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2016 was a year of disruption; the UK’s ‘Brexit’ vote and the outcome of the most contentious US election in decades are just two examples. It should perhaps have been obvious that a year that started out by taking David Bowie from the world was not going to pass by without making a mark, but after optimistic reports of price recovery in (as it was then) the ‘New Year’, few expected the price of Brent Crude to plunge as low as it did in February (beneath US$28.00/bbl).

Thankfully, despite apparently intractable problems with oversupply and economic uncertainty, prices did recover somewhat. They were further boosted in November with a landmark (and largely unanticipated) deal between OPEC members and non-OPEC producers, which saw Saudi Arabia reclaim its role as global swing-producer. After production cuts of roughly 1.2 million bpd were agreed to, prices rose rapidly back above US$50/bbl and have stayed around the US$55/bbl mark ever since. So, what does this mean for the upstream industry in 2017?

Hopes for a further jump in prices are probably unrealistic. According to Forbes, the main problem now facing the industry is massive global storage inventories. ¹ Oversupply in 2016 (and earlier) saw so much surplus oil produced that millions of barrels-worth of crude are now sitting around waiting to be used. If OPEC’s production cuts are followed to the letter, and maintained beyond the six-month term of the agreement then these inventories could be reduced to a level that would support a further price recovery (perhaps even to the US$55/bbl mark ever since. So, what does this mean for the upstream industry in 2017?


2. Ibid.
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Deloitte: Oil prices expected to grow slightly in 2017

Production cuts by members of the Organization of the Petroleum Exporting Countries (OPEC) and other non-OPEC countries are expected to provide a short-term boost to world oil prices, but the effects will be offset to some extent by increases in production in Canada and the United States. The latest price forecast by Deloitte’s Resource Evaluation and Advisory (REA) group also predicts some weakening of natural gas prices after recent rises caused by the onset of colder weather in much of North America but an improvement in the price of propane as a result of increased processing facilities in Alberta.

“Although we expect some slippage in the actual cuts by OPEC and non-OPEC countries, there should still be enough to bring world oil supply below projected demand this year,” says Andrew Botterill, Partner, REA group. “That means prices should recover somewhat in 2017, but there’s nothing we’ve seen to suggest the industry is on the verge of a return to significantly higher prices any time soon.”

Botterill points to the futures market where there is very little increase in the price of oil as global demand growth is expected to remain relatively flat at 1.2 million bpd. Deloitte’s long-term forecast for oil prices remains unchanged, at US$75 a barrel for West Texas Intermediate (WTI), while prices should reach US$55/bbl this year and US$77 in 2018. But there is some optimistic news for Canadian oil producers, as the recent approvals of Enbridge’s Line 3 and Kinder Morgan’s Trans Mountain pipeline projects mean enhanced access to market for Canadian oil. For 2017, however, the report forecasts an expected average price for WCS of US$53/bbl and US$54 in 2018, while prices for Edmonton Light are expected to be US$69 this year and US$70 in 2018.

USA

According to Reuters, the US Department of Energy has issued a Notice of Sale for crude from its Strategic Petroleum Reserves, with bids for 8 million bbls of light, sweet oil due by 17 January.

The sale is part of a plan to sell up to US$375.4 million of crude in the fiscal year 2017 to fund operational improvements to the infrastructure that holds the emergency reserves.

Moldova

Frontera Resources Corporation has announced that on 2 January 2017, Frontera Resources International LLC, signed a Concession Agreement with the Government of Moldova regarding the exploration, production and development of hydrocarbon resources in Moldova.

Frontera has the exclusive right to explore for, produce and develop hydrocarbon resources within an area comprising approximately 3 million acres situated in the southern portion of the country. The overall term of the Concession Agreement is 50 years from the date of its execution.

Morocco

PetroMaroc Corporation plc has announced that it has completed the disposition to Sound Energy of its 50% working interest in the Sidi Moktar Licenses located in Morocco in consideration for (i) 21 258 008 ordinary shares in the capital of Sound Energy; (ii) granting to PetroMaroc of a 10% net profit interest in any future cash flows from the Kechoula structure within the Sidi Moktar Licences; and (iii) a 5% net profit interest in any future cash flows from structures within the Sidi Moktar Licences other than the Kechoula structure.
McDermott awarded offshore EPCI contract from Saudi Aramco

McDermott International, Inc. has announced a contract award from Saudi Aramco for the engineering, procurement, construction and installation (EPCI) of four jackets and three gas observation platforms offshore Saudi Arabia. The total weight of all structures combined is 11,595 t.

