen Events at www.spe-uk.org

London

Morten Frisch, Senior Partner of Morten Frisch Consulting (MFC), will present the SPE London pre-dinner talk on '**Unconventional Gas: Consequences and Opportunities**', on the evening of **29 March, at the Geological Society, Piccadilly.**

Unconventional gas – coal bed methane, tight gas and shale gas – has become an energy 'game-changer' in North America. Will this development spread to other energy markets around the world, and if so, at what speed? How will unconventional gas impact the current up- and mid-stream gas industries? These are topics that will be addressed in the presentation.

Morten Frisch is a gas strategist and negotiator with more than 35 years of hands-on experience. He has monitored and analysed unconventional gas developments since 1999 and in 2004/05 he co-authored conference papers outlining how North American gas developments would support gas self-sufficiency in the region. Morten Frisch Consulting (MFC) has for more than 20 years provided strategic, commercial and operational gas advice around the world, specialising in gas pricing, commercial optimisation and risk mitigation issues. The consultancy also provides gas contract expert witness testimony for arbitrations and court cases.

The after-dinner presentations will focus on **Uganda and Namibia.**

Robin Rindfuss, of Tullow Oil, will present on '**Uganda – exploration, appraisal and development planning – getting ready for first oil!**

Tullow's operations in Uganda have gone through several step changes over the last 4-5 years, resulting in the highly successful exploration drilling campaign ongoing today. In parallel, appraisal operations, including seismic acquisition (2-D and 3-D), drilling of additional wells on discoveries and testing operations, are resulting in fast-paced delivery of high quality datasets. Integration of these data and delivery of fit-for-purpose development plans have been completed on several discoveries and are ongoing for many others, as appraisal results become available. The step wise approach and ramp-up of activity over time, together with the application of fit-for-purpose technology, will be discussed.

Robin, a Petroleum Engineer by background, has a keen interest in Petrophysics and has worked on many E&P projects in Africa for over 20 years, initially in various technical roles and more recently in leadership roles covering appraisal and development planning/execution.

Peter Kingston, of Tower Resources plc, will follow with '**Minnows Chasing Whales**'. A personally exciting and challenging component of the oil and gas exploration industry is the contribution made by small exploration entrepreneurs, he will explain. Often with only small budgets, such companies can acquire frontier exploration licences in all parts of the world, beyond the current focus of the more established E&P Companies.

Peter, a founder director of Enterprise Oil, has undertaken many executive, non-executive and consultancy roles around the world. He has been Chairman of Tower Resources since February 2006.

Before dinner: 5-6.30pm

Dinner: 6.30-7.30pm

After dinner: 7.30-9pm

Booking: www.katemcmillan.co.uk; tel: 07736 070066; katespe@aol.com

Cost: £34 for SPE/PESGB/EI members, £44 non-members, £19 unemployed members, £5 students booking by Friday 25 March (£19 after).

Edinburgh

On **6 April**, in Edinburgh (venue to be confirmed), **Peter Aird, of Cairn Energy**, will discuss his company's '**Frontier exploration Greenland activities**', highlighting the unique challenges and successes encountered during their 2010 operations and looking ahead to the opportunities presented by their Offshore Greenland 2011 exploration programme. Peter is a drilling, well engineering and operations specialist, with 30 years' extensive experience in the industry.

For bookings and enquiries, contact: spe@rodgerandco.com, or visit Aberdeen Events at www.spe-uk.org

Networking SPE student activities across Europe: can we make the dream a reality?

By Behrooz Koohmareh Hosseini,
President, Nancy-INPL SPE Student
Chapter

"If one advances confidently in the direction of his dreams, he will meet with success unexpected in common hours." Henry David Thoreau



In February 2010, I initiated the move to establish the fourth SPE Student Chapter of France, at Ecole Nationale Supérieure de Géologie (ENSG), with the help of ENSG faculty members and SPE-France. However later, the scope and activities of the chapter extended beyond ENSG, to all the INPL engineering schools located in the east of France, and we took the collective title 'Nancy Oil & Gas'.

