



London Section

Issue 23 | July 2017

SPE REVIEW

LONDON

- SPE London Conference 2017
PLUS
- Behind the Scenes
- Discussion: Making More Good Decisions

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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 143,000 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 global events, publications, events, training courses and online resources at www.spe.org, as well as local chapters such as the SPE London section. SPE London section publishes SPE Review London an online newsletter, 10 times a year, which is digitally sent to its 3000+ members. If you have read this issue and would like to join the SPE and receive your own copy of SPE Review London, 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. **The views expressed herein are not necessarily those of the SPE. Extracts may be reproduced subject to a clear acknowledgement of the source.**

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Information

At SPE Review London, we strive to provide knowledge and information to navigate our changing, and challenging, industry. We trust you find this July issue of SPE Review London to be both useful and informative.

In this month's technical feature '**Making More Good Decisions**', Jonathan Ovens, SPE Review London's Chief Editor, provides more information on the discussion at the SPE London Section Evening Meeting (page 4). Slides can be found on the SPE London website.

The **Oil and Gas Industry in a New Epoch** was the focus of the 2017 SPE London Conference. Find out more, starting on page 5.

Meet the people 'behind the scenes': The SPE Review **Editorial Board** (page 3) and the **SPE London Board** (page 7). Our regular feature '**Month at a Glance**' is on page 8.

Consider getting noticed – write an article for SPE Review London (page 3). Or **volunteer to speak at future events**: For example, the SPE London Business Development group hosted a June seminar on **Private Equity in the Oil & Gas Industry**, with talks from Daniel Reis (Petroleum Equity), Nicholas Gee (Buckthorn Partners), Roy Kelly (Kerogen Capital) and David Elmes (WBS), followed by a panel Q&A and networking. The seminar provided a fundamental background on the contribution of Private Equity to the Oil & Gas industry, as well as discussing the latest trends. This event concluded the 2016/17 SPE London Business Development program. **For information, or to volunteer contact Patrick Davies, SPE London BD Chair (patrick.davies@gmail.com).**

Keep up to date with **industry events, and networking opportunities** (page 9).

Members in Transition: SPE London will be running an evening seminar 'SPE Business Development – Career Transitions' on **Wednesday, 13th September**, at the Warwick Business School, (event sponsor) on the 17th Floor of The Shard. This seminar aims to show what Petroleum Engineers, Operations Staff, Economists and Commercial specialists could do as a transition from their current role, either within a company, between companies or between industries. It is aimed at staff with between 5 and 25 years' experience. Speakers will offer experience and practical advice.

And don't forget to check out our social media pages: Facebook, Twitter, and LinkedIn.

As always, this issue of SPE Review London offers the opportunity to be educated, entertained and informed.

We appreciate your feedback: spelondon@spemail.org

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Behind the Scenes: SPE Review Editorial Board



Jonathan Owens
Chief Editor

Jonathan Owens joined Shell in 1986 after completing a Ph.D in Physics at Cambridge University. He worked as a Reservoir Engineer, particularly in the areas of hydraulic fracturing, pressure transient analysis and reservoir simulation. Between 1997 and 2012, he worked as an independent consultant for a variety of companies, covering the North Sea, North Africa and the Middle East. His experience ranges from Exploration and Development planning through to Reserves Evaluation. In 2013, he joined JX Nippon E&P (UK) Ltd as a Senior Reservoir Engineer, working a wide variety of assets in the North Sea. Between 2009 and 2015 he served on the SPE Europec Technical Committee and is a member of the SPE London Board.



Josh Beinke
Editor

Joshua Beinke is an established Petroleum Engineer with 10 years prior experience with Chevron Corporation, Origin and Santos. Since earning a Petroleum Engineering degree from the University of Adelaide, he has found particular satisfaction specialising in Well Test Analysis, Data Room evaluation and numerous wellsite Production Engineering roles.