“As the third fast-track jacket contract from Saudi Aramco in the last 18 months, this award is a testament to McDermott’s successful performance on previous fast-track projects for Saudi Aramco,” said Linh Austin, McDermott’s Vice President, Middle East & Caspian. “McDermott’s fully-integrated EPCI solution provides Saudi Aramco schedule certainty, one of their key drivers, while helping them meet their aggressive schedule.”

McDermott is currently executing EPCI work for Saudi Aramco on nine jackets offshore Saudi Arabia, which are expected to be delivered in the third quarter of 2017. The contract award will be reflected in McDermott’s fourth quarter 2016 backlog. Work on the contract is expected to be executed through the fourth quarter of 2017.

McDermott plans to use its Engineering teams in Dubai, Chennai, India and Al Khobar, Saudi Arabia with construction taking place at McDermott’s fabrication facilities in Dubai and Dammam, Saudi Arabia. Vessels from McDermott’s global fleet are scheduled to perform the installation work.

ExxonMobil & Tillerson reach agreement to comply with conflict of interest requirements

The board of directors of Exxon Mobil Corporation has reached an agreement with Rex W. Tillerson, former chairman and chief executive officer, to sever all ties with the company to comply with conflict-of-interest requirements associated with his nomination as US Secretary of State.

Under the agreement developed in consultation with federal ethics regulators, if Tillerson is confirmed as secretary of state, the value of more than 2 million deferred ExxonMobil shares that he would have received over the next 10 years would be transferred to an independently managed trust and the ExxonMobil share awards would be cancelled. The trust would be prohibited from investing in ExxonMobil and the trustee would manage the assets consistent with government ethics rules. Payments to Tillerson from the trust would be subject to the same 10-year schedule that the cancelled awards would have had if they had continued in place.

Tillerson would also surrender entitlement to more than US$4.1 million in cash bonuses, scheduled to pay out over the next three years, and other benefits such as retiree medical and dental benefits, and administrative, financial and tax support. The one-time payment to the trust would be equal to the value of Tillerson’s cancelled shares based on a volume-weighted average price per share. Consistent with guidance from federal ethics regulators, the value would be reduced by about US$3 million.

The trust would include forfeiture rules that would prohibit Tillerson from working in the oil and/or gas industry during the 10-year payout period. The trust rules dictate that in the event of forfeiture, the money would be distributed to one or more charities involved in fighting poverty or disease in the developing world. Neither Tillerson nor ExxonMobil would have any control over the selection of the charities.

The net effect of the agreement is a reduction of approximately US$7 million in compensation owed to Tillerson. Tillerson retired on Dec. 31 with more than 40 years of service with ExxonMobil. Separate to the agreement with ExxonMobil, Tillerson has also committed to the State Department that, if confirmed, he would sell the more than 600,000 shares in ExxonMobil he currently owns.
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Statoil to increase exploration drilling in 2017

Statoil plans to drill around 30 exploration wells in 2017, an increase of around 30% compared to 2016. More than half of the wells will be drilled on the Norwegian Continental Shelf (NCS).

In Norway, the 5-7 well exploration campaign in the Barents Sea is at the core of the activity plan. In The Norwegian Sea and the North Sea, the ambition is to prove near field volumes to prolong the productive lifetime of existing infrastructure and determine the growth potential. In total, Statoil expects 16-18 NCS exploration wells to be completed in 2017. New discoveries are crucial to counteract decline on the NCS.

“The Barents Sea has yielded several of Norway’s most significant oil discoveries in recent years. We are looking forward to test new targets, both in the relatively well known geology around in the Johan Castberg and Hoop/Wisting area, as well as some new frontier opportunities with greater geological uncertainty but also high impact potential. This campaign can provide us with crucial information about the long term future of the Norwegian shelf,” says Tim Dodson, Executive Vice President of Exploration.

Internationally, Statoil’s 2017 exploration drilling activity will comprise growth opportunities in basins where Statoil already is established with discoveries and producing fields, as well as new frontier opportunities.

“Following our take-over as operator for the Carcara discovery last summer, Brazil has become even more important in Statoil’s portfolio, not least on the exploration front. We are stepping up exploration also in the UK, with plans for three Statoil operated exploration wells in 2017,” says Dodson.

Elsewhere, partner operated wells are planned to be spudded in established basins like the US Gulf of Mexico and in new frontier areas like Indonesia and Suriname. Statoil is also partnering on onshore exploration drilling planned in Russia and Turkey.

“The 2017 exploration plans demonstrate our long term commitment to the NCS, while we continue to position the company for global opportunities. If everything goes to plan, we will this year have exploration drilling activity in 11 countries on five continents,” says Dodson.