Obviously there is neither oil nor gas in Nancy, but INPL in Nancy has a very strong petroleum engineering programme, mainly due to the faculty members, invited lecturers from oil and gas operators, and also the support of some active French service companies and operators, such as Total. All these, combined with the Gocad development team based at ENSG, make Nancy a hub of activities for some oil and gas companies. However, in order to become real Petroleum Engineers, students also need to extend their range of interaction with various oil and gas companies in Europe.

Our dream has been to link all the SPE student chapters of Europe. Networking all four SPE student chapters of France has been our first step towards this.

My recent stay in the UK, while working with Total, gave me the chance to make closer contact with SPE UK members, and my attendance at some

of the events inspired me to think of some possible collaborative work between the SPE Student Chapters of France and the SPE UK Sections and Student Chapters. This collaboration could involve sharing ambassador lecturers, inviting key speakers from operator and service companies, the introduction of a paper contest in Europe, the arrangement of seminars and workshops, and, finally, organising conferences with the support of operator and service companies.

All these initiatives would be aimed at extending the collaborative work between oil and gas companies and universities, which would hopefully lead to the increased recruiting of talented students and the creation of a bridge between SPE South-Central-East Europe and SPE UK, in terms of educational programmes and experienced professionals.

As such, on behalf of all SPE Nancy Student Chapter members, I would like to invite SPE members within the UK oil and gas industry and related university programmes to join with us and play an active role in the achievement of this project.

If we take a single step, we will start a long journey of a thousand miles toward realisation of our common dream.

You can contact Behrooz at: behrooz.k.hosseini@gmail.com; INPLstudents@spemail.org



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January Technical Presentations

London

Gas pricing and geothermal energy presentations provide an uplifting experience for SPE London audience

LONDON
& ABERDEEN

Gas pricing trends and geothermal energy were the highly topical themes of SPE London's first evening meeting of the year, on 18 January. The event attracted a diverse audience of students, academics and energy industry professionals, whose interest in the subject-matter was apparent by the large volume of questions following the sessions.

Niall Trimble, Managing Director of the Energy Contract Company, opened the proceedings with an absorbing talk on gas pricing, which spanned the pricing philosophy, the evolution of gas pricing in the UK, recent trends in gas pricing in the rest of Europe, price reviews and pricing for LNG contracts.

Niall explained that the fundamental aim of the pricing mechanism is, for the seller, to reflect the market value of the gas and provide a basis for investment, and, for the buyer, to reflect the value of competing fuels, enable gas to be sold at a reasonable profit and (for some) provide a basis for investment. Its present-day link to the market value was characterised by the emergence of the spot market in the mid-1990s, which led to the use of spot pricing as a replacement for the pre-spot market requirement for a proxy for the value of the gas.

Since 2000, further changes in the gas market have led to the disappearance of old pricing formulae in new contracts, and the selling of all new gas on a traded basis, either directly, or on long-term contract linked to spot prices. Currently, 80% of UK gas is sold on a traded basis, with the remaining 20% sold on old contracts.

After describing the different types of trading options and sharing his views on the best-selling approach for UK gas producers (see his presentation at www.spe-org.uk for details), Niall explained that historically, gas pricing in the rest of Europe has differed from that in the UK, in terms of the approach to risk, the concern to maintain a fixed margin, the gas pricing formula and the fact that other European countries were slow to move to spot prices – a trend that has changed significantly during the past five years. An overview of the global LNG pricing approach concluded his presentation.

Following a lively networking buffet, kindly sponsored by EGS Energy, three geothermal energy experts further informed and entertained the audience with showcase presentations on the latest scientific findings and development activities in their fields.

First on the podium was **Professor Paul Younger**, Director of the Newcastle Institute for Research on Sustainability, who presented on 'Hot water rises: the coming heyday of deep geothermal energy in the UK'. After discussing the chequered history of geothermal energy exploration during the 20th Century, Paul shared the fascinating stories of the development of the Eastgate Geothermal Project, in the North of England, and of the recent emergence of NewcastleGateshead as "Geothermal Upon Tyne – the UK's most sustainable large city".

Discussing the first project, he explained that Eastgate Phase 2, which kicked off in February 2010, involved not only drilling a second (Eastgate 2) borehole, but also fitting out Eastgate 1 for productive use, using a novel approach based on air-lifting via a 900m GRP riser. The results of the recent and successful GRP performance test included the 'first iteration of the Eastgate Geothermal Spa', pictured on the front page of this magazine! Initial proposals for future direct use of geothermal energy at Eastgate include a more permanent spa – the first genuine natural thermal water spa in the UK since the Romans built Bath – and a tilapia (cod replacement) fish farm, as well as heating provision for commercial and residential users. Further deepening of one of the boreholes could support electricity generation in the future.

