

# Oil & Gas MIDDLE EAST

NEWS, DATA AND ANALYSIS FOR THE MIDDLE EAST

S

January 2016 • Vol. 12 • Issue 01

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Remote oil & gas sites pose logistical challenges for the region's companies / **p58**

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# A PLAN FOR OMAN

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INTERVIEW



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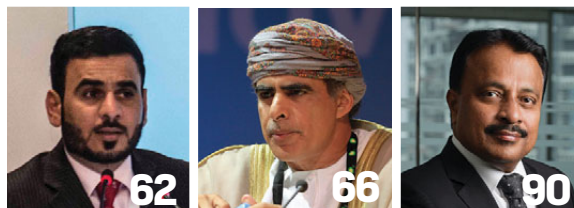
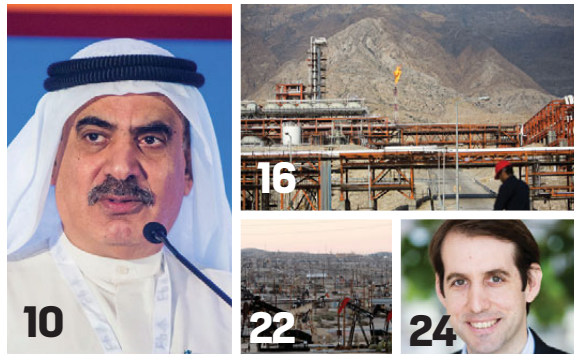
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**Editor's Choice:**

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# Hoping 2016 is a Happy New Year

A new year is likely to bring new challenges for companies in the GCC's oil and gas industry.



**THIS ISSUE:**  
Raoul Restucci is our star man this month, adorning the first cover of 2016. U.S. technology is our special report.

Hello and welcome to the first *Oil & Gas Middle East* of 2016 – it promises to be quite a year.

Whatever happens over the next 12 months, you can be assured that we at Oil & Gas Towers will continue to bring you the biggest and best news, views and interviews.

This month is no exception. As you will have seen on this month's cover, we sat down

with Raoul Restucci last month to discuss Petroleum Development Oman, and the company's importance to the country's long-term production goals. It's a great read.

You'll also find the first print interview with Ali Al Fares, the chairman of the newly formed Oil and Gas Committee at Basra Council. The Basra Council – the political authority for Iraq's economic capital Basra – is looking to invest up to \$800mn for developing the region's oil and gas sector.

The potential is huge; the Basra Governorate is home to 70% of Iraq's proven gas reserves, estimated at almost 112tn cubic feet – the 12th largest in the world according to the US Energy Information Administration.

The country's reserves and fields have been neglected in recent years, while the political situation has made Iraq an uncertain place for operators to work.

But with the security situation improving in the south of the country, the newly formed body will

be tasked with driving the sector forward in a country that desperately needs a properly functioning oil and gas sector.

This month we also look at network security – an ongoing challenge for oil and gas firms that is only going to grow.

There are many benefits of the digitalisation of information, data and processes.

But while the improvements are welcome, they do come at a cost. The information held by oil and gas companies is hugely valuable, and has made the industry a prime target for would-be cyber criminals. There have been a few high-profile attacks on some of the industry's biggest companies. But it does appear that the threat is being taken seriously.

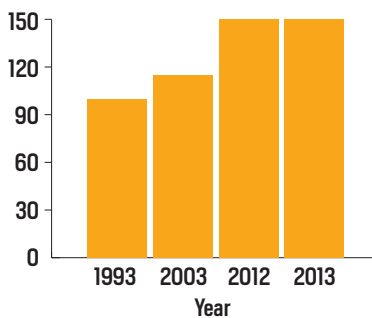
On a final note, it's been great to receive all your feedback over the year. We want to make sure we're writing about subjects that resonate with our readership, so please do continue to get in touch through the usual channels.

Here's to a prosperous new year. I hope you enjoy the issue.

## James Henderson

Oil & Gas Middle East, Editor  
james.henderson@itp.com

## Proved Oil Reserves in Iraq (thousand million barrels)



Source: OPEC, JODI, BP and GI Research

# Oil & Gas MIDDLE EAST

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# Aramco eyes local expansion

Saudi Aramco has announced plans to invest \$300bn to develop its In-Kingdom Value Programme

**S**audi Aramco has launched its In-Kingdom Total Value Add (IKTVA) programme, designed to increase investment, economic diversification, job creation, and workforce development within the Kingdom.

The IKTVA programme launch event was presided over by HRH Prince Saud bin Nayef bin Abdulaziz, Governor of the Eastern Province; Tawfiq Al-Rabiah, Saudi Arabia's Minister of Commerce and Industry, and Abdullatif Al-Othman, Governor of the Saudi Arabian General Investment Authority.

"IKTVA is a step change in our commitment to local content development that is now required across our domestic and international supply chain," said Amin H. Nasser, president and CEO of Saudi Aramco. "Sourcing a majority of materials, goods, and services that we require locally will enable Saudi Aramco to not only embed greater competitiveness and efficiency in our operations, but it will also help us fulfil our potential in support of the Kingdom's growth, job creation, and economic diversification goals."

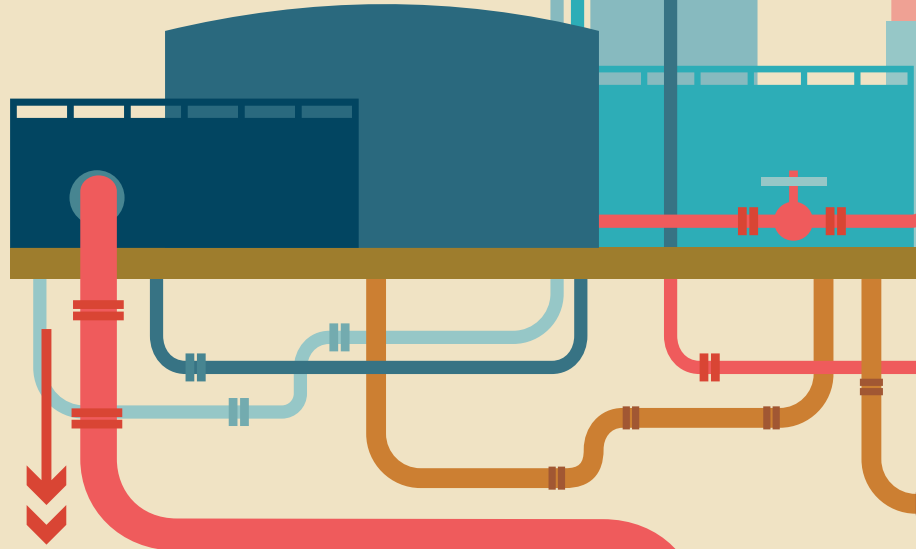
IKTVA will create win-win, mutually beneficial partnerships between Saudi Aramco and our suppliers," he continued. "The scale of our diversified energy business and associated capital expenditure programmes creates significant opportunities for those suppliers ready, willing, and able to invest in Saudi Arabia and partner with Saudi Aramco on a long-term, sustainable basis."

IKTVA is underpinned by mandatory local content development of suppliers and contractors that prioritises the purchase of goods and services from a local supplier base.



**AMIN H. NASSER,  
PRESIDENT & CEO**

"WE ARE SETTING THREE CRITICAL OBJECTIVES TO GUIDE OUR LOCALISATION PROGRAMME. THE FIRST AIM IS TO DOUBLE THE PERCENTAGE OF LOCALLY-PRODUCED ENERGY-RELATED GOODS AND SERVICES TO 70% BY 2021."



# 500,000

THE PROGRAMME WILL AIM TO DELIVER HALF A MILLION "DIRECT OR INDIRECT" POSITIONS FOR "TALENTED SAUDIS" IN THE LONG-TERM







# \$300BN

ARAMCO HAS SAID IT WILL SPEND AT LEAST \$300BN OVER THE NEXT TEN YEARS TO DEVELOP ITS LOCAL CONTENT.

