

SPE REVIEW

LONDON



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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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Talk to us...

More than ever, oil and gas professionals need to share technical knowledge, and enhance professional competence to meet the current challenges. This issue of SPE Review London offers the opportunity to be educated, entertained and informed. Enjoy!

Find out (see [page 6](#)), why nearly 200 delegates from 12 countries (UK, USA, Netherlands, Nigeria, Saudi Arabia, China, France, Switzerland, Norway, Spain, Australia, and Canada), and five continents (Europe, North America, Africa, Asia, and Australia) took the time out of busy schedules to take part in informative, interactive sessions, and benefit from fascinating discussions and insights.

Elsewhere in this issue, you will read about SPE Young Professionals' discovery of a wealth of stories waiting to be told, ([page 3](#)), and the results of one man's lifelong passion: The Etches Collection. Discovery, research, and dogged determination to find and collect specimens – and unearth the life stories of the amazing creatures that existed in the Kimmeridgian age.

If you want to use your professional abilities and business acumen to 'give something back', then consider our volunteer opportunities ([page 7](#)); don't forget to check out upcoming events (including webinars).

AND...talk to us!

We welcome your feedback on the online SPE Review London. This is our fourth issue, and the last of the summer.

*** The next issue will be in September, when we'll be offering some great prizes for topical quizzes!

Please send us your ideas and suggestions for articles/interviews/topics you'd like to see in future issues.

Enjoy the summer! We look forward to seeing you in September.

SPE YP Field Trip: Wytch Farm Oilfield and the Jurassic Coast

The SPE London Young Professionals committee had the pleasure of organising the SPE Geological Field Trip on the 20th May, 2015.

The trip included a visit to the Wytch Farm Oilfield, operated by Perenco UK, followed by a short hike with Steve Etches along the Jurassic Coast in Kimmeridge, and a tour of his impressive fossil collections.



Wytch Farm

The Wytch Farm oilfield is 17 miles from Poole and six miles from Wareham, in the Purbeck district, Dorset, England. It is the biggest onshore oil field in Western Europe, and is a mature oil field that has extracted oil and associated gas since 1979.

The Wytch Farm oil fields comprises three separate oil reservoirs: the Bridport, and Sherwood Jurassic sandstone oil reservoirs, and the Frome clay/limestone oil reservoir.

Bridport, lying 900m beneath surface, was discovered in 1974. The Sherwood reservoir, situated at a depth of 1,600m was discovered in 1978; followed by the discovery of the Frome reservoir, containing 7.5 million barrels of oil at a depth of 800m.

The Wytch Farm oil field was discovered and initially operated by the nationalised British Gas Corporation. The first phase of the field development completed in 1980, and involved four wells sites targeting the Bridport reservoir. BP took over as operator of the field in 1984, and upgraded the existing well sites, and constructed five new well sites as part of the second phase development initiated in 1987. The field started producing from both Bridport and Sherwood reservoirs with the completion of the second phase.

The third phase of development, initiated in 1993, involved extended reach drilling from the mainland under Poole Bay and the construction of a new well site on the Goathorn Peninsula.

The oil production from Wytch Farm peaked at 111,000 barrels per day in 1997, compared to 6,000 barrels per day in 1984.

However, the oil production gradually declined to 50,000 barrels per day in 2002; in 2015, it is approximately 18,000 barrels per day. In 2011, BP sold its 67.8% interest in the Wytch Farm to Perenco, which further sold 17.7% to Premier. The new operator started infill drilling at the site in the first quarter of 2012.

Wytch Farm is in an environmentally sensitive area, and various conservation laws protect most of the surrounding area. Surface operations have been carefully constructed to minimise impact in coniferous forests on Wytch Heath on the southern shore of Poole Harbour, and at satellite fields in Wareham and Kimmeridge Bay.

The gathering station and most of the wells sites are small and well screened by trees, and the equipment is painted dark brown. The smart design and use of ground flares at the gathering station, careful lighting on well sites, and the separation of the distillation column into two structures to reduce their vertical height, makes the field even more unique in its design.



In 1995, the field won The Queen's Award for environmental achievement; it is interesting to note that in a time

of increases public awareness of industry operations in the UK, the field remains largely unnoticed by the general public, just as the planners had hoped.

Wildlife habitats, plants and animals living near the oil-fields have been identified through a combination of desk studies and field surveys. The main habitats in the area are heath land, coniferous woodland and unimproved grassland.

Wildlife identified include important birds such as Night Jar, bats, specially protected reptiles, including Smooth Snake and Sand Lizard, and a great diversity of insects.

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SPE Field Trip: Wytch Farm Oilfield and the Jurassic Coast (continued from page 3)

Citing the improvements in reservoir management that have taken place since the initial reserves forecasts, Perenco anticipate that it will be economic to operate the oilfields for 20 years more than was originally supposed.



In September 2012, Perenco UK applied to Dorset Country Council (DCC) for permission to extend the life of 39 planning permissions

for the three oilfields. The application was agreed by Dorset County Council in September 2013.