Paul then discussed the NewcastleGateshead 1Plan, which promotes a programme of 'sustainable urbanism' in the twin cities, based around the programme of Newcastle Science City, in which Newcastle University is a primary partner. He outlined the Science City-DECC funded Deep Geothermal Challenge which involves a 2km vertical hole drilling programme, which began in January this year.

His encouraging concluding remark was that "North East England's potential as a fruitful subsurface laboratory for the pursuit of new paradigms in deep geothermal energy, together with exciting geothermal developments in Cornwall and Scotland, represent real promise for a future boom in deep geothermal energy in the UK."

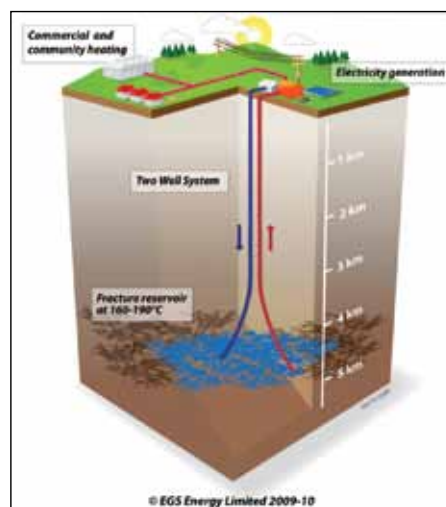
The upbeat messages continued with a presentation by **Dr Ed Stephens**, Geologist at the University of St Andrews, on 'Locating geothermal resources in Scotland'. Ed set the scene with a sobering examination of the Scottish energy context and the energy mix required to fulfil future electricity demand. Then, using an Australian granite geothermal project as a correlation, he built a compelling case for the significant heat energy potential of Scottish and other UK granites, based on the theory that temperature data from shallow boreholes in Scotland has to date substantially underestimated this kind of potential. In particular, he modelled the effect on geotherms of glacial-interglacial periods and argued that measurements of heat flow in northern Britain probably reflect transient geotherms due to post-Pleistocene warming.

Ed concluded by highlighting a number of possible future synergies between the geothermal and petroleum science and engineering disciplines. These exciting opportunities include:

- Basin modelling in search of hot sedimentary aquifers in the Midland Valley
- The use of geophysics to identify targets including aquifers and granites hidden in basement rock
- Improved modelling of transient geothermal gradients
- Use of reflectance, organic geochemistry, etc, in seeking palaeogeothermal gradients to improve targeting
- Improved drilling technologies, especially for drilling granites
- Development of stimulation methods in granites and sedimentary rocks
- A co-ordinated approach to maximise return from onshore drilling, etc, to geothermal, conventional hydrocarbon, coal based methane and carbon capture & storage studies in basins, such as the Midland Valley.

Roy Baria, Technical Director with EGS Energy, rounded off the positive event with an interesting and practical overview of lessons learned from 35 years of working with deep geothermal systems, which included the development of deep geothermal techniques and a description of how to design and build an engineered geothermal system.

In the first part of his talk, he argued that while conventional, hydrothermal systems have an important role to play, they are limited to the margins of continental plates and the addressable resource is therefore constrained.



Basic EGS concept

After discussing a number of European projects involving EGS engineered solutions, Roy spoke about his company's involvement with the global sustainability Eden Project, in Cornwall, where it has planning permission for a 4MW_e engineered geothermal system power plant.

Finally, he revealed EGS Energy's Vision 2050 strategy, which will be achieved through a series of phased developments and lessons learned over the next four decades. Vision 2050 aims to deliver:

- A total of 35 EGS sites across the UK
- Faster drilling capabilities and multiple systems available from the same wellhead
- Energy generation equating to 5% of the UK electricity demand.

You can download copies of all four SPE London presentations at the London Past Events section at: www.spe-uk.org.

Engineered geothermal systems, on the other hand, can significantly enhance the overall level of resource – but more complex technology is required to access it.

