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Why explorers want drillers to go bust

What can we learn from CRINE

Using costs to predict the oil price

Knowledge process outsourcing –
viable for oil and gas?

Outsourcing the exploration department

The plight of young professionals

Event Report, Cost Reduction in This Era, Friday, June 5, 2015, London

Special report

Cost Reduction in This Era

Friday, June 5, 2015, London



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Finding Petroleum's conference in London on June 5 2015, "Cost Reduction In This Era", stole its title from a UK initiative to reduce operations costs of the 1990s, "Cost Reduction In the New Era" (CRINE).

Dr Rex Gaisford, who started the CRINE project in the 1990s, also spoke at the 2015 conference. He said that when he came up with the name, people said "that's awful we can't have that", to which Dr Gaisford agreed and said "It's so awful, people will remember it."

Finding Petroleum's conference in June 2015 started with an introduction from conference chairman David Bamford, a non-executive director of Premier Oil and former head of BP's global exploration program.

It included Dr Gaisford's story about CRINE and how the learning on cost reduction could be applied to this era; an update from RFC Ambrian on where they think the oil price is going and the factors driving it; two talks on outsourcing, including knowledge process outsourcing from DDC and exploration outsourcing from PDF Limited; and finally a talk from Deirdre O'Donnell of recruitment consultancy Working Smart on how the workforce is affected, particularly young professionals.

I hope a couple of drilling companies go bust

I hope a couple of drilling companies go bust to encourage the others," said Dr David Bamford, conference chairman and a non-executive director of Premier Oil

Drilling rig rental costs ('day rates') have kept high probably longer than they should have done, given that the oil price started dropping in June 2014, and you would expect the drilling rig rates to go down in step with the oil price.

But by the day of the conference (June 5 2015), "day rates are plummeting for all sorts of rigs especially deepwater rigs," said David Bamford, chairman and producer of the Finding Petroleum "Cost Reduction in This Era" conference in London on June 5 (and a non-executive director of Premier Oil).

"My comment is, 'at last, hoorah'".

"I hope a couple of drilling companies go bust to encourage the others."

This is not vindictiveness, the problem with high drilling rates is that they have made it impossible for operators to consider deepwater wells, which means a large amount of prospective parts of the world become off limits, he said.

"Deepwater wells had become uneconomic. When a company drills a well [costing] \$250m offshore North West Africa in deepish water, that is not an economic proposition for anybody."

If drilling costs go down, it will "bring deepwater drilling back into the frame and make drilling deepwater wells viable again, they are not at the moment," he said.

How bad is it?

You can get a sense of how bad this oil price crash is, by comparing the current crash with the last three (1985-86, 1997-98, 2008-2009), with graphs published by BP showing the percentage drop in price over time, from 1 month to 21 months after the previous peak.

The graph shows that the 1997-98 crash was actually the least severe, in terms of how low and how fast the price dropped. However this might have been the crash with the biggest impact on the industry.

Mr Bamford said that this was the crash "I remember best, because I was most immersed in it," he said. "That led to the demise of Amoco, Arco, Texaco, Fina, and Elf."

"[From] where we are now, you cannot predict where we're going to finish up. So there's a lot of uncertainty in several time scales."

High costs

The oil and gas industry had problems with return on investment before the oil price started to sink. "Investors have become exceedingly sceptical about our sector because they lost money," he said.

"The North Sea was and is threatened by high costs. Exploration success is failing around the world,

With oil and gas development projects, "overruns and lateness are almost mandatory," he said.

"The low oil price presents the need and opportunity to fix some of these things."

With subsurface costs. One rule of thumb is that half of your money should be spent on drilling, a quarter on data (mainly seismic), and a quarter on people costs, known in the industry as 'G&A' (general and administrative), which includes salaries, travel expenses, training and "all that sort of stuff".

This 50:25:25 ratio "works pretty well," he said. If a company has a budget which goes out of line with that, it's "a warning sign".

The industry should look at its habit of making a massive reduction in staff when the oil price goes down, and then a massive hiring when the price goes up.

Perhaps the oil and gas industry would be better if the oil companies were flatter, with less senior executives, and more use of outsourcing, he said.

Watch David's talk on video here
<http://bit.ly/dbcrite>

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This special edition of Digital Energy Journal is an Event Report from our forum in London on June 5, 2015, "Cost Reduction in This Era".

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Event website

<http://www.findingpetroleum.com/event/03df9.aspx>
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Digital Energy Journal

www.d-e-j.com
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www.fuenp.com

What can we learn from CRINE?

The “CRINE” initiative of the early 1990s to reduce costs of North Sea operations, led to a reduction in new project costs of 30 per cent, according to Wood Mackenzie, but the benefits did not last forever. Is this something we can learn from now?