# 22

## NATIONAL TRAINING CENTRES

ARAMCO WANTS TO ESTABLISH 22 NATIONAL CENTRES AROUND THE KINGDOM BY 2025, SEVEN OF WHICH ARE ALREADY ACTIVE



## 2015

THE LOCAL CONTENT LEVEL CURRENTLY IS 35%, A FIGURE NASSER DESCRIBED AS "MODEST"

## 2021

ARAMCO SAYS IT WILL DOUBLE LOCAL CONTENT TO 70% OVER THE NEXT SIX YEARS

0% 10% 20% 30% 40% 50% 60% 70% 80%



## TECHNOLOGY

# Better together?

In a low oil price era, technology development is more important than ever. But are service companies and operators working effectively? **James Henderson** reports

In times of \$100+ a barrel oil, it can be easy for those in the industry to get comfortable, using tried and tested – if sometimes dated – methods and technology, happy to tick along while making profits. Regretful as it is – the oil price is lurching precariously close to an 11 year-low at time of press – the industry is not in the midst of one of those boom periods.

As a result, effective and targeted technology is more important than ever, especially when it comes to drilling and production.

Conversely, the low oil price is clearly an obstacle to the development and implementation of technology; operators may not be willing to take the risk on a new solution, while service companies can be reluctant to invest huge swathes of investment into new research and development. It is also worth mentioning that the oil industry has one of the

lowest levels of technology adoption of all industries, “trailing even food” according to Sultan Al Mansouri, senior manager, drilling, ADMA OPCO.

Speaking at the recent ME-DrillTech Conference & Exhibition in Abu Dhabi, he told delegates from all over the world: “What we are seeing is a situation where everybody is waiting for others to take the lead.”

ADMA OPCO is trying to reverse that trend and, after an internal review in August 2015, has implemented 42 new technologies across its 32 divisions, an achievement Al Mansouri said was made possible because of help from its stakeholders and service providers.

“We believe that integrated teams – oil companies, service companies and drilling contractors – can work together to be innovative and best use technology,” he added.



Speakers address questions from the audience.

## 42

ADMA OPCO has implemented 42 new technologies across its 32 divisions since August 2015.

There is a broad agreement from those within the service industry that a hand in glove approach with operators is the preferred way forward.

Gokhan Yarim, D&M VP, MEA, Slumberger, said it is important that providers and customers work closely, and to do so would improve efficiency, increase production, and minimise costs.

“I believe integration and alignment of technologies between service providers and customers is going to become



### Service companies bear brunt of price fall



All sectors of the energy industry have been somewhat affected by the falling oil price – which fell to a nine-year low in December.

But service companies have suffered more than most. Many have been asked to agree to less costly contracts, or have had projects cancelled entirely. With the latest price fall, there will be fears that the situation will worsen yet still.



even more important in the current market conditions, and with the budget constraints. At Slumberger, our objective when developing technology is to help lessen our customers' cost per barrel, while ensuring safety and compliance. Our aim is to provide that across all environments.

"By partnering with our customers early and proactively, we can develop the technology that is fit for a particular purpose, and cut cost per barrel for them.

"Much of the remaining oil

and gas reserves that are left are not in locations that are easy to access, and exploration and production of these resources requires real partnerships. I'm convinced that leveraging each other's strengths will enable service companies and customers to fulfil potential in the oil and gas industry."

But just working together is no guarantee of success, according to Matias Schlecht, VP, technology drilling services, Baker Hughes, who said that alignment

↑  
Ali Rashid Al  
Jarwan, CEO,  
ADMA OPCO

between the R&D departments have to include the end users from day one, while creating a line-of-sight commercial model is important for both sides. He added that the speed of adoption is a major hurdle, and requires "significant work", even with a close working relationship.

"Technology collaboration agreements can accelerate technology development implantation but they are the exception rather than the norm," he said.

So while it [Continued on page 12>>](#)

### DRILLTECH FORUM THREE THINGS YOU NEED TO KNOW...

**1** The low oil price is an obstacle to the development and implementation of technology; operators may not be willing to take the risk on a new solution, while service companies can be reluctant to invest huge swathes of investment into new research and development,

**2** There is a broad agreement from those within the service industry that a hand in glove approach with operators is the preferred way forward. Speakers said it is important that providers and customers work closely together, and it would improve efficiency.

**3** While both perspectives are aligned, namely a methodical approach to identifying a problem, getting people involved and a collaboration to find solutions, problems with how to properly meet the needs of the client remain.





Continued from page 11>> does seem that both perspectives are aligned, namely a methodical approach to identifying a problem, getting people involved and a collaboration to find solutions, problems with how to properly meet the needs of the client and have new technology adopted remain.

Asked to put himself in the position of the operator, what he would do to see technology implementation accelerated, Yarim said: “If I took the role of the E&P Company, I would ask my team to tell me the main issues they have. I would bring the service companies together and actively engage them to come up with a solution, and I would tell those companies the budget that we have to come up with those solutions. One last thing I would do is give very solid objectives to my team and I’d like to see more risk taken. Maybe the first or second time the technology is not quite right, and it may require some changes, but that is what needs to be done.”

His sentiments on risk were echoed by his service provider peer, Akshay Sagar, global business manager, drilling and drilling engineering solutions at Halliburton. On the issue of

cultivating an environment of implementing technology, he said: “Cultivating a culture of innovation is critical to the industry. We must celebrate both when we succeed and when we fail. We have to be allowed to be able to take risks and fail. We can’t allow our people to think they are risking their careers and livelihoods if they fail. Sometimes the industry is living years in the past, we need to move with the times, and that has to come from the service companies and the operators – there has to be an appetite to take a risk. One of the main road blocks for service companies is risk and we have to improve collaboration and co-development between operators and service companies. We have also seen a reluctance from operators about which one is going to use new technology first.”

The issue of operators embracing trends was perhaps the definitive theme, and one that the service companies kept coming back to, although Schlecht conceded that service companies had to ensure they stuck to the customer’s brief.

“We continue to face the problem that our ideas are ahead of their time and the industry isn’t

↑  
Delegates at the  
forum in Abu  
Dhabi.

ready to embrace them. When we come up with something that is fundamentally different, it takes a lot of time to convince the customers to take the risk to use it. Sometimes we can be too ambitious and design new technology, when what we could be doing is making incremental improvements for our customers. We have to make sure our customers are ready for what we are offering.”

The observation led to an interesting discussion about how service companies had to offer the right technology, rather than the most advanced one.

Taking the example of consumer technology giant, Apple, Askhay, said: “Steve Jobs had the user in mind; our user is the oil industry so we have to keep them in mind. We speak about the best technology but the iPhone was built with users in mind and what they wanted. The iPhone is not the most technically advanced phone, but it provides the best user experience.”

It remains true that the oil and gas industry has long been too insular, unwilling to look to other industries for inspiration. But difficult times and stretched margins call for a change in thinking.

Speaking about industry crossover, Al Mansouri said: “This is the million dollar question. I saw a programme talking about how the medical industry is using sound vibration to break up kidney stones. That instantly made me think about how we could implement that sort of technology when trying to break out sand from our drilling casings. It seems an easy and brilliant tool to use, especially when you consider that each day drilling costs me \$200,000, so downtime is very expensive. ○



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# UPDATE

## Coming up:

- /16** Iran, India seal \$3bn contract
- /17** ENOC, GE sign MoU
- /18** Axens wins Aramco contract
- /20** Qatar PM's statement
- /21** Total CEO negative on 2016



OPEC secretary general Abdullah al-Badri

## OPEC ministers' meeting in Vienna ends in deadlock

Cartel fails to agree on oil production ceiling, as Iran insists on raising output

**WHAT WAS SAUDI ARABIA'S STAND?** Saudi Oil Minister Ali Al-Naimi - who made no comment after the meeting - had earlier said that growing global demand could absorb an expected jump in Iranian production in 2016.

OPEC members failed to agree an oil production ceiling in December at a meeting that ended in acrimony, after Iran said it would not consider any production curbs until it restores output scaled back for years under Western sanctions.

A final OPEC statement was issued with no mention of a new production ceiling.

"We have no decision, no number," Iranian Oil Minister Bijan Zangeneh said after the meeting.

OPEC's secretary general Abdullah al-Badri said OPEC could

not agree on any figures because it could not predict how much oil Iran would add to the market in 2016.

Badri tried to lessen the embarrassment by saying OPEC was as strong as ever, only to hear an outburst of laughter from reporters and analysts in the conference room, reports said.