SPE YP thank Suzie Baverstock from Perenco UK, for providing such an informative tour of the oilfield and the surrounding areas.

Kimmeridge - The Etches Collection

The Jurassic Coast, England's first natural World Heritage Site, is internationally renowned for the abundance of fossils on its shores. Along this famous coastline lies the Dorset village of Kimmeridge, which has given its name to the clay formation that contains a unique range of fossils from the late Jurassic period.

The Jurassic Coast covers a distance of 95 miles, with rocks recording 185 million years of the Earth's history. World Heritage status was given to this side due to the quality of its varied geology and resulting paleontology spanning the entire Triassic, Jurassic and Cretaceous periods.

Amazing stories can be found in the cliffs and shale sediments formed 150 million years ago. A prehistoric time



when pterosaurs, big and small flying reptiles ruled the skies and the first feathered birds began to appear. On land, giant eating Sauropods populated the terrain, grazing on the many species of tropical ferns and early conifers.

One man's passion

Steve Etches is a local to Kimmeridge and has been a fossil collector for the last 30 years. He has discovered, collected and researched over 2000 incredible late Jurassic Kimmeridgian specimens. The Etches Collection is the result of one man's passion.

Over 30 years of discovery and diligent research, dogged determination not just to find and collected specimens, but also



to bring to life the amazing stories of the creatures that existed in the Kimmeridgian age, has resulted in the growing popularity of the collection.

A brand new immersive museum

The Etches Collection of Jurassic Marine fossils collected from Kimmeridgian clay is publically recognised to be unique and of world importance. The vision of the Kimmeridgian community is to create an engaging museum based in Kimmeridge that will benefit all, while securing, conserving and enhancing the collection.

Visitors entering the Exhibition Gallery will experience a laboratory of the senses, as they are taken on an immersive journey through life underwater 150 million years ago.

The space will be transformed into an aquarium of the past, changing from a scene of tranquility and beauty to one of raw, primal violence and a fight for survival. Objects that once seemed static will be brought to life and represented as if they were modern day animals.

The fossils specimens will be carefully presented and interpreted to bring to life their individual stories. Visitors will leave the museum recognising that the fossils are tangible evidence

of living beings, and there is a wealth of untold stories to explore and discover as well as much to be learned from this former life on earth. ■

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Stellar speakers, deep insights and discussions: the SPE London Annual Conference 2015

Top-level professionals in the technical, financial and operational fields focused on key issues challenging the industry in today's low-oil price environment – at the fourth SPE London Conference in early June, 2015.

Nearly 200 delegates from 12 countries (UK, USA, Netherlands, Nigeria, Saudi Arabia, China, France, Switzerland, Norway, Spain, Australia, and Canada), and five continents (Europe, North America, Africa, Asia, and Australia) took part in the conference on 8/9 June, as accomplished industry speakers led informative, interactive sessions.

Focusing on the issues of maximising efficiency, and enabling financing opportunities, on regional and global levels, the six sessions ranged from strategic opportunities, extracting value from shale, to challenges in West Africa. An additional key theme, resonating through the conference sessions and in informal networking, was the current challenge of public/social perception and acceptance, especially in an era of low prices and high costs. .



Dr. Renu Gupta

Renu Gupta (Gupta Energy), Conference Chair, set the conference scene with her opening remarks on the need to maximise returns on existing investments while also maintaining an adequate level of investment in exploration and development activities to ensure long-term growth. She also led the Keynote Session, 'Maximising Value in a Low Oil Price Environment', where **Jan Dirk Bokhoven (EBN)** was the first to examine the conference challenge.



Jan Dirk Bokhoven

After discussion of changing oil prices since the 1970s, Jan demonstrated how capital cost indexation outperformed inflation; he ended with various options to reduce costs. **Jonathan Dent (Statoil)** stated that 'we've been here before', as he showed global upstream M&A deal value and deal count since 1989, and offered ideas on the challenges of the evolving buyers universe.

Claiming that 'lawyers can add value', **Michael Burns (Ashurst)**, examined the implications of the changing buyer's market and how to maximise value by keeping it simple. **Barry Aling (City of London Investment Group)** comprehensively answered questions from the Session Chair and the floor.

Demand and Spikes

Panellists **Christopher Mylde (Sproule)**, **Eric Oudenot (Boston Consulting Group)**, and **Robert Hodges (EY)** addressed oil prices key challenges and opportunities, and the global outlook of fiscal trends, in the first morning session chaired by **Raju Patel** from **Fulcrum**.

Overall conclusions included the acknowledged strain put on global fiscal regimes, along with future price volatility and the need to take a long-term perspective. Christoffer also remarked that while long-term full cycle marginal costs would fall within the \$60-\$80 range, 'demand may sneak upon supply and this may lead to future price spikes'.



Michael Burns and Barry Aling

Adapting and Innovating

Changing dynamics affecting the management of investor returns, and cost control was the focus of Tuesday's first afternoon session, chaired by **Arnaud Mille** from **Centrica Energy**. Panellists **Ian Thom (Wood Mackenzie)**, **Gunnar Olsen (Total E&P UK)**, **Andy Bevington (Centrica)**, and **Egil Tveit (Forsys, UK)** discussed how cost and efficiency challenges are addressed on local and global levels, with individual and collaborative results.