The CRINE “Cost Reduction in the New Era” initiative of the early 1990s led to a reduction in costs of new projects of 30 per cent, according to Wood Mackenzie calculations.



Dr Rex Gaisford

Dr Rex Gaisford, who started and led “CRINE”, said that the benefits probably came as much from a change in attitudes and willingness to standardise, as from anything specific which was done, speaking at the Finding Petroleum forum on June 5 2015, “Cost Reduction in This Era”.

It is perhaps a natural human inclination to always want to do a task differently rather than the same way that it was done last time, but this inclination can make projects much more expensive, he said. CRINE aimed to discourage this inclination.

The main intention behind CRINE was standardisation, “which should put quality up because you're not experimenting all the time, you're using tried and tested equipment. [working with] people who've been through the processes before,” he said.

CRINE focussed on mainly project developments and drilling to a lesser extent.

Following his work, Dr Gaisford was awarded a CBE (Commander of the British Empire) in 1995.

Project managers

The inspiration for CRINE came from Dr Gaisford's experiences in the mid-1980s, working in Aberdeen as a project manager for oil company Amerada Hess. “I was determined I was going to change the way things were done, there was no other way to get costs under control,” he said.

“I completely and utterly failed. The job came out on time and on cost, but it wasn't done in any different way than the way it was done before, by beating people to get things done on time, which is an exhausting process and not a repeatable one.”

“In that process I learned in quite a lot of depth why things in the industry were going wrong.”

“The reason I failed to change the mould was cultural. The oil and gas industry has an amazingly robust culture. I was the project manager, and I couldn't change anything. I couldn't change the way things were being done because

‘that's the way it's done, boss.’ You can have meetings and argue and insist, then nothing happens.”

“To test this hypothesis, on the next project I took on the entire personal responsibility, for off-shore cranes. Why? Because the simplest system we put on a platform in operational terms are the cranes. They sit there, lift stuff, swivel, drop stuff. It's the same whichever platform you are on. Therefore they should be standard.”

“I bought the cranes on a very clear requirement, but according to the manufacturer's specification.”

“I went through hell with my engineering contractor, my engineering team on the project, the construction people, the operations people, everybody you can think of wanted to change things. I refused to let anybody near it, no-one was allowed to interfere. They all predicted failure, ‘it won't work.’”

“At the end of the day, those cranes were bought as a manufacturer's standard piece of equipment. They were landed and installed on the platform, operated successfully and as far as I know still going today.”

A luncheon

“When I got to the next project I thought, ‘there has to be a better way of achieving this’.”

“I invited all the project managers in the North Sea to a luncheon. Rather than discussing detailed current issues as we often did. I suggested, that we examine the whole N Sea problem and see if there was a way that we, the people supposedly in charge, could fundamentally affect the outcome.”

“I wasn't confident we could, but I thought I'd got the right people together to discuss it.”

“We peeled out of the hotel finally at 8.30 in the evening having been discussing it the entire day.”

“I said, ‘if we're going to get this going, this isn't just a business of working out a few new ways of doing things, this is a matter of winning hearts and minds, this is a cultural change.’”

“I suggested that to make a step change of this sort, it would have to have a “name” - people have got to be able to talk about it as being “something”. I told them that I had decided to call it ‘Cost Reduction Initiative in the New Era’ CRINE.

“Everyone present thought, it awful. I agreed, but pointed out that it was so awful people

would remember it and that as ‘we were all project people, we know that if we're going to achieve anything, what we're trying to achieve has got to be clearly specified and there's got to be a clear date and a clear deliverable.

“I suggested that the deliverable is a CRINE report with recommendations, and a conference to launch the report in December next year.”

“They all fell about laughing and said, ‘there's no way that can be achieved.’”

“I said, ‘well actually I've booked the Queen Elizabeth II Conference Centre in Parliament Square (London) for December 1993.’”

Report

The ‘CRINE Report’ was published in December 1993, on the day of the London conference.

“The content is, I think, fairly good, all the things suggested in these 50 pages, they all add value,” he said. “But the fact that the whole industry was involved in their production was the important thing.”

“It didn't stop at just the initial bunch of project managers, but involved all the people that operated, owned and interacted with those and future projects. This included all the non-operating partners of those companies and all the other myriad of companies working in the North Sea including the contractors, service companies, the suppliers, manufacturers, engineering companies.”

“We built a CRINE structure comprising overall co-ordination through a steering group and then individual elements addressing each of the issues we discerned were necessary. They all contained members from each of these segments of the industry.”

Conference

The conference to launch the report “was almost a religious occasion, we had 1500 people in the hall, they were all CEOs of major oil companies from all over the world, ministers of energy from all over the world. The place was absolutely packed,” he said.