Petrofac awarded Oman gas project

Petrofac has signed a contract worth close to US$600 million with Salalah LPG SFZCO LLC, wholly owned subsidiary of Oman Oil Facilities Development Company LLC, to undertake the engineering, procurement and construction (EPC) of its Salalah LPG extraction project in the southern part of Oman.

Marwan Chedid, Petrofac Group COO, commented: “This contract is our 11th in the Sultanate and reinforces our commitment to Oman where we have been present since 1988.

“This project will further support our commitment to increase in-country value. We will continue to maintain strong focus on this aspect of our delivery, particularly by engaging the local supply chain and recruiting local resources”.

Rabat Deep Offshore – Eni farm-out approved

Chariot Oil & Gas Limited has reported that the farm-out signed between Chariot Oil & Gas Investments (Morocco) Ltd. and a wholly owned subsidiary of Eni has now been approved for the Rabat Deep Offshore permits I-VI by the Moroccan authorities. Eni is now operator of these permits.

Ownership is now as follows: Eni (operator, 40%), Woodside (25%), Chariot (10%) and Office National des Hydrocarbures et des Mines (25%).

Chariot CEO Larry Bottomley, commented: “We are pleased to have satisfied all conditions precedent and welcome Eni as the operator of the Rabat Deep acreage. We anticipate that further to completing the Environmental Impact Assessment, finalising well planning and securing a rig, drilling will now occur in early 2018.”

SapuraKencana wins US$300m of contracts

SapuraKencana Petroleum Bhd has won five contracts totalling US$300 million.

1) SapuraKencana Subsea Services Sdn Bhd was awarded a two-year contract to provide underwater services for Petronas Carigali Sdn Bhd.

2) SapuraKencana GeoSciences Sdn Bhd will provide soil investigation services for one year in the Peninsular Malaysia and Sarawak/Sabah operation areas.

3) SapuraKencana TL Offshore Sdn Bhd is to provide Hyundai Heavy Industries with offshore installation work of BNPCCP-B jacket, foundation piles and bridge structure between BNPCCP-B to BNG-B.

4) SapuraKencana TL Offshore was awarded a 12-month contract by Repsol to provide transportation and installation of pipeline and topside for the Bunga Pakma development project.

5) SapuraKencana Drilling was hired by Brunei Shell Petroleum Sdn Bhd to provide its tender assist drilling rig “SKD Alliance”. The contract is scheduled to start in April 2018 for a firm period of five years.

Lion Energy encouraged by Amanah Timur-1 well

Lion Energy Limited has noted that encouraging gas readings, combined with some oil fluorescence shows have been encountered in the objective ‘400’ sandstone from 80 m KB to the mid depth of 154 m KB. On reaching planned total depth of 570 m KB, the section will be evaluated with wireline logs and likely production testing to confirm fluid content and reservoir quality.

Lion’s CEO, Kim Morrison noted “the elevated gas readings with some oil shows over a 60 m section in the shallow objective are very encouraging. We would note wireline log evaluation and production testing will be required to determine fluid content and potential commerciality of the interval. We will continue to keep the market informed of result on this exciting well as we drill the deeper objectives”.

World news January 2017
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Derek Boulware, PwC, South Africa, describes how the digital transformation of the oil and gas industry will make operations more cost-effective.
Ask anyone in the oil and gas business today about their greatest challenges, and cost control will likely come out near the top of the list. With depressed global oil prices, the only way to improve margins is through efficiency gains – doing the same with less. Traditionally, this means reduced staff headcounts and applying pressure for reduced pricing from service providers. Strategy& analysis has shown that revenue from the 18 leading upstream, midstream and oilfield services companies in the US have decreased by 40% between Q3 2014 and Q3 2015. Over the same time period, operating expenses have declined only 9%, and PwC believes that the reason for this is that traditional methods of cost optimisation are approaching their limit, due to the high fixed costs associated with the industry. For a long time, business success has been based on cost competitiveness, but now there is a real desire to compete instead on value, created through innovation. Digital transformation may be the answer.
It is clear that oil and gas organisations must take the time now to apply transformational digital applications. Not only will new technologies increase margins and improve efficiencies, they also have the potential to disrupt the entire market, changing how people think, how business is conducted, how people learn, and how they conduct themselves on a daily basis.

The problem is that oil and gas companies are slower than other industries to respond to using new technologies. This has been especially the case when it comes to digital. According to a recent CEO survey, oil and gas companies are much less likely to use social media, data analytics and CRM systems than other industries, such as financial services. The energy industry tends to be inherently conservative, considering the high capital investments and long payback periods. Energy executives tend to prefer proven solutions as opposed to new ideas that may or may not get the job done. Some find this quite surprising given the reception that new technologies and engineering solutions have always had from oil and gas companies over the years. The difference is that these solutions have always provided tangible and measureable benefits at an operational level, many times improving recovery rates or overall production.