The developments set up the fractious cartel for more price wars in an already heavily oversupplied market, with Brent crude presently trading at around \$39 a barrel.

A year ago, Saudi Arabia pushed through an OPEC decision to defend market share instead of cutting output, hoping to drive US shale firms out of the market.

Iran had made its position clear ahead of the meeting with Zangeneh saying Tehran would raise supply by at least 1mn barrels per day (bpd) - or 1% of global supply - after sanctions are lifted. The world is already producing up to 2mn bpd more than it consumes.

Saudi Oil Minister Ali Al-Naimi - who made no comment after the meeting - had earlier said he hoped growing global demand could absorb an expected jump in Iranian production next year. "Everyone is welcome to go into the market," he said.

Also during the meeting, OPEC welcomed back returning member Indonesia, its 13th member.

OPEC sources told *Reuters* the ministers had agreed to roll over existing policies during the first couple of hours of deliberations. That involved raising the collective ceiling, excluding new member Indonesia, to 31.5mn bpd from the previous 30mn - effectively bringing it in line with real production numbers.

But later, all decisions appeared to have been overturned, leaving the group with no official policy.

**QUOTE:** "EVERYONE IS WELCOME TO GO INTO THE MARKET:" ALI AL-NAIMI, SAUDI OIL MINISTER

# Oman Oil E&P to invest up to \$4bn to boost output by 2020

“We have ambitions to acquire companies and enter joint ventures”: COO

**INVESTMENT** The COO of Oman Oil Company Exploration & Production (OOCEP) has said the company plans to invest up to \$4bn to boost output over the next five years.

“For us, low oil prices are an opportunity. We have ambitions internationally to acquire companies and enter joint ventures,” Suleiman al-Zakwani said.

“We plan to spend between \$2-4bn,” he said, adding that OOCEP was looking at opportunities in the Middle East, south Asia and mainland Europe, and would be raising its own funds for expansion from Q1 of 2016.

Zakwani did not give a precise time frame for the investment drive but said it was part of an



effort to reach production of 200,000 barrels a day in 2020.

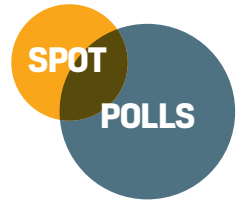
He said OOCEP’s gas production in 2015 would fall short of a target of 70mn cubic feet per day but the company had not slowed down any of its major projects, at least one of which was running at a loss.

## 2020

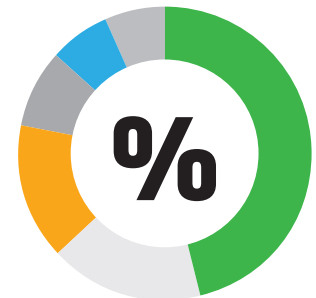
OOCEP plans to boost oil production to 200,000bpd by 2020

## 70MN

cubic feet per day OOCEP’s gas output in 2015 will fall short by



WHICH COUNTRY IS SUFFERING THE MOST FROM THE OIL PRICE FALL?



- Saudi Arabia: 46.3%
- Oman: 17.0%
- United Arab Emirates: 15.0%
- Kuwait: 8.4%
- Qatar: 6.9%
- Bahrain: 6.4%

Source: Arabianoilandgas.com



Picture of the Month

## IRAN CALLS FOR GLOBAL INVESTMENTS IN ITS ENERGY SECTOR

Iranian Oil Minister Bijan Zanganeh (dais) speaks during the ‘Tehran Summit’ in the Iranian capital on November 28. The aim of the summit was to strengthen Iran’s international ties to boost economic cooperation in global markets and attract investments to develop the Islamic Republic’s vast oil and gas sector in its post-sanctions era.



REGION

# AROUND THE GCC

Latest developments across the region

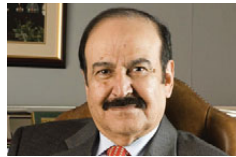


## 1. KUWAIT



Kuwait's Agilty, the largest GCC transport logistics company, plans to raise around \$1bn to fund future growth across its business, the CEO Tarek Sultan said in November. The company is focusing on diversifying its business across emerging markets as low oil prices risk delaying some projects in the Middle East, he said. Agilty is present in around 100 countries.

## 2. BAHRAIN



Bahrain will soon be awarding the contracts for the Phase 2 expansion of the Bahrain National Gas Company (Banagas), the Kingdom's Energy Minister Dr Abdul-Hussain bin Ali Mirza has said. The Banagas expansion project aims to utilise the excess associated gas resulting from increased crude production by Tatweer Petroleum.

## 3. QATAR



Qatargas revealed that it cut its greenhouse (GHG) gas emissions down to 25.6% in 2015. The presentation listed figures such as an improved reliability rate of 98.4%, greenhouse gas emissions down to 25.6%, maintaining strong performance on unit cost at \$11.1 per tonne and reduction of losses to 0.8% of weight of intake.

## 4. SAUDI ARABIA



Saudi Arabia's Sabic is moving ahead with plans to consolidate its operations in the US. The company is planning to close its Polymer Processing Development Centre in Pittsfield, Massachusetts and move operations to Selkirk, New York by 2017. The news comes as plans were announced in October to close Sabic's Innovative Plastics Unit also based in Pittsfield.

## 5. UAE



UK-based Weir Group opened the UAE's first wellhead manufacturing facility. The \$20mn investment will see local manufacture and service of highly engineered equipment for use in oil and gas operations. The 250,000 square feet facility is based in Dubai's Jebel Ali Free Zone and will have over 300 employees serving the MENA and Caspian regions.

## 6. OMAN



GlassPoint Solar has announced its Oman organisation has achieved 50% 'Omanisation'. In 2015, the company rapidly expanded its national workforce to account for half of its Oman based employees and is on track to surpass 70% Omanisation Q1 2016. GlassPoint and its partner PDO recently broke ground on the landmark solar project Miraah.



# Iran, India seal \$3bn contract

Indian consortium of firms will develop Farzad B gas fields, at a cost of \$3bn

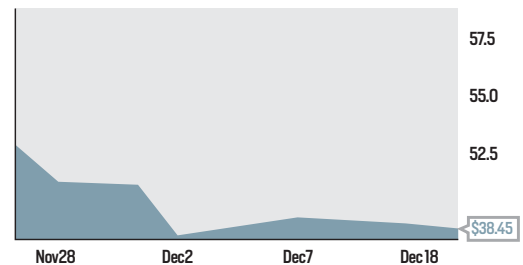
**GAS DEAL** Iran has agreed a \$3bn contract with a consortium of Indian companies to develop the Farzad B gas field in the Arabian Gulf. Saeed Hafezi, the director of the Falat Ghare oil company, said the lifting of Iranian sanctions means the consortium can resume development, Iran's official *Mehr* news agency has reported.

N.K. Verma, the managing director of ONGC Videsh, the Indian company leading the consortium, said they had not yet been notified about the development. He added that under the proposal submitted by the Indian companies, the first phase of development of the Farzad B gas field would cost around \$3bn.

The objective of developing the first phase is to produce 1bn cubic feet of natural gas each day, Hafezi said in the interview with *Mehr*.

DATA SNAPSHOT

## WTI CRUDE OIL PRICE



Oil prices fell to a six year low in December, off the back of an unsatisfactory OPEC meeting. *Source: highcharts.com*

## ENOC, GE sign MoU for innovation

Deal was announced at Cisco Internet of Things World Forum in Dubai

**TECHNOLOGY** The Emirates National Oil Company (ENOC) and GE have signed a Memorandum of Understanding (MoU) to develop new technologies that would help improve ENOC's operations.

The newly signed agreement, which was announced on the sidelines of the Cisco Internet of Things World Forum in Dubai, will focus on energy conservation at ENOC's subsidiaries, improving the performance of its fuel and lubricants products and making its supply chain more streamlined and efficient.

It also draws on the potential of GE's Industrial Internet offerings to help ENOC achieve new levels in productivity and



operational efficiency.

"ENOC is the energy partner of choice for Dubai and has a growing international footprint across the entire energy sector value chain," Nabil Habayeb, GE's president & CEO for META, said.

### WHAT WAS THE MOU ABOUT?

The MoU will focus on energy conservation at ENOC's subsidiaries and make its supply chain more streamlined and efficient.