After spending the majority of his career in Australia, he recently decided to broaden his horizons to include European and African assets and is presently a Production Engineer with Vermilion Energy.



Ffion Llwyd-Jones
Designer

Ffion Llwyd-Jones is an editor and business writer, with 15+ years experience in Canada, the US, and the UK. She is Editor for several trade and consumer magazines (print and/online); and also provides industry-related case studies, and detailed, research-driven B2B reports and white papers. She is an accomplished photographer. Educated in Canada, and in the UK, Ffion is completing a BSc (Hons) with Open University. She enjoys the challenge of creating the information-driven SPE Review London.

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Making More Good Decisions

SPE London Section Evening Meeting Report by Jonathan Ovens

In the June Issue of the SPE Review we reported on the May Section Evening meeting that was devoted to Making Good Decisions. However, in some ways we held the best back (to perhaps draw you away from Johanna Konta at Wimbledon?) since we did not report on the after dinner talk given by SPE Distinguished Lecturer Reidar Bratvold.

Reidar may be familiar to many of you from his papers and teaching on Decision Risk Analysis and his book *Making Good Decisions*. The following paragraphs provide a brief summary of his talk.

In the Beginning

Reidar began by recalling that when he started as an engineer in 1984, he was involved in the creation of the first Gulfaks simulation model. This was a single case model and the concept of uncertainty was not even considered. Today, the industry as a whole has moved forward, with the routine creation of multiple realizations for simulation models and an assessment of uncertainty. Nonetheless, as shown by Nandurdika (IPA 2014, Slideshare: 'Why only the most efficient E&P

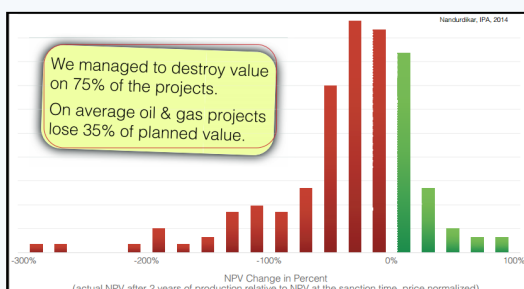


Figure 1: NPV change on project outcome showing value destruction in 75% of cases

Projects will survive the cost price squeeze', www.ipaglobal.com, June 2014) as an industry we have managed to destroy value in 75% of our upstream mega projects. So what has caused this situation and how can we address this problem?

Reidar noted there will always be a certain level of uncertainty in all our projects; this is inherent in all aspects of our lives, so uncertainty is not the enemy. As Reidar noted: 'The enemy is not uncertainty but a lack of acceptance of it, combined with a biased and error prone approach to dealing with it.' If we were more competent in the way we understand,

communicate and apply uncertainty then better decisions would be made, resulting in better overall performance; you can't make good decisions without embracing uncertainty.

The start of this improvement would be to more accurate initial assessment of the uncertainty inherent in our project outcomes; we are frequently overconfident and biased in our original uncertainty estimates, even though techniques have been developed and are widely available to help overcome these problems they are rarely used. The lack of attention

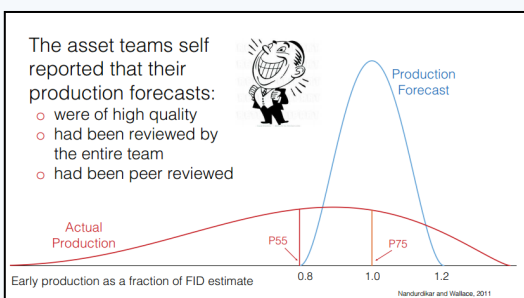


Figure 2: Overconfidence and bias lead to erroneous forecasting

to a good initial uncertainty estimate leads to significant value destruction through the inability to effectively manage outcomes that differ from the original plan.