The prize in the UK alone is considerable, Roy explained: a government-commissioned review of resource in 1992 concluded that the potential resource available could amount to a total power output of ~4.3GW (~2.1GW of which would come from Cornwall alone) – representing 10% of the UK's required electricity capacity today.

Aberdeen

'Proper PVT' plays central role in determining oil and gas project success

Reservoir Engineers and related disciplines attending the SPE Aberdeen January technical meeting were treated to a troubleshooting master class in how to ensure quality reservoir fluids data, ably delivered by SPE Distinguished Lecturer **Birol Dindoruk**.

Birol, a Projects & Technology Reservoir Engineering Advisor with Shell International, and an Adjunct Professor at the University of Houston, began his presentation on 'Reservoir fluid properties (PVT) – issues, pitfalls and modelling', by stressing the importance of quality fluid properties (PVT – Pressure, Volume, Temperature) data in determining the potential success of offshore and onshore projects, premised upon the fact that quality PVT data ensures accurate fluid properties modelling, which supports the estimation of in-place volumes.

PVT input plays a central role in a diverse range of petroleum engineering calculations, he said, including those concerned with:

- Reservoirs, reservoir connectivity
- Reservoir simulation/material balance
- Pressure transient testing
- EOR (enhanced oil recovery)/injection processes
- Flowline, wellbore hydraulics
- Flow assurance
- Production allocation and calibration
- Tax implications/qualifications/quotas
- Production Sharing Agreements
- Drilling and completion fluids.

Birol then outlined the different sources of PVT data and described the main focus areas of reservoir engineering within this context as being: primary and secondary production (typically fluid properties/depletion characteristics from reservoir to separators); interaction with non-native (ie EOR) fluids, using experiments and modelling to capture EOR processes, and modelling of the desired processes ('EOS work').

He then talked the audience through a number of frequently-encountered issues experienced during the delivery of a PVT programme, and gave useful pointers as to how these could be overcome. Among the important quality control considerations and modelling issues he discussed were: measurement errors and sample consistency; rules-of-thumb governing difficult fluids; oil based mud contamination; compositional grading; transport properties (viscosity), and EOR.

Bringing his highly practical presentation to a conclusion, Birol summarised with the following key messages:

Proper PVT data will capture depletion performance of the reservoir and the interaction of injectants and the in-situ fluids.

Consistent fluid description is needed from the reservoir to the delivery point.

Difficult fluids (ie near-critical systems, heavy fluids, contaminated fluids, lean condensates, graded systems) pose challenges with respect to characterisation/modelling, computation, initialisation and measurement.

PVT/fluid properties should be used to complement the geological and geophysical (G&G) information.

From an EOS/Computational perspective: quality control of the data is a must; better viscosity prediction/modelling is required; sample characterisation/representation should have a minimum number of components, and multiple (PVTs) sample characterisations pose a challenge.

Birol Dindoruk's full presentation is available at: www.spe-org.uk



Birol Dindoruk

continued from front page.

INSPIRATIONAL STUDENT CHAPTER INAUGURATION

The inauguration was followed by my own address on the Chapter's objectives for the year (see below) and then by presentations delivered by two fantastic speakers from the Aberdeen YP Committee: Gerardo Arteaga (Centrica Energy Upstream) and Michael Qiong Zhang (Schlumberger). Gerardo's presentation 'My career path and opportunities for students within the oil and gas industry' identified networking and access to resources as benefits of student membership of SPE. He also said passion and dedication were essential to success in the industry. Michael's presentation, 'Your role in the Digital Oilfield' gave a technical perspective, explaining key areas such as remote sensing, 3D visualisation and modelling, intelligent completions and real-time drilling.

The inspiring talks were followed by gift presentations to the speakers in appreciation of the time and support they had shown towards the Chapter, and the event was rounded off with an informal refreshment, photograph and networking session, which allowed students to interact with the speakers.

RGU SPE Student Chapter objectives:

Our primary objective this session is to elevate the technical knowledge of our members by organising monthly technical presentations within the school.

Furthermore, we aim to instigate an annual UK students' conference in Aberdeen, which will allow SPE student members from different schools across the UK to network and share knowledge, as well as challenges relating to their disciplines, and help them return with broader knowledge and recommendations for their school Chapters.