“It was so overbooked that I had to book another conference the week after in Aberdeen for another 1500 people, who all wished they had been able to get a seat on the first one. We'd won the hearts and minds.”

Practise

Putting CRINE into practise was another matter.

Dr Gaisford was reminded of Machiavelli's quote, "There's nothing more difficult or uncertain in its success than to take the lead in introducing of a new order of things because the innovator has for enemies all those who have done well under the old conditions and lukewarm defenders in those who may do well under the new."

"We had to defeat the enemies and win over lukewarm defenders," he said.

12 months after

We were fighting all the time an uphill battle to get the ideas understood and accepted. Every single thing we tried to do was a battle. That is exhausting," he said.

We were talking to people of repute, people across our industry. A lot of them older than I was in those days. "I remember one guy, at a conference toward the end of my involvement with CRINE, he said "it's all rubbish, you'll

never get it to work because people won't play ball."

"I said, 'you come back in two years and if you've still got that attitude you won't be in our industry any longer, because the world has changed, everyone is onside'".

Dr Gaisford stood down from the Chair of CRINE in 1994 to become an Exec VP Western Hemisphere for his company and spent the next 5 years building business opportunities for his company including a new role in Brazil.

For CRINE, I was right for the next few years but sadly, slowly over time things in the UKCS have reverted to where they were before.

"If the UKCS industry is going to do a similar thing again, I advocate that it follows a similar track to CRINE, but it has to be more careful about guarding the result it achieves. "The policing of CRINE afterwards, we didn't do well enough."

There was a successful effort to develop standard construction contracts, but even this has now reverted to old ways with each project/company having its pet "standard".

Do it today?

The conditions which led to CRINE were "exactly the same as we're facing today. Prices were going sky high, organisations were getting fat, and people were doing things in rote fashion because it had always been done that way," he said.

The industry could get a lot out of repeating this process, but it must "just be tighter on policing it afterwards," he said.

Watch Rex's talk on video and download slides here

<http://www.findingpetroleum.com/video/RCM-Consulting-Ltd/Rex-Gaisford/1350.aspx>

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Using costs to predict the oil price

People usually predict the future oil price starting with an estimate of what OPEC wants the price to be, said Stuart Amor of RFC Ambrian. But it might be better to start by looking at industry costs.



Stuart Amor

Microeconomics suggests that over the long term, the oil price should cycle around the marginal full cost of oil supply. The full cost of oil supply includes all capital costs, operating costs, taxes and the required return on capital.

Stuart Amor, Head of Oil and Gas Research with corporate advisory company RFC Ambrian explored this theory in his talk at Finding Petroleum's forum on June 5 2015, "Cost Reduction in This Era".

Upstream capital costs doubled from 2004 to 2008, according to IHS Cera's Upstream Capital Cost Index. From 2000 to 2004, and after 2008, they were fairly flat.

You can see a similar shape in the graph of long dated Brent oil prices (which reflect the marginal cost of oil supply), fairly flat until 2004, then a big jump to 2008, and fairly flat after that, he said.

RFC Ambrian defines the marginal cost as the cost of the most expensive 10% of global non-OPEC production.

Looking over back over 20 years, you can see

quite a close correlation between the Brent oil price for 3 years in the future, and the supply costs for the most expensive 10% of production, he said.

"The long dated price is the market's best guess at the marginal cost of oil supply, this is the long term structural component of oil prices," he said.

Many market commentators work on the basis that the price will end up where OPEC wants it to be, he said.

But if you work on the basis that the long term oil price will be equal to the marginal full cost of production, it means that OPEC actually has very little influence in the long term, because most OPEC production is low cost. By effecting the short term supply/ demand balance OPEC has significant influence over whether the spot price trades at a premium or discount to the long dated contract, he said.

RFC Ambrian estimates that the marginal full cost of oil supply is around US\$80/bbl and they forecast that the oil price will be between \$70/bbl and \$90/bbl in the long term, he said.

The long dated Brent contract is down to around US\$75/bbl from US\$100/bbl just 12 months ago. This is because some high cost projects have been delayed or cancelled and because oil service costs are lower than they were.

Current overcapacity in the oil service sector, is now putting downward pressure on the rates the service sector can charge upstream companies.

Short term

Over the shorter term, the market focus has been on how fast US shale oil producers will reduce production. "We thought US tight oil would peak in June 2015 but it actually peaked in April."

Shale operators have been leaving drilled wells uncompleted. "Operators are hoping for lower completion costs later in the year. And they don't want to lock in a loss," he said.

If OPEC's main short term aim is stopping US tight oil, it will probably wait a little longer, perhaps until early 2016, before reducing production, he said.