## IN BRIEF

- **Pakistan and Qatar** have inked a government-to-government deal for the award of a \$16bn contract for supply of LNG from a Qatargas, without going through the mandatory bidding process, according to a local media report. Pakistan would receive supply of 1.5mn tonnes of LNG per year from QG2 and the supply would be raised to 3mn tonnes per year from the second year till 2030.

- **Dubai's Jebel Ali Free Zone** has announced plans to retrofit its buildings and facilities in a bid to become the world's most energy efficient business hub. The deal between Economic Zones World and DEWA's Etihad ESCO will make all buildings in Jafza more energy efficient.

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## IN QUOTES



"Companies that build a deep and lasting relationship with the kingdom by setting up shop here and investing in workforce development will capture the major share of Saudi Aramco's spend on materials and services."

*Amin Nasser, CEO, Saudi Aramco*



"We don't anticipate a recovery in 2016 (for oil prices) because in 2016 the growth in capacity will be larger than the growth in demand... I am not very optimistic for 2016."

*Patrick Pouyanne, CEO, Total*



"We are relentlessly pursuing stricter cost control and have identified a number of great opportunities to execute work more efficiently and reduce waste."

*Raoul Restucci, MD, PDO*

## Axens wins Aramco contract to install APC system in SAMREF

Technology to help SAMREF generate up to \$5.6mn in yearly revenue: Axens



A file photo of the Yanbu refinery complex in Saudi Arabia.

**TECHNOLOGY** Saudi Aramco Mobil Refining Company (SAMREF) and technology provider Axens have signed a deal to develop and implement an Advanced Process Control (APC) system at one of SAMREF's refinery units.

The technology will be deployed at the Prime-G+ unit used for desulphurisation of FCC gasoline to ultra-low sulphur content.

According to Axens, the

### 50:50

SAMREF is a 50:50 joint venture between Saudi Aramco and Mobil Yanbu Refining Company Inc.

### 236,000

Barrels per day of Arab Light Crude SAMREF was initially designed to produce.

### 402,000

bpd SAMREF's capacity doubled to after upgrades and improvements.

technology would help generate up to \$5.6mn in revenue a year 'by providing extremely precise control of product sulphur content while minimising octane loss and reducing consumption of hydrogen and utilities'.

'Axens' experience in APC developments combined with their unique process licensor insight has enabled a rapid implementation of a turnkey solution with substantial quantifiable results', the company said in a statement.

SAMREF, a 50:50 joint venture between Saudi Aramco and Mobil Yanbu Refining Company Inc, a wholly owned subsidiary of ExxonMobil, was one of the first refineries to open in Yanbu.

Initially, it was designed to process 263,000 bpd of Arab Light Crude, but after significant upgrades and improvements, its capacity has almost doubled to about 402,000 bpd.

## PLAY/PAUSE: Who's moving up in the oil and gas world this month, and who's falling away?



Oman's oil revenues in 9M 2015 dropped by 45.5% when compared to the same period last year. The Sultanate's oil revenue at the end of September stood at \$10.92bn, compared to \$20.28bn in 9M 2014.



UAE's Mubadala Petroleum and China National Petroleum Corporation have signed an agreement to foster co-operation in the oil and gas exploration and production sector outside of the UAE.



The first half of 2016 could be a 'long slog' Wood Mackenzie says. 'It is going to be a long slog until H2 2016 with the oil market facing rising Iran output and continued implied stock builds for H1 2016'.



Qatargas has delivered its first LNG cargo to Polish Oil & Gas, according to the deal with the Polskie LNG. A Qatargas chartered vessel carrying 210,000 cubic metres of LNG, delivered the cargo.

# Reaching further



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# Qatar working to ensure market stability: PM Sheikh Abdullah

PM warns against global conflict between oil producers over market share

**WHAT WAS HIS KEY MESSAGE?**

Speaking in Doha, Sheikh Abdullah said Qatar has worked to provide everything that would ensure stability in world oil markets, both in terms of supplies or prices.



Sheikh Abdullah bin Nasser bin Khalifa Al Thani

**MARKET** Qatar's Prime Minister and Interior Minister Sheikh Abdullah bin Nasser bin Khalifa Al Thani has sought to boost confidence the global energy market's confidence in Qatar, amid the declining oil prices.

Speaking at the opening ceremony of the 9th International Petroleum Technology Confer-

ence in Doha, Sheikh Abdullah said Qatar has worked to provide everything that would ensure stability in world oil markets, both in terms of supplies or prices.

He stressed that the market volatility that is not linked to demand and supply 'will not be in the interest of producers or consumers in the long run', in an apparent reference to the current global conflict between major oil producers over market share.

Sheikh Abdullah called for 'sustainable growth for development efforts around the world, preserve economic achievements of all nations, contribute to raising the living standards of individuals and ensure continued investment in the various energy sources'.

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**HITS OF THE MONTH**

- 1 OptaSense signs deal with Abu Dhabi's Gasos
- 2 OPEC fails to agree on production ceiling
- 3 Petro Rabigh restarts operations after shutdown
- 4 Basra to invest up to \$800m for oil, gas: Chairman

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**116,000 BPD**

CRUDE OIL PRODUCTION IN JANUARY FROM SEVEN MAJOR US SHALE PLAYERS IS EXPECTED TO DROP BY 116,000 BPD TO 4.86 MILLION BPD, ACCORDING TO THE US ENERGY INFORMATION ADMINISTRATION.

**26**

NORWAY HAS RECEIVED 26 APPLICATIONS FROM OIL FIRMS WHO ARE INTERESTED IN EXPLORING THE WATERS AROUND THE BARENT SEA.



**\$85MN**

CONOCOPHILLIPS AND CNE OIL AND GAS, A SUBSIDIARY OF CANADA'S CANACOL ENERGY, HAVE SIGNED AN UNCONVENTIONAL E&P CONTRACT WITH COLOMBIA'S NATIONAL HYDROCARBONS AGENCY, ANH. THE EXPLORATION AGREEMENTS WILL REQUIRE AT LEAST \$85MN IN INVESTMENT.



**\$755MN**

FLUOR CORPORATION HAS AGREED TO BUY THE DUTCH ENGINEERING AND CONSTRUCTION FIRM STORK FROM ITS PRIVATE EQUITY OWNER ARLE CAPITAL, FOR \$755MN.

**\$8.4BN**

WOODSIDE ENERGY HAS WITHDRAWN ITS \$8.4BN PLANS TO TAKE OVER THE PAPUA NEW GUINEA-FOCUSED OIL AND GAS PRODUCER OIL SEARCH.

**19,000 BPD**

FIRST OIL FROM THE EDVARD GRIEG FIELD IN THE NORWEGIAN NORTH SEA HAS BEEN DISCOVERED. IT IS EXPECTED TO ADD APPROXIMATELY 19,000 BOEPD OF PRODUCTION.

# Total paints grim picture for 2016

Patrick Pouyanné said he does not expect oil prices to increase significantly



**OPINION** Oil prices are not expected to rise next year because demand will continue to be lower than supply, Patrick Pouyanné, CEO of French multinational oil and gas conglomerate Total, said during the International Petroleum Technology Conference in Doha. “Having said that I don’t know

**COUNTER VIEW:** “There is no additional unconventional oil coming to the market, actually there is a decline,” Aramco CEO, Amin Nasser, said at the same event.

if the price will be at \$40, \$45, \$50, \$60 per barrel,” he said. “In 2016 the growth of capacity will still be larger than the growth of demand. I am not very optimistic for 2016, beyond that it is difficult to know.”

“My job is to be sure that we can make profits whatever the price is,” he added. “The good answer which we are working on in Total is to lower the break-even,” he said, adding that the objective is to “break even at \$60 per barrel in 2017.”

However, at the same event, Aramco CEO, Amin Nasser, said, “There is no additional unconventional oil coming to the market, actually there is a decline.”