Common Mistakes

Many people use the language of uncertainty but fail to understand the concepts properly. One common approach is to behave as if there was no uncertainty; the 'just give me the number' approach is still all too prevalent. Have you been asked to 'guarantee that you will not spend more than the P50 on a project'? Or received comments like 'I prefer to evaluate your project deterministically because either you're right or you're wrong – and if you're good, you'll be right!'?

But do we ever learn from these common mistakes? Possibly not, since most of our attention in large projects is on the delivery of the project on cost and on time, even if little attention has been paid to the ensuring the original cost and time estimates are accurate, realistic and reliable.

Reidar pointed us to a video of Michael Jordan, commenting on his success and failure. Jordan said: 'I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game-winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed.'

But in the oil industry we tend to forget about failure, and certainly never share lessons from failure across companies. As Daniel Kahneman said ('Thinking Fast And Slow', Farrar Straus and Giroux, 2011): 'We fail to keep track so as to learn from those mistakes. I think this isn't happening.'

Two cheers for Uncertainty

So, as we celebrate the Wimbledon with strawberries, cream and Pimms, let us raise a glass to uncertainty, accept it as a part of life to be embraced and not rejected and let us learn to improve from our shared failures and keep track.

SPE London Conference: Oil and Gas Industry in a New Epoch

The 2017 SPE London Conference was held on 27th June. The conference provided an opportunity for the Finance and Technical (Subsurface) communities to come together and share experiences and ideas.



Darcy Spade (2018 SPE President) addresses the Conference

The Conference opened with an introduction from the 2018 SPE President Darcy Spady, who had travelled from Calgary.

Darcy noted the current market situation was not clear; short-term oversupply is driving current prices lower, but how long this might last and what the outlook for the medium and long term was continued to be uncertain.

He did note that the impact of the Youth on our future means we had to consider both the economic and environmental outcomes in our work and decision making.

The New Epoch

Dr Renu Gupta, Gupta Energy, introduced the first session entitled 'The New Epoch', a term which reflected the new regime of lower but volatile oil prices. Nikolai Lyngo (Statoil) explained his company's approach in this new world: effectively ensure all projects are robust and be prepared for surprises. A new financial discipline would drive technical developments leading to a close connection between finance and technology. The overall strategy would be: high value, low harm and always safe.

John Moon (Morgan Stanley Energy Partners) discussed some of the underlying drivers impacting current oil price trends. In 2015 US production increased to over 1 million barrels of oil per day, Saudi Arabia's reaction to this increase led to the rapid drop in oil price. This was the new epoch; instead of an oligopoly driving prices, we have moved to a market driven system where the cost/price balance dominates.



Rene Gupta introduces the first session

Niels Kirk (Citi Corporate and Investment Banking) predicted we would be in a 'lower for longer' environment with a dominance of gas production. He noted that the high oil prices of the recent past had masked potential problems but these could no longer be ignored. He noted that there was a potential for data itself to become a stranded asset.

Financing and Valuations

A number of lessons learnt from the performance of the last few years were shared by the speakers; don't forget the oil price cycle, there is a downside from having many sources of funding and operational performance is always key. From a finance perspective, the four "C's" of credit should always be considered: Competence, Character, Cashflow and Collateral.

The End Game

Gavin Ward (RISC) provided a very insightful discussion of the impact that company culture can have on the prospects of fields late field life. He pointed to RWE's experience in addressing the problem of multiple cognitive biases impacting on decision making and ultimately leading to significant value loss for a company. Gavin then related his experience in turning round the



Networking at the London Conference

continued on page 6

SPE London Conference *continued from page 5*

Morecombe Bay field in late life, showing how a change in organizational thinking and culture greatly improved late life performance.



Roger Essen discusses decommissioning

Roger Essen, Decom North Sea, discussed the current state of play in decommissioning in the North Sea. There has been a significant movement down in costs as a result of significant innovations being made. He mentioned a Planning Portal (www.l2p2.net - Late Life Planning Portal) aimed at sharing knowledge.