Our ultimate goal is to raise the status of UK schools to gain global SPE Student Chapter recognition. The Petrobowl competition, eg, which is contested annually at the SPE ATCE, has been dominated and won only by American schools since its debut in 2002. We're hoping that an event like this will inspire the UK Student Chapters to change this trend.

We also hope to further bridge the student/industry gap by organising frequent industrial tours and creating a network of SPE student and professional members through our website and Facebook links.

Family miracle is motivation for Dave's Marathon effort

There's nothing like personal motivation to put a spring in your step! When SPE activist and competitive running rookie Dave Cox pounds the pavements for charity in the London Marathon next month, his focus will be very much on his family's good fortune, following his small son Joshua's miraculous recovery from a life-threatening illness.

Dave – North Sea representative on the SPE Young Professionals Co-ordinating Committee and global Sustainability Committee, and a member of the Aberdeen section Membership Committee – is raising funds for Action Medical Research, the charity behind numerous breakthroughs including the UK polio vaccine, ultrasound scanning in pregnancy, and the foetal heart rate monitor that could help save thousands of at-risk babies. Most importantly for the Cox family, the charity is spearheading a research programme into the killer hospital bacteria *Pseudomonas aeruginosa*, which Joshua contracted as a baby, while on holiday in Mexico three years ago.

"Despite being given a 10% survival chance, he made a truly miraculous recovery and is now the confident happy boy you see in the photo, alongside his little sister, Mariana," he says. "Since then, I have wanted to 'give something back' and running the London Marathon in aid of Action Medical Research is my way of doing this. All the money I raise will go directly to their research project, so I'd appeal to fellow SPE members to please give generously – particularly as I have never run competitively in my life!"

If you'd like to support Dave, visit his sponsorship page at: <http://www.action.org.uk/sponsor/davecox>



ABERDEEN EVENTS

Carbon Storage – the subsurface; how, where and when now

28 March, 9am-5.30pm, King's College, University of Aberdeen, followed by Dinner in Elphinstone Hall, 5.30pm Reception for 6pm

It's no longer a question of *if* carbon storage will become a reality in the North Sea but *where*.

Hosted by SPE Aberdeen as part of its Summit Series of focused one-day seminars, this topical event will be addressed by leading industry experts, including Jon Gluyas, Professor in Carbon Capture and Storage (CCS) and Geo-Energy at Durham University. Professor Gluyas will set the scene with a keynote talk on the requirements for a first-class subsurface carbon storage site.



Jeb Tyrie, Director 3rd Energy Limited and SPE Carbon Storage Conference Chair says: "There has been talk of carbon storage in the North Sea for many years; this event moves the discussion on to 'where' and is therefore an unmissable learning opportunity."

Other highlights will include: an interactive debate, led by Dr Andy Beckly (Senergy) and Professor Stuart Hazledine (University of Edinburgh), on the relative merits of depleted reservoirs and saline aquifers; global case study presentations by Maxwell Watson (BP) on storage risks; Dr Owain Tucker (Shell) on key elements of CO₂ geosequestration in a depleted North Sea gas field, and Bamshad Nazarian (Statoil) on reservoir simulation of CO₂, followed by a post-seminar Dinner in the magnificent Elphinstone Hall.

SPE Aberdeen is using the event to promote UNICEF UK and to increase the awareness of its work around the world. Jeb explains: "UNICEF not only supports children in disasters and extreme need, but also has a philosophy in common with our SPE section, supporting the education of children – particularly where there is gender discrimination. A significant share of the event proceeds will therefore be donated to UNICEF UK."

In May, Jeb will join other intrepid explorers in a UNICEF UK-organised trek across the Jordanian Desert to raise funds and awareness of UNICEF's activities: www.supportunicef.org.uk/Jeb_and_Vicki_head_for_Petra

3rd European Well Abandonment Seminar

29 March, 8am-6pm, Aberdeen Exhibition & Conference Centre

Best practices for the abandonment of wells, together with forthcoming challenges and opportunities, are the focus of this increasingly popular biennial event, hosted by SPE Aberdeen.



"As an industry we can't afford to ignore well abandonment any longer," says event Co-Chair Sarah Gibson, of Baker Hughes. "It's costly and must be carefully planned, otherwise it's a poor legacy to leave for the next generation – but it's also an area that offers great commercial opportunities to those with the right skills and knowledge."