## UPCOMING EVENTS INDUSTRY CALENDAR

- 11 – 13 January, 2016  
Middle East Gas Conference, Abu Dhabi
- 26 – 28 January, 2016  
Middle East Drilling Technology Conference, Abu Dhabi
- ME-TECH 2016 – 14–16 February, 2016  
Madinat Jumeirah, Dubai – Conference and Exhibition
- IGTC 2016 – 17–18 February, 2016  
Madinat Jumeirah, Dubai – Conference and Exhibition
- Oman EPC Projects Conference – 22–25 February, 2016  
Grand Hyatt Muscat, Oman



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# US shale oil under serious pressure

Production from the United States has remained stubbornly high, but the plight of many of its shale projects is precarious

It is interesting to note that despite the oil market woes, US shale oil production has continued to increase year on year. In April 2015, US production of tight oil from shale formations reached over five million barrels per day – a ten-fold increase in the last 10 years.

Overall US oil production continues to rise this year reaching a peak of 9.6mn barrels per day in April this year – competing with Russia and Saudi Arabia for the world top ranking oil producer.

We were expecting to see a much sharper impact of low oil prices on US shale oil production. However, it has become quite clear that US shale producers are not as vulnerable to low prices as previously anticipated – in fact, everyone has been left a little puzzled by the resilience of the shale oil industry under current market conditions. If we analyse what is happening in the US shale industry we realize that average production levels this year are higher compared to 2014 but production peaked in April this year and is now slowing down (see figure 1). The number of rigs has been drastically curtailed too – data from



US shale production hit five million barrels per day in April 2015.

Baker Hughes shows the oil rig count dropping from 1,575 a year ago to 545 in December this year. In spite of the massive reduction in operating rigs, the flow of oil from existing wells has not slowed as much as expected.

In fact shale oil operators have been very quick to squeeze more oil out of their existing wells and reduce operating costs through technological innovation and cost savings. Improvements in well efficiency and better staff training have been key factors



## About the author:

Colin Chapman is the president of Euro Petroleum Consultants.

leading to substantial cost savings. In addition, 20 to 30% lower charges by service companies helped to achieve further reductions in operating costs.

If we take a closer look at the technology used to improve well yields we can include the advanced pad drilling techniques which enable frackers to launch wells in different directions from the same site.

We can also include smart drill-bits with computer chips, and new dissolvable plugs. US company Hess corporation has reported that the use of such techniques have re-

sulted in 50% savings in drilling costs and estimate that further savings are achievable in the future.

If we analyse the break-even points for shale plays we realise that this is now at a much lower level compared to recent past. The Bakken formation in North Dakota has a break-even average of \$40 per barrel but often the break-even point can vary widely even at the same shale formation, for example in the Bakken formation break-even can be as low as \$30 and

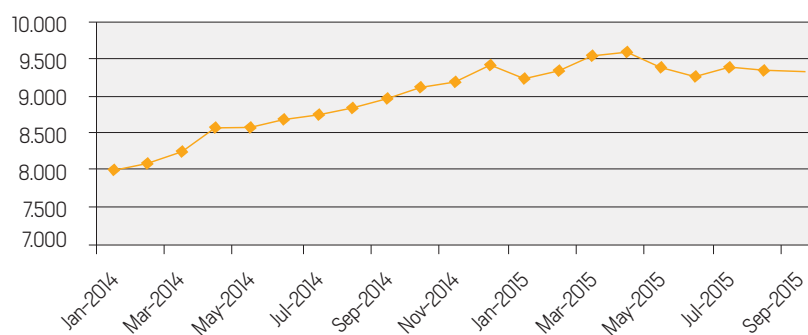
as high as \$75 per barrel.

Looking at break-even figures and production statistics from the main shale plays we may conclude that US shale oil industry is resistant but not impermeable to low oil price levels. Recent statistics by the EIA show that oil production levels from the seven main shale plays - accounting for 92% of total shale production - have dropped in recent months and are expected to continue to decline. The largest decline comes from Eagle Ford, Bakken and Niobrara.

EIA November Drilling Report shows oil production decline of over 95,000 barrels per day for the main seven shale plays with only Permian and Utica reporting a small increase in production. Overall the EIA expects an overall production decline of 400,000 barrels per day next year compared to 2015.

It is undeniable US shale oil producers have been very quick to adjust to the low oil price environment but it is also very clear that the recent decline in oil production from the main shale players are the direct result of reduced investment in the sector. Oil analysts are estimating that \$200 billion dollars of investment has been deferred by major oil companies around the

### US Crude Oil Production (Thousands Barrels per Day)



Source: EIA

world in response to low oil prices.

Shell cancellation of its Arctic ventures is the perfect example of mega-projects being shelved indefinitely as current low oil market prices make these projects unfeasible.

In the US alone, \$125bn of oil production and exploration projects have been cancelled not only at shale developments but also in conventional oil exploration and production. Several projects in the Gulf of Mexico have been either delayed or cancelled - ConocoPhillips has cancelled its deep water project and Chevron has announced the delay of \$5 billion investment in the region.

However, while shale produc-

ers can bring oil to the market very quickly, conventional oil projects take years to come to fruition. This is the real deal changer which will determine supply and demand balances in the future and impact price levels. The deferral of investment in conventional oil is expected to result in a much tighter oil market in the future bringing back prospects of oil price volatility.

Middle Eastern producers are more likely to benefit from this future scenario and are well prepared to endure a period of painful low prices for the prospect of better returns in the future when global supply and demand markets are better aligned. ○



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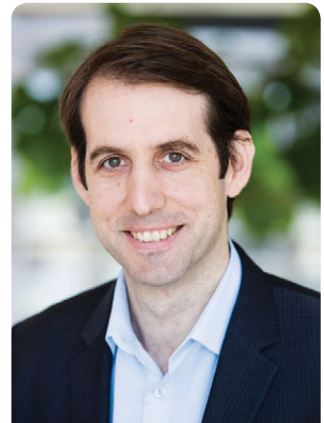


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# Pondering policy

Andreas Kyrillis looks at the need for a holistic perspective on energy sector policymaking in the GCC



## About the author:

Andreas Kyrillis is a principal at Boston Consulting Group, which has 82 offices in 46 countries.

At the moment the oil and gas markets are severely challenged – low prices were persistent in 2015 and are expected to create pressure on the budgets of hydrocarbon producing countries.

This will create further motivation for realising the maximum value through extraction, processing and marketing of each barrel of oil or each cubic meter of gas – whether used to fuel the domestic economy or exported.

However, it would be inaccurate to say that the lower hydrocarbon prices is the only driver behind the increased emphasis on optimization of natural resources. Another very important factor is the continuous and accelerating energy consumption by the domestic markets in the region. A 4.1% population increase annually from 2000 to 2014 across the GCC, coupled with a systematic development of the – typically energy intensive - domestic industrial base by local governments has increased energy usage substantially.

The total MENA annual primary energy consumption – including Saudi Arabia, UAE, Kuwait and Qatar among others – has increased steadily by 4.5% year-on-year over



the past five years to reach 395 MTOE .

Facing these trends, resource holding countries are urged to increase their focus on optimising their natural resources with the key objectives of maximizing their contribution to economic development and diversification, ensuring security of supply, establishing resource sustainability and achieving cost competitiveness.

To achieve the above, a holistic approach towards managing the different dimensions of a country's energy strategy is required. Specifically, the following four key aspects of the domestic energy landscape should be addressed and coordinated in a coherent way, rather than pursued independently: demand manage-

ment, energy efficiency, power mix, hydrocarbon allocation.

As part of demand management, for example, the reduction of electricity and gasoline overconsumption in the commercial/ residential and transportation sectors respectively should take place. Achieving energy

conservation through targeted pricing or other incentives can result to significant reductions on total energy demand in a country without impacting adversely economic activity. This in turn, can reduce the need for additional investments in the power mix or oil production. Equally, significant impact is achievable through energy efficiency initiatives, which can be deployed across sectors, ranging from transportation, to power generation and industrial production.

On the other hand, the power mix performance can be optimized through the use of alternative energy sources. Currently, the GCC power mix is still largely hydrocarbon-heavy, including sizeable amounts of liquid fuels with significant op-

portunity costs, which creates the incentive to investigate the further usage of alternative fuels; the UAE, for instance, has launched a \$20bn nuclear program under ENEC .

It is clear that the above options imply important decisions and trade-offs with significant effect in a country's social balance, economic development and international profile. The complexity of the trade-offs becomes even more evident when considering other relevant questions – especially given the current price environment – such as the hydrocarbon allocation to domestic industries vs. exporting them internationally for profit.