OPEC has a track record of being slow to react. "In 1985 – 1986, OPEC didn't act until 13 months after the cycle [started]. We are only 10 months into this cycle" he said.

OPEC

Mr Amor was asked if he thinks Iranian production could change the numbers.

Mr Amor replied that they model on the basis that all OPEC production (including Iran) will be steady, so if Iran starts producing more, all other OPEC members will reduce production to make space. This is not too hard. "There are a few other OPEC countries that I think will struggle to meet their quota levels," he said.

For example, "crude coming out of Iraq will struggle in the near term. Iraq isn't paying oil companies what it needs to pay them. For every country that might come up, there's always one that might come down."

Mr Amor was asked how accurate he thought production data actually is, considering that some commentators believe that Middle East countries lie about their production.

"There are people counting ships in and out and making assumptions of how much oil is there," Mr Amor replied. "It is probably reasonably accurate."

How low can it go?

RFC Ambrian's estimate of the 'marginal cash cost of oil', how much it costs to keep production going (not including exploration and development expenses) is roughly \$30, he said.

However oil and gas companies could take some comfort from knowing that the oil and gas price did not approach this cash cost in previous crashes, except for 1998.

Investors

Mr Amor was asked about the current investment attitudes in Wall Street, who seem to prefer US onshore operations over deepwater.

"Investors are investing in growth. Shale has been a growth story and that's what they are investing in," he replied. "But the growth has come from debt. It is not generating enough cash flow to grow itself at the rate it's been growing."

Watch Stuart's talk on video and download slides at

www.findingpetroleum.com/video/1302.aspx

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Knowledge process outsourcing – viable for oil and gas?

We all understand that it is possible to outsource simple tasks to lower cost countries and save money, but companies usually think that tasks involving more knowledge work are better kept in-house. Simon Bates of DDC Group believes outsourcing knowledge work is also worth considering.

Outsourcing work to a lower cost country is normally only considered for simple, routine tasks. But some companies are outsourcing more knowledge intensive tasks as well, said Simon Bates, Project Manager and Advisor with outsourcing company DDC Group, speaking at the Finding Petroleum forum on June 5 2015, "Cost Reduction in This Era".

The term 'knowledge process outsourcing' (KPO) is used when the outsource workers are developing and using specialist knowledge as part of their work, he said.

Examples of more knowledge intensive work that can be outsourced are research, indexing, compliance checking, data collection, management and cleansing, he said.

Meanwhile you keep all your company's core expertise and creative work at home, he said.

The cost of doing outsourced work is typically 30 to 75 per cent of doing it in-house, he said.

"KPO doesn't directly solve industry problems, but it does have a significant impact on operational cost and ability to do new things," he said. "It releases time for in house experts to do more on what drives the business forward."

As part of the process of outsourcing, you can also re-organise the way the task is done, he said.

And of course you won't need to provide office space, training and employment benefits for your own staff, he said.

Examples of KPO

DDC offers a KPO service for an oil and gas drilling service company.

This company receives reports about drilling bit performance, provided in many different data formats, often including different acronyms in the text.

They are not easy to enter into a computer, but it is vital that the data in them is kept, to keep track of how different bits perform and what has been used in each well. The data is also important for future sales.

Before working with DDC, the company would usually input reports into the database selectively and do it in a rush job. There would be a stack of reports with the data never captured.

Converting a report sent from someone around the world (perhaps also in a rush) into a standard structured format is not good use of an engineer's time or mental energy. It is not particularly difficult work but not very rewarding either.

Now the reports are sent daily to a Knowledge Process Outsourcing (KPO) team in the Philippines, via a secure server. They are transcribed and input into the central knowledge database with a guarantee of accuracy and short turnaround time. "Nothing gets left aside or rushed," he said.

If something is missing from the data, or doesn't seem to match, the outsourcing company staff can contact the person who sent the report and request further information.

"They are applying a great deal of understanding to the process, which they receive through training from the customer," he said.

DDC also works with a global academic publisher, to check and index medical research papers before they are added to its "Embase" database, and check and index geological papers for its "Geobase" database.

For the work on the Embase medical database, DDC Group employs around 40-50 people

with medical expertise (some of which are doctors), to index peer reviewed articles. "This team's job is to read through concepts within the articles and then index or apply index terms to the articles so when they are made available from the publisher's website they can be retrieved by global industry professionals," Mr Bates said.

For the work on Geobase, the geological database, DCC has recruited a team of engineers and people with a geological background to index articles.

If you consider the amount of technical expertise required to check technical papers, this should answer concerns that you can't outsource complex technical tasks, as many people believe, he said.

The service is also offered to a US freight company, where the knowledge team provide document compliance checking services.

Other work which could be outsourced include paper document scanning (including well logs) and digitisation, which could be done by a team of geophysicists, who would

know (for example) how to get the projection right.