John Blaymires

Trust and Transparency

The last session before the evening networking event and awards ceremony* was chaired by **Ramin Lakani** from **Haliburton**, and tackled the challenge subject of shale gas. Acknowledged as offering potential for significant economic benefits, UK shale gas operations can be challenging for industry, stakeholder groups and communities. With panellists **John Blaymires (IGas Energy)**, **Richard Byrnes (Haliburton)**, and **James Rose (Department of Energy and Climate Change)**, the discussion ranged from exploration of the regulatory process, to the need for 'appropriate regulatory oversight and industry commitment to rigorous standards'.

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Stellar speakers, deep insights and discussions: the SPE London Annual Conference 2015 (continued from page 7)

Failure or Success

Wednesday opened up with the second session chaired by Ramin, and addressed the challenges of mega projects.

While large E&P projects have a high failure rate, that rate may be remedied in part by stronger processes and well-defined, less marginal project acceptance, according to panellists **Mary Ellen Yarossi (IPA)**, **Graham Henley (Shell)**, and **Chris Ward (Baker Hughes)**. **Christopher Requin (HSBC)** joined in the audience Q&A session.



Christopher Requin and Chris Ward

Global Significance

Wednesday afternoon's session examined the attractions and challenges of West Africa. Chaired by **Drew Powell** from **Cline & Associates**, the panellists discussed whether the opportunities of investing in West Africa outweighed the risks. Taking part were **Kazem Raimi (Seplat Petroleum Development)**, **Ade Adeola (Standard Chartered)**, and **Sandy Stash (Tullow Oil)**.



Graham Henley

Innovative Financing

The conference closed with the final session, chaired by **Herve Le Guen** from **Scotiabank**. He led the session panellists **Andy Brogan (EY)**, **Neil Passmore (Hannam & Partners)**, **Stephane Foucaud (FirstEnergy Capital)**, and **Jan Laubjerg (Flow Stream Commodities)**, in discussion of private equity funding, equity opportunities, and expanding, innovative financial solutions.

Leveraging London's unique position, the SPE London Annual Conference offered an outstanding opportunity for oil & gas industry professionals, and the financial community, to learn, share knowledge and network. It also attracted a large number of non-SPE members – making up more than 20% of the attendees.

As **Pamela Tempone (SPE London Chair 2015/16)** commented: "The 2015 annual conference was well-attended and resulted in fascinating discussions and insights, reflecting the ongoing success of the event since its inception in 2011. For next year, SPE London section, in co-operation with SPE international, will be working hard to ensure the 2016 London Conference is better and bigger, and attracts even more attendees from both SPE and the general public!" ■



Pamela Tempone

* **Allan Twynam** and **Dr John Campbell**, each a recipient of a 2015 SPE Award, previously took time to answer our questions about driving efficiency and performance, and future challenges facing society and the industry: see their interviews in the June issue of *SPE Review London*.

EVENTS

Upcoming events – 2015

14 July 2015

Web Event: What You Need to Know about Investigations Affecting Operations in the Oil and Gas Industry Houston, TX... By registering for this session, you can listen to the speaker live and watch the slides broadcast from the presentation without leaving your desk.

Live Event at 12:30 PM (EDT) **Note: Online registration**

8 – 11 September 2015

SPE Offshore Europe 2015

AECC (Aberdeen Exhibition & Conference Centre) Aberdeen, Scotland. UK. **Note: Online registration**

8 – 11 November 2015

SPE ICoTA 21st European Well Conference

Aberdeen, UK

Call for abstracts – deadline 14th August 2015

Information: event organisers Rodger and Co: 01224 495051

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Can you help?

We need your industry experience...

Volunteers with SPE London tell us they get great personal satisfaction from using their professional abilities and business acumen to 'give something back'.



We're looking for a few key new volunteers in 2015!

While volunteers are very welcome on all our committees, we are especially looking for skills for the 'Conference', and the 'Continuing Education' committees.

The SPE London section 'Conference' committee organises regular, established events, along with single occasions created especially to answer industry demand. Each event is the responsibility of the committee chairman and his or her team. The Continuing Education (CE) committee is particularly seeking volunteers with technical or event-organising experience and skills.

Please **contact Kate McMillan** for more details of how you can volunteer your experience and skills to benefit all our members: katespe@aol.com

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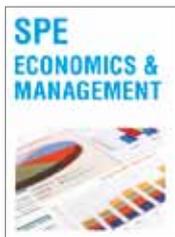
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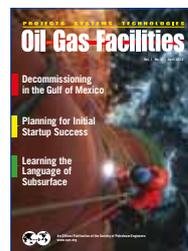
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Journal of Petroleum Technology

is SPE's flagship magazine for members and anyone interested in petroleum technology. Each issue includes three to four technical topics featuring some of the best papers from SPE conferences over the prior year. These papers are selected by the Editorial Board, rather than through peer review.

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