If the above decisions are not addressed properly or even if they are addressed independently from each other, the optimal development of a country's energy sector cannot be materialised. Of course, the objective prioritization of different potential initiatives must take place depending on their cost and impact. But equally important is the

analytical exercise of identifying the interconnection among initiatives and the combined effect different decisions can have on the overall country objectives. For example, energy efficiency initiatives provide better results when coupled with optimised fuel pricing, and the decision to pursue one or the other should be taken after assessing their combined effect.

Analysing trade-off and selecting the right combination of decisions requires an exceptional level of coordination among the existing policymakers. In the case of energy the involved stakeholder base can comprise a very broad network representing producers and consumers of energy: industry, commerce, transportation, economic development, and urban development are a few of the sectors that can have a strong influence in national energy policymaking.

Therefore, the presence of a strong central governance with a holistic view across the totality of

the country's energy landscape is required to create common ground among stakeholders towards achieving the country's objectives.

This central governance body can take different forms (e.g. Energy Council or Energy Ministry depending on the specifics of the country). In all cases though, it must play the role of a central coordinating entity that is supported by all relevant stakeholders and has the capability to analyse and identify the optimal combination of energy related policies.

To conclude, bringing a holistic perspective on the energy sector – a perspective that will further integrate demand and supply decisions is a necessity that will become even more pronounced as domestic needs continue increasing. Enhancing coordination through further integration of energy sector policymaking at a national level is a challenging goal worth pursuing that can have a substantial impact in the case of the GCC. ○







**Have your say:**

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# Opportunity knocks?

The oil price challenge represents an opportunity to get creative, says Phil Camp



#### About the author:

Philip Camp is the Vice President, Energy, Metals & Mining Industries, EMEA, at Hitachi Consulting

## Low oil prices could lead to an investment drought

The sudden and dramatic plunge in global oil prices determined mainly by supply, demand and partly by expectation has also been compounded by pockets of regional instability.

This combined with political pressure to shift to renewable energy sources means many of the industry's most established players – and governments, because of their reliance on oil revenues to balance national budgets – are intensely focussing on rigorous cost discipline.

Waves of redundancies cutting payrolls and saving cash, large-scale asset disposals and sharp reductions in capital expenditure have become the norm and still continue throughout the industry supply chain.

While this cost-cutting formula has borne some fruit in terms of reinforcing balance sheets there are, as Saudi Arabia's Minister of Petroleum and Mineral Resources warned recently, inherent risks in this approach.

Ali Al-Naimi sounded a note of caution about the trend towards



reduced investment when he spoke at a November energy conference in Bahrain, saying that the world must continue to invest in oil projects if the international energy community is to guarantee stability, safeguard energy security and meet demand in the long-run.

There is a need for companies to find ways of generating immediate but sustainable cost savings without jeopardising critical long-term investment in jobs, skills, infrastructure and energy supply.

## The need for innovation and sustainability

The impact of the oil price crash has been dramatic, with much of the industry still coming to terms with the effects of a five year low continuing to decimate budget and investment

forecasts. Conventional wisdom dictates that in times of high uncertainty, speed and a sense of urgency are crucial and the cumulative effect of year-on-year cost inflation, poor production efficiency and demand shift helps to explain why so many operators are being forced to take drastic action.

Cost reductions and operational efficiencies are taking precedence over growth however a “cost-savings only” strategy does not lay the ground for long-term returns.

The companies that emerge in a stronger position from this period of turmoil will be those that use the market conditions to drive transformational organisational effectiveness by deploying innovative ways to streamline operations and drive culture change through sustainable business practices which go hand in hand with efficient business practices.

Continued investment needs to be made in capacity building and skills development of the workforce, retention of corporate memory and knowledge transfer supported by the implementation of operational excellence programmes.

### Advancing to the next level of Operational Excellence (OE)

Much of operational excellence involves objectively stepping back to see the bigger picture. An approach we use called “Rapid Cost Optimisation”, which facilitates quick identification of possible savings and efficiency gains through a combination of internal business knowledge, external performance comparisons and by encouraging individuals and teams to think creatively.

Compared to more ‘traditional’ methods, rapid cost optimisation has been shown to generate great results.

The reason for this is quite simple – traditional methods tend to focus purely on identifying ‘gaps’ and try to find ways of improving the way things currently work. Rapid cost optimisation, on the other-hand,

removes the boundaries that often constrain innovative thinking and limit an organisation’s ability to consider what might be possible and what could be done differently.


It is also important to convert urgency into focussed action in a way that keeps individuals engaged, motivated and energised. Clients are often surprised by how ingenious and inventive their people can be when they are given the opportunity and the tools to do so.

### Building confidence for the future

Options for reducing costs should be evaluated from the perspectives of financial and practical viability fully taking into consideration any requirements for risk mitigation. As opportunities are more closely scrutinised they can either be accepted or rejected. If accepted and signed off, it is important for

them to be categorised, ranked and measured. Each opportunity needs its own business case providing insight into the nature and detail of the proposal so its true potential to guard against the impact of a low oil price can be fully assessed.

Our credentials and experience with oil and gas organisations around the world have helped companies incubate new ideas and insights that can be applied to tackling the most pressing issues facing the oil and gas industry today.

Operational Excellence programmes challenge conventional thinking around business improvement addressing how to release locked away cost savings while ensuring sufficient investment is maintained to tap into tomorrow’s potential and preparing the organisation now for the next cycle of economic growth. 



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**In a rare interview, PDO's managing director, Rauol Restucci, talks about the organisation's new cost savings programme, unlocking unconventional, and the trail blazing Miraah project**

28

# THE MAN WITH A PLAN FOR OMAN

**INTERVIEW:** INDRAJIT SEN

**Could you talk through some of the major oil and gas projects that PDO started in 2015?**

The headline one is Miraah (meaning mirror in Arabic) which we have begun with our partners GlassPoint Solar. Once complete, this will deliver more energy to the customer than any other solar plant in the world.

The installation will harness the sun's rays to generate an average of 6,000 tons of solar steam daily which will be used for thermal enhanced oil recovery (EOR) to extract heavy and viscous oil at

Amal in southern Oman.

The plant will provide a sustainable solution for EOR steam which is currently produced by burning natural gas. When finished, Miraah will save 5.6 trillion British Thermal Units of natural gas each year, the amount that could be used to provide residential electricity to 209,000 people in Oman.

The project is expected to reduce CO2 emissions by over 300,000 tons annually, the equivalent of taking 63,000 cars off the road.

Meanwhile, work on PDO's mega projects at Rabab Harweel and Yibal Khuff continues, with foundations being laid at the former and groundbreaking expected on the latter soon. Additionally,









↑  
Oman has ambitious targets to boost production in the future.

we also reached the Final Investment Decision phase for key gas installations: the Kauther Depletion Compression 2 and Saih Nihayda Depletion Compression 2 projects.

**What was PDO's total oil and gas output in 2015? Also cite an average daily output figure?**

Early monetisation of prospects, improved project delivery and drilling, and other improvements have led so far to a barrel of oil equivalent production of around 1.28 million barrels per day (oil, gas and condensates). In addition, PDO is working to a long-term oil production plateau of 600,000 bpd by 2019. Our fully audited figures for 2015 will be announced at the Omani Ministry of Oil and Gas media briefing in Q1 next year.

**Almost all industry players, in the region and globally, have been affected by the low oil price situation. How do you think your company has been impacted by the declining oil prices? Has**

**600,000**

**PDO IS WORKING TO A LONG-TERM OIL PRODUCTION PLATEAU OF 600,000 BPD BY 2019.**

**there been a fall in revenues?**

We are aiming to stay the course on our main activities with a continued focus on business improvement and sustainability. Our well engineering and project activity levels continue to grow and we are pursuing early monetisation of prospects.

At the same time, we are relentlessly pursuing stricter cost control and have identified a number of great opportunities to execute work more efficiently and reduce waste. The current environment is enabling us to challenge the status quo.

From discretionary expenditure to redeployment of hoists and other resources, we need to ‘serve Oman’ by ensuring we are all working to remove inefficiency and waste.