Digital must be seen as an enabler. It is a way of doing things underpinned by the technology trends of social, mobile, analytics, cloud and cyber (SMACC). Digital means that companies and individuals are using new technologies to achieve a variety of outcomes in a variety of ways previously unimaginable or non-feasible. Figure 1 summarises the five elements of SMACC.

Digital in oil and gas is not just about technologies. It is about redefining the operating model, simplifying underlying systems, empowering people and enabling deep organisational change. Digital must be broader than the historical ‘digital oilfield’ concept – which has a strong focus on oil and well production optimisation. Some of the areas that are and will be affected include: asset tracking; safety alerts; drilling data; fleet management; operations data; inventory management; equipment performance; field data capture; problem area scanning; and facility optimisation.

There are five major market themes that will have an effect on digital transformation in the oil and gas industry, including: the internet of things (IoT), building alliances, simplification and standardisation, solution-based buying and knowledge transfer from international oil companies (IOCs) or national oil companies (NOCs) to oilfield services companies (OFS).

In addition to these themes, there are a number of specific digital solutions which are already being implemented across the upstream space – from exploration through to production. When these capabilities are present and working as a system, the digital oilfield becomes a reality. An example follows in Figure 2.

**Digital in the African context**

So, why digital? Why now? Why Africa? Simply put, disruption is the way of the future. Organisations who find themselves doing business the same now as they did fifty years ago are in for an inevitable wake-up call. Digital represents disruptions. It is all about connectivity and communication. Business executives need to create more insight in real time in order to be able to make decisions in an agile and ever-changing environment. Organisations that do not embrace it now will find themselves adapting to it later. While many may argue that Africa must start from the basics as it is a continent full of developing nations, Africa may actually be the prime space for innovation.

Take the banking industry in South Africa as an example. It has managed to be at the forefront of new, innovative ideas from enhanced security to improved customer offerings. Clients have
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been very receptive to these new ways of doing business. This is proof that Africa can deliver innovative solutions to the market and that industries don’t necessarily have to build up from the basics. For oil and gas players on the continent, why not harness the knowledge and learning that has taken place in the rest of the world and use it to leap-frog the competition?

As a continent, another important challenge that must be addressed is the lack of infrastructure. This is an issue for many industries looking to operate in and around the continent. For extractive companies, the lack of infrastructure means that it is difficult to get parts, equipment and people to remote work sites. It is equally challenging to get produced natural resources to market. While digital does not hold the promise to teleport produced spare parts or systems might be failing. If digital innovation is really put to use, the industry could even see 3D printing of spare parts and drone delivery to the remote oilfield.

Overall, the emerging global market for business services using drones is valued at over US$127 billion according to PwC. Leadership at the newly-mobilised Global Drone Centre in Poland says that “the application of drone technologies in existing business processes is allowing companies to create new business and operating models. Each industry has diverse needs and as a consequence requires different types of drone-powered solutions and various drone functionalities. Some of them value flight speed and payload capacity, while others wish to concentrate on solutions delivering high-quality, real time data in a cost-effective way.”

### Prompting the disruption

In order to prompt the digital disruption in an organisation, one must begin by understanding the digital fitness of the company to ascertain if it has the right capabilities to succeed in a digital world. An organisation’s maturity across six key areas should be assessed including: know, define, evolve, create, accelerate and protect. These areas are summarised in Figure 3.

The ability to think disruptively is not second nature for most people. In fact, for the most part, they do not like change, preferring to stay in their comfort zones for fear of rejection or failure. Innovation and disruption require people to think differently, and they require people to be comfortable in uncomfortable circumstances.

In order to open the mind to disruptive thinking patterns, it is often a good idea to run a disruptive innovation leadership workshop or course. It is a way to get leaders to push themselves with a line of questioning which sparks thought in an unconstrained manner. Questions starting off with “what if...?” can be explored in a safe environment with a clear and open mind – “What if a competitor introduces a new service that made a previous offering in the market irrelevant?” Answering those hard questions really gets one to think about how to be the disruptor, not the disrupted! Disruption is a divergent shift in perspective – both an opportunity and a challenge. There are a few good ways to start the disruptive thinking journey including:

- Constantly focus on challenging current paradigms and the status quo.
- Do not worry about the reactions of others, but build on them.
- Be open to failure.
- Do not be afraid to think or say something drastic or bold.

In the end, it is essential to remember the wisdom of Albert Einstein: “if you always do what you always did, you will always get what you always got!” In today’s world, this could mean getting put out of business.
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JANUARY ISSUE

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