Respected industry practitioners from around the North Sea will address the one-day conference, sharing a practical perspective on the key themes of Guidance & Best Practice, Expenditure, Practical Experience, Planning, and Enhanced Techniques & Materials. The associated exhibition will showcase specialist products, services and case studies from a range of operator and service companies, including Rushmore Associates, Shell, Aramco, Baker Hughes, Thinjack, Interact Projects, Weatherford, Decom North Sea NCA Group, TAM International, Schlumberger and Hydrawell.



"The event is essential for anyone who wants to know more about the challenges associated with well abandonment that the industry will face during the next three decades," says Co-Chair Martin Mosley, of Talisman Energy UK. "It's an excellent opportunity to learn from expert practitioners, hear about best practice and see the services and tools used."

Abandonment of exploration and appraisal wells has long been common practice, but with decommissioning of assets set to be a major activity over the next 40 years – incurring around £27 billion of spend in the UK – the annual number of well abandonments is expected to increase at least 10-fold within the next five years alone. By 2020 it is expected that 940 wells will have been abandoned at a cost of at least £1.5 billion.

To find out more about the events listed above, visit www.spe-uk.org. To book a place online visit www.rodgerandco.com or call event organisers Rodger and Co, on 01224 495051.

DEVEX 2011

11-12 May, Aberdeen Conference & Exhibition Centre

DEVEX 2011

An excellent selection of high-quality abstracts ensures a robust and engaging programme this year for this major annual event, organised by SPE Aberdeen, PESGB, AFES and DECC, and designed for geologists, geophysicists, petrophysicists, reservoir engineers, petroleum engineers, production technologists, well engineers and drilling engineers.

Event Chairman Paul Adair says: "Nearly 400 delegates attended this event in 2010, where a programme with more than 40 technical presentations addressed the range of challenges facing development of mature basins. This year we aim to build on previous successes and encourage attendance from operators and suppliers globally who wish to share or learn more about solutions leading to successful field development."

"With its reasonable delegate and exhibition cost, participation at DEVEX provides a first-rate technical experience and is excellent value for money."

www.devex-conference.org

Smart Energy 2011
Delivering return on investment by applying technology and expertise

7 June, Mercure Ardoe House, South Deeside Road, Blairs, Aberdeen

What role is 'Smartness' playing in realising the potential of the mature North Sea basin? Focusing on leading-edge examples of Smart technology and working practices through a full programme of presentations and relevant exhibition this SPE Aberdeen event will help the industry better understand the challenges of mature field operators and the innovative solutions that are being effectively applied. Excellent sponsorship and exhibition opportunities are now available for companies wishing to raise their profile to a targeted audience.

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LONDON EVENTS

New Frontiers in E&P: Shale Gas

Thursday 24 March, 9.30am-5pm, Geological Society, Piccadilly, London

Kindly sponsored by Schlumberger www.slb.com and ERM (Environmental Resources Management) www.erm.com

Adrian Topham	Baker Hughes	Global Overview of Shale Gas Operations and Opportunities
Phil Clarke	Novas Consulting	Shale Gas in Europe: Estimating the Potential
Ian Hutchinson	SASOL	G&G overview of Shale Gas
Ewan Whyte	Landmark	Shale Gas Development Planning - An Unconventional Approach to Modelling
Eduardo Martinez	Schlumberger	Shale Gas Frac and Completion Techniques and Access to Services in Europe vs US
John Demanti	URS Corporation	The Shale Gas Experience in North America: How Can Environmental Lessons Learned be Transferred to Europe?
Ramin Lakani	Baker RDS	Financial Implications of Unconventional Gas Developments in Europe vs the Experience in the US

We welcome all who have an interest in this exciting phase of the energy industry and would like to know more.

Tickets: £200 members SPE/PESGB/EI inc VAT, £230 non-members

Dates for your diary:

Seminar for Women in the Energy Industry: 'Having It All'

19 May 2011, at 09:30

Tickets: £40 for both members and non-members

EAST AFRICA: The Pursuit of African Oil

2 June, 9.30am-5.30pm, Geological Society, Piccadilly, London W1

Tickets: £200 members SPE/PESGB/EI inc VAT, £230 non-members

Secure advance booking for all of the above at: www.katemcmillan.co.uk or contact Kate McMillan, tel: 07736 070 066; Katespe@aol.com – early booking is strongly advised.