Technology and Innovation

Narsi Ghorban, Commission of Environment and Energy, International Chamber of Commerce, Iran, discussed the current situation in Iran. The country has a huge resource potential with plans for major investment over the next five years. There is a significant home grown industry that partners,

particularly from Europe, should use to enter Iran.

Rebekah Bostan, IHS Markit, presented the current situation in Egypt and the Senegal Basin, where significant gas discoveries have been made recently.

Daniel McKeown (Seacrest) discussed an innovative approach to providing comprehensive seismic surveys based on an extensive 3D dataset that could be used to generate prospects for exploration drilling.

Raymond Burke (GE Oil and Gas) discussed the longer term implications of the traditional supply and demand balance.

Reach out to...

London Technical and Commercial
Energy Community

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Meet the SPE London Board

SPE is a non-profit professional society with 164,000 members in 143 countries. SPE London Section, with average 2000 members and seven associated student chapters, is an active section with an aim to connect, engage and promote exchange of knowledge within London energy community of technical and commercial professionals. The SPE London Board is the policy-making and governing body consisting of volunteers who devote their time to oversee many of SPE London's administrative and operating responsibilities.



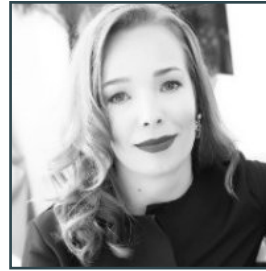
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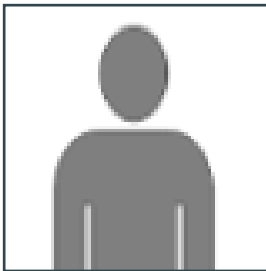
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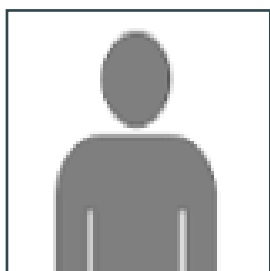
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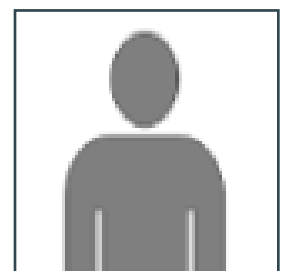
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Cont. Education Co-Chair



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Women in Energy Chair



Kanad Kulkarni,
Student Chapters Liaison



TBD
Young Professional Chair



Jonathan Owens
Director, Editor SPE Review



Anthony Perry
Director



Arnaud Mille
Long Term Planning



Alain Gringarten
Director

Month at a Glance

SPE London has been busy with activities! Here's a pictorial overview of what's been happening. For activities and events: Events page on SPE London website. **NOTE: Photo credit Patrick Davies**



SPE London Conference 2017
Rebecca Jones of Gaffney, Cline and Associates, accepting the North Sea Reservoir Description and Dynamics Regional Award on behalf of John W. Barker, of Gaffney, Cline and Associates.

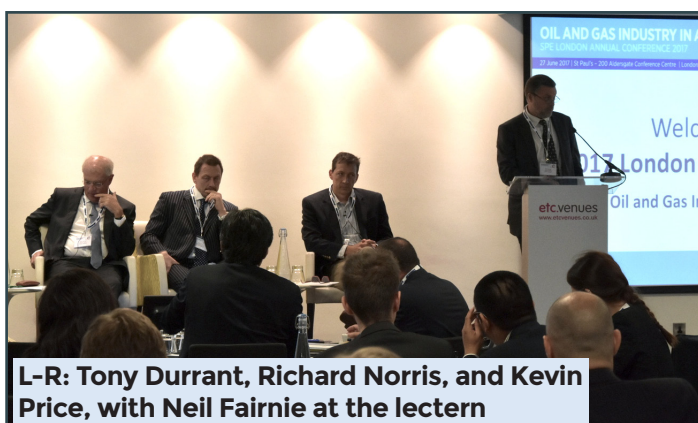
L-R: 2018 SPE President Darcy Spady, Rebecca Jones, and North Sea Regional Director Karl Ludvig Heskestad.