You could also outsource personal assistance. "An engineer could say, I spend half my time pulling together data from various sources before I can even start to do my job!" The natural answer is to get a research assistant. But it doesn't have to be someone sitting next to you," Mr Bates said.

"The assistant can communicate with the engineer, the engineer is able to train them."

You could outsource data analytics tasks, which can be better performed by someone objective rather than in-house experts who might already have expectations of what results they will see.

Setting it up

The pathway of setting up outsourcing starts by working out which tasks you want to outsource and documenting how the tasks should be done. The outsourcing company can provide assistance with this.

When it comes to the level of guidance given by clients, "some businesses can come to us

with a manual already written, some customers come to us with nothing, and say, 'this is what we do, can you help,'" Mr Bates said.

"I've been involved in teasing out information so I can write instructions to get the process going, which we then refine over time," he said.

The KPO company finds suitable people, trains them and sets up the software systems to do the work. This is followed by testing and piloting until everybody is happy.

KPO solutions can have anything from one person to thousands, he said.

Companies continue as they have done before, but technical data capture is given to an outsourced team.

Watch Simon's talk on video and download slides at

www.findingpetroleum.com/video/1259.aspx

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PDF Limited - Outsourcing the exploration department

Dr. Mark Enfield, Managing Director and Founder of PDF, speaking at the Finding Petroleum “Cost Reduction in This Era” event on June 5, discussed how outsourcing oil and gas exploration can work. PDF has been providing an outsourced exploration function to oil and gas exploration companies for 21 years.



Dr. Mark Enfield

With the recent fall in oil price, real pressures are being placed on the exploration industry to reduce costs and gain efficiencies, all in a climate of increasingly hard-to-find reserves and requirement for technical innovation.

ceived need for efficiencies. The talk then went on to explore outsourcing's role in meeting the current challenges.

More than traditional consultancy

Dr Enfield set out the standard model for the exploration department, which is to have in-house staff, or to have out-of-house staff working through one of a number of consultancy models.

“There are pros and cons to both in-house staff and out-of-house staff (consultants). Advantages of in-house staff include familiarity, corporate alignment, knowledge retention and certainty of capacity, but with downsides such as higher cost, less flexibility and higher G&A expenditure,” he said.

“With consultants, advantages include, for example, lower cost, greater scalability and the potential for more efficient working through focussed application of specialist skills and knowledge. But disadvantages may include potential loss of knowledge/lack of project continuity and potential difficulties with getting answers that address corporate objectives.”

Dr Enfield argued that by “fully outsourcing the exploration department in a best practice manner it is possible to leverage the main advantages of both the consulting and in-house models whilst avoiding most of the disadvantages”.

Outsourcing in this way “achieves the benefits of efficiency and scalability, bringing to bear the necessary specialists when they are needed in a very cost effective and focussed way”.

Making outsourcing work

The structure and governance of an outsourcing relationship are crucial, said Dr Enfield “If we don't set this up right, it's never going to work”.

He went on to explain that the overall spirit of the outsourcing partnership “needs to be captured within the agreement, just as much as the finer contractual details”. It is also important to foster a relationship based on mutual trust and respect, “it is a strategic partnership - the intention is to operate seamlessly in an open and collaborative environment for the success of the E&P company”.

Many companies outside of oil and gas are successfully using the outsourcing model as a key

part of their business strategy. Dr Enfield described how “exemplars of outsourcing excellence”, such as Toyota, achieve success by “only outsourcing to trusted suppliers who have proven an ability to deliver on time, with an overriding preoccupation with quality and who can deliver at a competitive price”.

The company demands that outsourcing suppliers are continuously innovating and generating efficiencies, he said - “they've got to have some ideas of their own”.

At the same time it is important that the outsourcing provider is willing and able to adapt to the client's procedures and working practices. “The exploration function should only be outsourced to contractors who can demonstrate all of the above.”

Another part of the key to success is for the company to work “very closely with their outsourcing partners and to respond to supplier concerns with integrity and mutual respect.”

The relationship is optimised where the day-to-day management of the outsourced exploration department's work is also outsourced to the trusted provider. This equally liberates the client company executives from time-consuming ‘micro’ management, allowing them to focus on their core business function.

Exploration outsourcing

Dr Enfield likened an exploration company to a ship where the exploration department is the engine room, driving the vessel forwards. In this analogy the direction (and speed) of the ship is the corporate strategy, with the direction set by the captain - the company's executive management and board.

The exploration department are “more than just ‘G&G’”, with broader responsibilities including the addition of new assets, business development and the running of the company's asset portfolio - “they are the engine room for corporate growth”. The outsourced exploration department model provides access to a bigger ‘engine’, allowing companies to “punch above their weight” and compete on a much larger playing field than the company's size might otherwise suggest.