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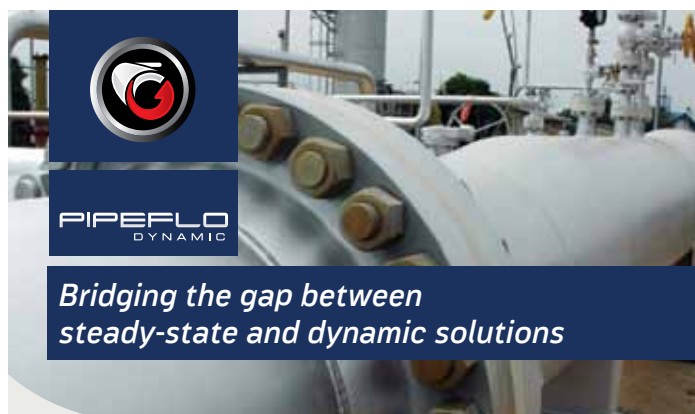
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FORTHCOMING UK EVENTS

- **29 March (5pm-9pm) (Before dinner): 'Unconventional Gas: Consequences and Opportunities', Morten Frisch (Morten Frisch Consulting)**
(After dinner): **'Uganda – exploration, appraisal and development planning – getting ready for first oil', Robin Rindfuss (Tullow Oil); 'Minnows Chasing Whales', Peter Kingston (Tower Resources plc)**

- 24 March (9.30am-5.00pm): New Frontiers in E&P: Shale Gas
- 19 May 2011 (9.30am): Seminar for Women in the Energy Industry: 'Having It All' (venue to be confirmed)
- 2 June (9.30am-5.30pm): East Africa – The Pursuit of African Oil

VENUE FOR ABOVE EVENTS: The Geological Society, Piccadilly, London W1

- 9 June: SPE London 40th Anniversary Ball

VENUE: Claridge's Ballroom, London

For details of all SPE London events, visit: www.katemcmillan.co.uk and www.spe-uk.org 'London Events'. If you would like to sponsor an SPE London event, please email TKuiper@chevron.com

- **23 March (6.30pm):** Aberdeen YP Chaired event: **'Shocks & Vibrations – cause of drill string failure'**, Martin Hayes (Schlumberger)
VENUE: Douglas Hotel, Aberdeen

- 28 March: Carbon Storage – the subsurface; how, where and when now

VENUE: King's College, University of Aberdeen

- 29 March: 3rd SPE European Well Abandonment Seminar
VENUE: Aberdeen Exhibition & Conference Centre

- 11-12 May: DEVEX 2011

VENUE: Aberdeen Exhibition & Conference Centre
Details: www.devex-conference.org

- 7-8 June: Smart Energy 2011

VENUE: Mercure Ardoe House, South Deeside Road, Aberdeen

- **6 April:** (time & venue to be confirmed), **'Frontier exploration Greenland activities'**, Peter Aird (Cairn Energy).

For details of all SPE Aberdeen and Edinburgh events, please visit:
www.spe-uk.org 'Aberdeen Events'

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Society of Petroleum Engineers
Aberdeen Section

Carbon Storage



Well Abandonment



Smart Energy



They say good things come in threes:
here are the three hottest topic continuing education seminars from the SPE Aberdeen Section.

1 Carbon Storage - the subsurface: how, where and ~~when~~ now!
Monday 28th March, Aberdeen

One day seminar and dinner. Conference on 'how and where' with a live debate on utilising depleted fields versus saline aquifers.

2 SPE 3rd European Well Abandonment Seminar
Tuesday 29th March, Aberdeen

This is a topic that can no longer be ignored in the North Sea! One-day seminar and exhibition on best practices, challenges - and opportunities.

3 Smart Energy 2011
Tuesday 7th June, Aberdeen

Delivering return on investment by applying technology and expertise. One day seminar and exhibition. Presentations from Shell, BP, Total, BP, IHS CERA, Apache North Sea.



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To find out more about the SPE one-day seminar in Bergen please go to Bergen.spe.no.

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