Revenues are obviously significantly down but our development activities continue at a significant pace and remain economically robust. In periods of difficulty and uncertainty, it’s key to get the fundamentals right and our track record and robust business plan have enabled us to absorb the impact of the price fall and continue to deliver key growth and development targets to our shareholders.

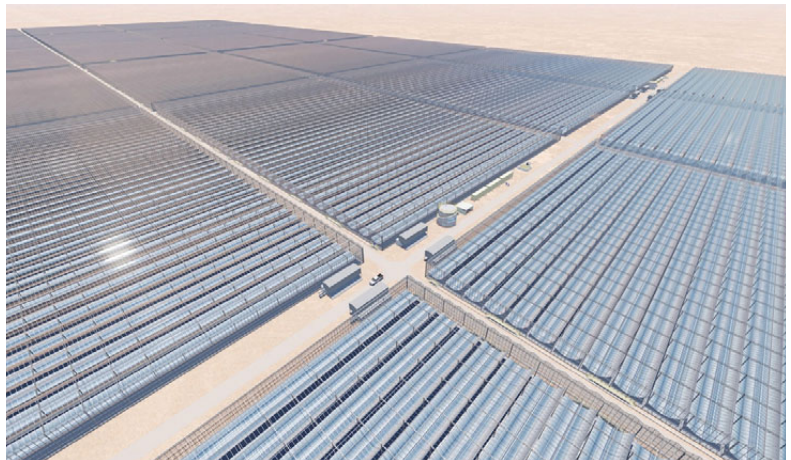
**What are PDO’s plans/strategies for 2016? Are you going to increase oil and gas production or intend to focus more on cost efficiency?**

This is not a binary choice and it is possible to both maximise production and manage costs. Central to this objective is our Lean continuous business improvement programme which helps us to identify waste, strip out duplication and streamline our operations so that we do more for less.

When economising, any business must assess the impact of cuts across the value chain and then be surgical and selective in its approach, and the most important aspect for us has been to work collaboratively with our contracting community rather than issuing top-down cost reduction orders.

So, we have held a series of Contract Optimisation Reviews and listened carefully to our contractors for solutions on where they believe we could enhance their performance and enable us to mutually operate more efficiently. As a result of this collaboration, and along with procurement savings on our mega projects, we are well on our way to booking \$1bn real and structural savings from 2016-2020.

Further initiatives include the launch of our “Every Rial Counts” campaign, a wide-ranging initiative focused on savings and efficiencies across the Company (including right down to the amount of printing we do, and the level of food that is wasted) which emphasises that everybody has a responsibility to treat PDO’s money as if it were their own. We are also progressing well with our Lean continuous business improvement strategy which extends right across the business and is aimed at eradicating duplication, streamlining operations and cutting wasteful work processes.



**“WITH OUR CONTRACTORS, WE HAVE A GREAT OPPORTUNITY TO REVIEW HOW WE DO THINGS MORE EFFICIENTLY AND EFFECTIVELY THROUGH BETTER WAYS OF WORKING.”**

RAOUL RESTUCCI

At the same time, our teams continue to ramp up production by working harder and smarter. For example, in November, PDO achieved its best monthly oil production since April 2006. We have also just drilled the fastest well in our history, taking 3.25 days to drill to a depth of 1,289m in our Amal field in southern Oman.

↑  
The Miraah project in the Oman desert.

**Come 2016, is PDO going to start new oil and gas projects?**

One to watch out for is our Khulud tight gas development. Since January 2014, six wells have been producing through an Early Production System that was commissioned in 2013 to test the long-term potential of the field. Estimated reserves are in the range of several trillion cubic feet.

Khulud’s ‘tight’ gas characteristics require the use of unconventional techniques to unlock the gas and make it flow to producing wells.

Compounding the challenge of producing this gas is the depth at which the reservoirs in Oman are often located – typically in excess of 5.5 km – far deeper than tight gas found elsewhere in the world.

**What do you think is the way forward or future of the Omani oil and gas industry?**

I remain optimistic that the nation’s oil and gas sector generally, and PDO specifically, can rise





## RESUME

Raoul Restucci was appointed Managing Director of PDO in October 2010. Prior to this, he was appointed as Executive Vice-President for Shell in the MENA region, a member of Shell's Upstream Leadership Team, EVP for North & South America, President & CEO Shell E&P USA, and Regional Business Director for Shell in South East Asia, including China and Australasia. He joined Shell International in 1980, following graduation from Nottingham University with a degree in Mining Engineering.

Raoul Restucci.



to the current challenge. However, we have to ensure we get the fundamentals right. We need to press ahead with a continued focus on business improvement and sustainability, operational excellence and project delivery while all the time adhering to safety as the bedrock of everything we do.

## OUR MANTRA IS: NEVER WASTE A CRISIS. IN PERIODS OF DIFFICULTY AND UNCERTAINTY, IT'S KEY TO GET THE FUNDAMENTALS RIGHT

RAOUL RESTUCCI

Yes, we have to adapt and adopt new ways of working as we pursue cost control measures. However, we should seize the opportunity to eradicate wasteful and inefficient work practices for good, embracing new technologies and maintaining a robust pipeline of talent and expertise.

In doing so, we can maximise the value we create for Oman so the Sultanate can continue on the road to progress and prosperity under His Majesty's wise and visionary leadership.

Our mantra is: never waste a crisis. In periods of difficulty and uncertainty, it's key to get the fundamentals right and our track record and robust business plan have enabled us to absorb the impact of the price fall and continue to deliver key growth and development targets to our shareholders.

With our contractors, we have a great opportunity to review how we do things more efficiently and effectively through better ways of working and the deployment of new technologies to address key challenges so we emerge leaner, stronger and fitter from the current difficulties. For example, our Collaborative Work Environments, spaces equipped with the latest digital technology, are enabling real-time communications and activity programme co-creation between our Coastal teams and the field to identify issues, monitor performance and devise solutions in an integrated, multi-disciplinary, faster way. ○



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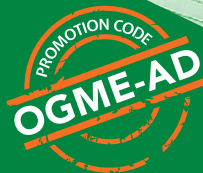
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WORDS: INDRAJIT SEN & JAMES HENDERSON

# MADE IN AMERICA

The United States' oil industry has been rocked by the price fall, with many projects shelved or cancelled. But the country's foray into shale has established it as a leader in oil and gas technology



**R**ewind 18 months and the United States' oil industry was in rude health, with the \$100+ price of oil fuelling the country's myriad of shale plays, leading to predictions that it would become the world's leading producer of oil.

Today, the picture could scarcely be different. The number of drill rigs working off the States has halved, with thousands of workers suddenly finding themselves out of jobs – many of whom are being headhunted by firms in the GCC.

Saudi Aramco, in partly has reportedly lined up hundreds of American workers, keen to tap into the wealth of shale knowledge and experience that has been accrued in the last few years. In addition, production levels have remained on an even keel.

That fact perhaps explains the thinking behind the landmark move in December, when the White House announced its support for a deal reached by the Congress on a package of spending and tax legislation to lift a 40-year ban on crude oil exports.

The move indicates to the fact that despite near-daily reports of offshore rig counts going offline, the US oil producers have drilled enough to not only meet the huge demand at home, but also have enough surplus to sell to the world. It is also indicative of the fact that American producers have resisted stiff competition from the low-cost

↓  
Ryan E. Doyle,  
marketing and  
sales director,  
New Tech  
Systems.



**“WE THINK THERE IS GREAT POTENTIAL FOR THIS TECHNOLOGY IN THE GCC TO HELP OIL AND SERVICE COMPANIES SAVE TIME AND MONEY, COMPARED TO CONVENTIONAL INSPECTION METHODS,”**

RYAN E. DOYLE, MARKETING AND SALES DIRECTOR, NEW TECH SYSTEMS.

oil producing cartel OPEC (particularly Saudi Arabia), Russia and other players, and are now ready to battle it out in the global marketplace.

American companies – big or small – have primarily been behind this achievement of sorts due to their pioneering technological innovations. Deriding popular perception that US shale oil producers wouldn't survive in the current hostile market conditions for long due to their high cost of production, American IT, contracting and service providing companies have helped them cut down their cost of production significantly, making their operations efficient and economical.

Moreover, American firms have also garnered significant interest for their innovative oilfield, automation and software technologies in the Middle East, as regional NOCs scramble to urgently reduce their capital expenditures.