Dr Enfield went on to explain that the lifecycle of an outsourced exploration department partnership is not fixed at the outset, but the nature of the re-

While outsourcing is generally considered as being a means to reduce costs, it can be more than that.

Exploration consultancy P.D.F. Limited, based in Oxfordshire, UK, has been providing exploration outsourcing to oil and gas companies for 21 years, both as a traditional consultancy - where individual tasks are outsourced - and as an aligned strategic partnership, the “Outsourced Exploration Department®”, where the full exploration function is outsourced.

Dr Enfield outlined the importance that PDF places on long term relationships, the application of experience to exploration success, the importance of full spectrum capability and the overriding imperative of quality at every step: “quality must run through everything – quality of thought process, workflows, management and, critically, people”.

PDF have operated discreetly throughout their history and have never divulged their client nor project identities, he said. “Discretion and confidentiality are our abiding principles and we believe are critical in maintaining longer-term relationships - a key issue in, and requirement for, successful outsourcing”.

PDF have worked with companies of varying scale and type, ranging through from privately held, to smaller-listed and medium-sized independents, to majors, super majors and governments. Dr Enfield summarised some of the success metrics of PDF's track record, showing how the company has helped its clients and strategic partners to grow and achieve exploration success through transformative events such as discoveries, new venture value realisation, money raises and IPOs.

Within the theme of cost reduction, Dr Enfield discussed the recent change brought about by reduced commodity prices and how this has brought uncertainty into the industry and a per-

lationship is carefully structured over a multi-year cycle to achieve long term stability and to prevent surprises.

Importantly, flexibility is built in because change is recognised as an almost inevitable feature of any company's growth and the beginning, middle and end phases are carefully designed to achieve certainty for both parties throughout the lifecycle – again Dr Enfield emphasised “no surprises”.

“Outsourcing of the core exploration function is a big decision for companies to make, but is perhaps highly relevant in today's low oil price en-

vironment,” Dr Enfield said in conclusion.

“Alignment is a crucial feature of good outsourcing and is gained by the structural setup of the arrangement/strategic partnership.”

“Change is inevitable. It should be expected and anticipated, as a natural part of success, by being addressed in the contract for a “no surprises” functioning of the relationship.”

“Outsourcing, done well, is value adding and realises cost benefits including reduced corporate G&A (bringing G&A down to less than 10% in

best practice outsourcing).”

“Successful outsourcing of the core exploration function requires a supplier of sufficient scale with a full spectrum of capabilities that brings to bear a highly focussed, ready-made exploration team.”

Watch Dr Enfield's talk on video and download slides at www.findingpetroleum.com/video/1298.aspx

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The plight of Young Professionals – will history repeat itself?

There are growing fears amongst our industry's Young Professionals concerning job security as oil prices dramatically plummeted from last year's peak. Working Smart's Managing Director, Deirdre O'Donnell addressed these concerns and examined the current workforce demographics and the challenges we are faced with in the next upturn.



Deirdre O'Donnell

A recent survey of UK oil and gas Young Professionals was undertaken to assess their views and concerns relating to the low oil price and how the industry could support their careers during this down-

turn. The survey was undertaken by SPE, PESGB, and AFES Young Professional (YP's) members with less than 5 years' industry experience and the results were presented to a group of about 100 young professionals at the DEVEX 2015 conference in Aberdeen in May. Deirdre O'Donnell chaired this YP session.

Speaking at The Finding Petroleum forum on the 5th June in London, Ms O'Donnell presented some of the survey results and stated that “There was a consensus amongst our young professionals who felt there was a threat to job security and restrictions in job opportunities.” Although the results showed that only 3-4% had received ‘at risk’ letters from their employers and only 7% had been made redundant, ‘Job Security’ was a major concern for 80% of the respondents. Ms O'Donnell feels that employers need to be more supportive and transparent in dealing with YP's with regard to job stability.

Today graduates leave university with large debts in the region of £30-£40K so securing and maintaining employment is vital. Ms O'Donnell feels that the industry should be doing more to support them.

Mentoring

Many of the respondents expressed a need for greater support through mentoring by more experienced staff, but with the layoffs many senior employees have seen an increase in workload and have restricted time. Also there was a feeling that YP's were expected to undertake work that surpassed their current abilities and that we have a serious need for effective mentoring programs.

Working Smart conducted research of people aged 55+ regarding retirement plans, mentoring etc. 76% said they currently mentored staff. 24% said they did not, however 85% of these stated that they would be interested in mentoring. Of those that mentored, only 9% did so through a formal mentoring scheme and 59% through team participation. Ms O'Donnell feels that “You get the impression that some companies merely pay lip service to mentoring.”