Renu Gupta (left) introduces the first session



L-R: Renu Gupta, John Moon, Nikolai Lyngo, and Niels Kirk



L-R: Tony Durrant, Richard Norris, and Kevin Price, with Neil Fairnie at the lectern



L-R: Raman Lakani, Narsi Ghorban, Daniel McKeown, Rebekah Boston, with Raymond Burke at the lectern



L-R: Raman Lakani, Narsi Ghorban, Daniel McKeown, Rebekah Boston, with Raymond Burke at the lectern



L-R: Carolina Coll, Roger Essen, Franco Uliana, and Gavin Ward

EVENTS: Upcoming events 2017

24 - 26 July 2017 (Austin, Texas, USA)

SPE/AAPG/SEG Unconventional Resources Technology Conference

Shale plays continue to hold a significant place in the world's energy future. URTeC is the only event that brings the entire asset team together under one roof to connect on all things unconventional. With 2,500+ attendees, 293 technical presentations and 125 exhibiting companies in 2016, URTeC continues its success as the premier science-based conference and marketplace for unconventional exploration, drilling and production ideas and technologies.

For more information, and to register: <http://bit.ly/2pUCCbL>

26 - 28 July 2017 (Xi'an, China)

SPE Workshop: Effective and Efficient Development of Fractured Carbonate Reservoirs

This workshop will contrast challenges, techniques, methods and technologies applied in fractured carbonate reservoirs, with special attention to the effects of vugs and karsts, on well location and design and on enhancing reservoir productivity and recovery.

For more information, and to register: <http://bit.ly/2rPHxv4>

29 - 31 Aug 2017 (Denver, Colorado, USA)

SPE Workshop: Distributed Fiber-Optic Sensing for Well, Reservoir and Facilities Management**Workshop Objectives**

This workshop, reviews of distributed fiber-optic sensing case histories and mature development projects will provide a focused look at the application of this technology to better optimize well and field performance. Session Topics:

- Interpretation of flow using DAS and DTS
- Infrastructure and reservoir geomechanical integrity
- Intervention-based distributed fiber-optic systems
- Decreasing installation risk
- Improving system reliability

For more information, and to register: <http://bit.ly/2t96Plk>

31 July - 1 August 2017 (Kuala Lumpur, Malaysia)

SPE Workshop: Sand Management - Holistic Strategy Implementation to Maximise Business Value**Workshop Objectives**

The workshop aims to gather practitioners and managers for a holistic discussion on sand management including, sand production physics and latest techniques, and best practices in implementation and monitoring while maintaining a keen eye on value. Additional discussions on remedial and retrofit technologies, both downhole and at the surface which have been deployed successfully within the region and globally, will be included. This workshop is an open sharing forum with discussion of experiences, solutions, best practices and lessons learnt to meet the industry's immediate and longer term needs.

For more information, and to register: <http://bit.ly/2sLhwvb>

5 - 8 September 2017 (Aberdeen, Scotland)

SPE Offshore Europe 2017

SPE Offshore Europe is recognised by offshore E&P professionals as Europe's leading E&P event. Attending will ensure you are up to date with the most significant technologies and can connect with a global network of 50,000+ attendees. Engage directly with technical experts from more than 1,000+ suppliers on the exhibition floor, from international market leaders to new innovative technology companies, to source and compare effective solutions. Expand your technical knowledge with exceptional insight and best practice in the industry's largest free to-attend Conference.

For more information, and to register: <http://bit.ly/2si4hp8>

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Jane Doe: More than 25 year's experience with global projects. Offices in London, UK. We specialise in oil & gas project management.
Call us: +44 (0)123456789 janedoe@abc.com

John Smith: Experts in field development planning for the oil & gas industry. We understand your business. Specialist Engineering
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