The majority of respondents said they expect to retire at 65 but 80% stated they were happy to work 3+ days per week after their retirement age. “We as an industry need to take advantage of the willingness of our semi-retired people to mentor”, said Ms O'Donnell.

With many of the 55+ generation retiring, our future industry leaders will come from the 36-45 age range (the most sought after). However, industry surveys typically show that this demographic represent only 9%-12% and it is reported that we need 60% more leaders by 2017. As our mid-tier technical staff take on more of

our managerial roles, our younger generation will have to step up. The question that arises is “are they equipped, have we provided the breadth of experience required and more importantly what are we doing to build the pipeline of future YP's?” she said.

“All senior level staff should be involved in mentoring, especially those over 55. We have to capture this knowledge before they leave our industry.” said Ms O'Donnell.

1999/2008/2014 Downturns

Prior to 1999, most functions were managed in-house by oil and gas companies. Ms O'Donnell explained “the age of the ‘Flexible Organisation’ which was highly prevalent in the car and other industries had escaped our sector. “When oil fell to \$9 in January 1999 we had a bit of a wake-up call,” she said. “As mergers and acquisition progressed, organisations looked to reduce costs through the outsourced model which provided numerical, financial and functional flexibility. Functions that were deemed non-core were outsourced.”

Oil and Gas companies dramatically reduced the number of ‘first tier contractors’ who took on the responsibilities for many of the second and third tier suppliers. There was an emergence of consulting houses and a shift in how they were contractually engaged and paid. It was an era of constant change!

Before this crash, many oil majors were running 2 year graduate training programs, where people

Cost Reduction in This Era

would spend 6 months in different departments, such as field, geoscience, operational, commercial... “These programs delivered very well rounded individuals” she said.

“After the crash, we experience a major decrease in graduate intake as oil and gas companies hired for their core activities only.” she says. Many technological research and development (R&D) projects were abandoned, outsourced, or offloaded to service partners. Training and staff development budgets were also severely cut. The industry during this period lost a great deal of experienced people who never returned and the universities saw a major decline in the number of students entering science and engineering. Overall industry recruitment remained low until 2002/2003, leading to today’s low mid-career demographic.

The years 2003 to 2008 saw a steady improvement in graduate recruitment and training and development spend, and overall good-times prevailed! The pipeline of young geoscientists and engineers was being replenished, albeit slowly, but progress was being made. Some initiatives as to how to engage more effectively with young people were also coming to the fore.

“However, the global economic downturn in 2008 saw tumbling oil prices and the commencement of another cycle of layoffs and cost cutting measures” she says. In January 2009, an

estimated 100,000 staff were laid-off from the oil and gas industry as a whole in the US and this trend was reflected elsewhere. 2008 was another poor year for graduate hires across all industries with a 28.2% decrease in graduate intake across the oil and energy sector.

“From 2010 to 2014, Working Smart witnessed a vibrant recruitment market for experienced personnel, especially for consultants” she says. Competition was fierce and with it came escalating day rates, salary packages and a requirement for strong negotiations.

“The current downturn appears to be more characteristic of 1999.” she says. The service industry has been badly affected, with reported costs cuts of 45%, and layoffs in the region of tens of thousands for some of the larger players. Many of Working Smart’s 3200+ registered consultants have already adjusted their day rate expectations – some by as much as 35%.

Industry resource challenges

Ms O’Donnell presented many of the resource challenges we as an industry are faced with, from tackling our negative perception amongst our youth; how to attract and retain or graduates, to harvesting the knowledge of our elder demographic who have retired or are due to retire.

“We have been aware for the last decade of our skill shortage problems” she says. “As we have experienced over the last 3 downturns, people leave our industry, graduate intake declines, numbers entering our universities decline and so the cycle continues.”

However, many positive initiatives have emerged since 1999 – we have seen greater collaboration between industry and academia, improved outreach programs and industry focused degrees etc. and most recently industry taking a proactive approach in providing hands-on training free to graduates. For example Romanian seismic contractor Prospectiuni has organised graduate field trips, teaching them the basics of geology and geophysics and how to conduct a seismic survey, with 20 - 40 students for a 6 week stretch, with access to their equipment and experienced personnel.

Research shows that we still have many hard to fill positions and we are faced with a lack of experienced leaders for the future. The question is, are we doing enough? “There are many potential solutions but a coherent industry approach is needed. Yes this great industry will survive but at what cost? Devising a sustainable resource strategy is now critical” she says.

Watch Ms O’Donnell’s talk on video and download slides at
www.findingpetroleum.com/video/1335.aspx

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Attendee list – 'Cost Reduction in This Era' at The Geological Society in London Friday, June 5, 2015

Christian Bukovics, Partner, Adamant Ventures	Nicholas Daly, Managing Director, Eutelsat UK Limited	Ramesh Shukla, Shareholder of exploration companies
Chris Beech, Business Development Manager - Capital Projects, Amec Foster Wheeler	Salar Golestanian, Managing Director, Finity Asset	Riley Smith, Group Manager, OPC
Hugh Ebbutt, Associate Director, AT Kearney	Paul Bannister, Vice President A&D, FirstEnergy	Mark Enfield, Managing Director, P.D.F. Limited
Derry Vaughan, Autodesk	Alexandra Kenna, Managing Director, GEOSERVE LIMITED	Paul D 'Arcy,"Director, Technical Services, Europe, Africa, CIS & Middle East", Paradigm
Dominic Thasarathar, Strategic Industry Relations, Autodesk	Duncan Clarke, Chairman of the Board, Global Pacific & Partners	Robert Parker, Consultant
Lili Chahbazi, Bain & Co	Simon Berkeley, Principal, Halliburton	Jonathan Popper, Vice President Business Development, Petrofac Integrated Energy Services
Mark Bexon, Director, Bexon Search & Service	Wally Jakubowicz, Managing Director, Hampton Data Services	Greg Coleman, MD, Petromall Ltd
Philip Leijten, Manager Group Strategy, BG Group	David Harper, Principal Consultant, Harper Associates	Rex Gaisford, CEO, RCM Consulting
Philipp Chladek, Analyst, Bloomberg Research	Norman Hempstead, Director, Hempstead Geophysical Svcs	Mike Rego, Managing Director, Rego Exploration (Oil & Gas Consultancy Services)
Holly Mcdonald, Category Manager Seabed and Marine Seismic, BP Exploration Operating Co. Ltd	Bill Green, Account Director, Hermes Datacomms	Stuart Amor, Analyst, RFC Ambrian
Nick Wayth, VP Competitor Intelligence, BP plc	Alexander Chalke, Managing Director, Hydrocarbon Search Partners	Robert Waterhouse, Director, Roshia Resources Ltd
Emeka Anosike, Share Dealer, Capita Share Dealing	Bani Norouzian, Global Marketing Analyst, HIS	Ian Hutchinson, Principal Geoscientist, Sasaol
Jocelyn Lomer, Managing Director, Cereno	Anis Chaghal, Senior Principal EMEA E&P Lead, Infosys	Paul Day, Director / Consultant, SCGIS Ltd.
Sean Barber, Business Development Manager, Cereno	Ronald Doherty, Manager Field Developments, Intecsea	Stephen Ward, Head of VMM O&G, Siemens plc
Clare Baldock, Sales and Marketing Manager, CGG	Paul Warwick, Account Director, ISN Solutions	Tony Edwards, CEO, Stepchange Global
Mustafa Elsherif, Sales Manager, CGG	Ian Dring, Business Development Manager, Jackson Oil & Gas	Chris Jones, Senior Consultant, StrategicFit
Sean Waddingham, Data Library, CGGVeritas	Ravi Chandran, Director, Kalki Consultants Limited	Rosemary Johnson Sabine, VP Exploration, Tethys Petroleum
Micky Allen, Consultant	Peter Allen, Consultant, Layla resources	John Bridgeman, Research Analyst, The EIC
Christopher Roberts, Consultant	James Pope, LR Senenergy	Brian McBeth, Managing Partner, The Oxford Consultancy Group
Mohsen Daneshkhah, Chairman & Managing Director, Dana Geophysics Co.	Brian McCleery, Director, M2C Energy Advisers	Simon Cushing, Head of Advisory Services, Venture Information Management
Simon Bates, Project Advisor and Manager , DDC	Charles Lesser, Managing Director, Macquarie	Katerina Gunningham, Principal Consultant, Wipro Technologies
Bob Tyler, Director of Business Development, DDC FPO	Ed Evans, MD, NDB Ltd	Chris Gumm, Business Development Manager Automation Business Unit, Wood Group Mustang
Esther Hayes, Solutions Director, EnergySys Limited		Andrew Gilmore, Business Development Manager, Wood Group Mustang
		Steve Esau, Analyst, Xynteo

What did you enjoy most about the event?

<p>An interesting topic and a challenge to the industry as a whole. The future of E&P in the UK is at stake and another generation of young geoscientists and engineers will be lost.</p> <p><i>Ed Evans</i></p>	<p>Networking, and gaining an insight into other less familiar aspects of the industry.</p> <p><i>Rego Exploration</i></p>	<p>Interesting range of talks from different perspectives.</p>	<p>Very interesting & informative sessions by Stuart Amor & Mark Enfield. Excellent slides, which were very thought provoking.</p> <p><i>David Harper, Harper Associates</i></p>
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