This is evident from companies like Schlumberger expanding their presence in the GCC, and Baker Hughes continuing to showcase its products at major industry events like ADIPEC.

Schlumberger, the world's largest oilfield services company recently announced the launch of a major office in Dubai, to cater to the rising demand for its products and services.

It also became the first freezone company to be established under the Dubai World Trade Centre Authority (DWTC Authority).

Also this year, in what was probably its biggest corporate gain, Schlumberger acquired its American rival and another major oilfield services company Cameron, for a reported \$14.8bn. Even the US Department of Justice has cleared their proposed merger, without any conditions. “The transaction combines two complementary technology portfolios into a ‘pore-to-pipeline’ products and services offering to the global oil and gas industry. On a pro forma basis, the combined



→ New Tech launched its new rig floor tubing inspection system at ADIPEC 2015.

Schlumberger recently launched a new office in Dubai. ↓

company had 2014 revenues of \$59bn,” Schlumberger said in a statement at the time.

As an example of its commitment to press ahead with innovations that help oil producers ‘do more with less’, Schlumberger teamed up with IT giant IBM this year to provide integrated services to upstream oil and gas customers ‘that will improve the business impact of production operations’. The offering combines Schlumberger’s production optimisation services, upstream expertise, and its flagship Avocet production operations software platform with IBM’s enterprise asset management and enterprise services to deliver an end-to-end

service for optimising production operations.

American company New Tech Systems, manufacturer of electronic tubular inspection systems and related pipe service equipment, is also spreading its wings in the GCC. Established in May 1996 in Texas, New Tech Systems’ has been operating in the Middle East and North Africa for almost two decades. In addition to selling equipment in the GCC, the company has now upgraded itself to offer industry certification, training, repairs, spare parts, and calibrations through MSPEC, its agent in Abu Dhabi.

“It makes sense for American companies to look outside the US for business opportunities to offset the decrease in domestic activity. As stated earlier, New Tech Systems has been firmly established in the GCC for many years. We have recently partnered with MSPEC in Abu Dhabi to be our exclusive agent on the ground, expanding our presence in the MENA and CIS regions,” Ryan E. Doyle, marketing and sales director, told Oil & Gas Middle East.

Through its equipment, New Tech Systems strives to streamline customer operations for pipe

**“AS MARGINS ARE ERODED DUE TO THE LOW OIL PRICE THE INDUSTRY’S FOCUS HAS TO BE ON HOW TO BE MORE EFFICIENT AND COST-EFFECTIVE, AND AUTOMATION IS A KEY ENABLING TECHNOLOGY FOR ACHIEVING THIS.”**





inspection with technology and industry-leading technical and product support. The company provides electromagnetic (EMI) and ultrasonic systems or inspection of casing, tubing, drill pipe, sucker rod, coiled tubing, and drill collars.

At ADIPEC 2015, the company launched its WellTech 4X EMI Rig Floor Tubing Inspection System. The technology, which inspects oilfield tubing on the well servicing rig, is a standard method of inspecting production tubing throughout North America.

“We think there is great potential for this technology in the GCC to help oil and service companies save time and money, compared to conventional inspection methods,” Doyle said.

Baker Hughes, also among the top ten global oilfield service providers, announced a range of products this year, and was seen promoting their portfolio at regional exhibitions, only to receive satisfactory responses.

Baker Hughes announced the commercial release of its DeclineShift mature asset technology, which helps operators maximise capital efficiency and extend profitable production from their

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# 300%

## BAKER HUGHES' TECHNOLOGY INCREASED PRODUCTION AT AN 80-YEAR OILFIELD BY 300%

→ The WellTech 4X is designed to inspect oilfield tubing on a well servicing rig.

Chris Rittler, CEO, ABB Wireless. ↓

older oil and gas investments. The DeclineShift technology boosts recovery and lowers operating costs rapidly and efficiently through a combination of detailed analysis of the asset and fit-for-purpose technology applications.

The foundation of the product includes a close examination of the areas that can have the greatest positive impact on the asset's overall economics, whether individually or collectively.

The process focuses on three primary areas to increase the value of an asset: optimising hydrocarbon flow from existing wells, maximising production revenues and increasing economically recoverable resources.

Talking about practical implementation of the product, Baker Hughes designed and implemented DeclineShift for an 80-year-old field in which production was declining 6% monthly, new wells were costly, and previous revitalisation attempts had not yielded significant improvements.

Baker Hughes developed and prioritised an assortment of production enhancement opportunities, including rejuvenating existing wells and accessing bypassed oil.

At the operator's request, Baker Hughes assumed management of the field. The full solution included the drilling and completion of 30 new wells, 36 recompletions and 86 workovers of existing wells, and 77 new fracturing treatments.

As a result of these efforts, DeclineShift increased the operator's field production by 300% while reducing monthly decline rates 43%. Additionally, the efficient execution of the product reduced costs related to ongoing production and field operation by 57%.

Baker Hughes also recently released its



SPECTRE frac plug, the first in the industry to completely disintegrate downhole after fracturing.

The plug eliminates coiled tubing (CT) interventions, accelerates completion times and leaves behind an unobstructed production inside diameter (ID) for maximum flow area and easy future access. As with a traditional frac plug, the SPECTRE plug enables flexible stage placement. But unlike traditional plugs and even other disappearing downhole plugs, however, the entire SPECTRE plug – including the plug body, anchoring grip and packing element – disintegrates fully at predictable rates when exposed to wellbore fluids. Complete disintegration ensures that no plug debris are left downhole, thereby protecting the well infrastructure from undissolved components, which can compromise wellbore integrity, restrict access and complicate operations such as future well rejuvenations.

Industry media and the local consensus in the Middle East would suggest that investment in R&D by the major NOCs is growing despite the downturn. In such a scenario where not just awareness, but investments into operational excellence is growing manifold, Texas-based global drilling services provider National Oilwell Varco (NOV) sees relevance for its products increase in





the region.

NOV uses a number of proprietary software platforms, including VibraScope and DynaScope platforms. The VibraScope software uses a proprietary finite element analysis method to model the dynamic behaviour of both the drill-string and the bottom hole assembly (BHA) and has been validated through downhole measurements using the high-resolution BlackBox dynamics recorder.

The DynaScope software enables the detailed analysis by expert staff of downhole dynamics based on data acquired from multiple tools within the BlackBox product line, resulting in the delivery of a solid optimization strategy to the client and the strategy's associated performance benefits, NOV claims.

“It is my sound opinion that investment in technology and in particular automation will not decline in the current market and will in fact continue to grow. Multiple SPE events in the Gulf region have recently focused on technological innovation to solve complex operational problems, reinforcing that the need for

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→  
Automation is a key component in US manufactured oil and gas technology.

Workers safety is companies' first priority be they on the rig or inside the plant.  
↓



technical breakthroughs is still strong,” Stephen Pink, director - dynamic drilling solutions services Eastern, NOV Wellbore Technologies, told this magazine in an earlier interview.

“As margins are eroded due to the low oil price the industry’s focus has to be on how to be more efficient and cost-effective, and automation is a key enabling technology for achieving this. The technology enables operators to be more informed, efficient, and consistent whilst at the same time bridging the growing competency gap as we move towards the ‘Big Crew Change,’” Pink said.

Swiss-headquartered automation services provider ABB, which recently acquired a business unit for wireless technology in Silicon Valley, considers the Middle East as an important market for its offerings, boasting a major office in Dubai.

“Here, in the Middle East, there is more of a conventional oil production, and not to say that there is no investment there, it just hasn’t put such big demand for it and there hasn’t been a lot of new technology and innovation from my perspective,” Chris Rittler, head of wireless, ABB, said in an interview.

“My opinion of this region is that it is following the United States and I would say more of the North Sea. If you look at those regions, there has been a lot of new infrastructure deployments. In the US, that is because there has been an increased fracking activity by the producers there that has led to new requirements in the production and therefore you have had new technology put in which is driving the demand for wireless,” he said.

“Now that the price of oil is changing drastically, we are seeing customer enquiries from this region, very similarly to the other regions that are





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→  
Wireless technology is proving extremely useful for connecting the rig to the control room on the shore.

Oil and gas control room with NOV technology loaded on the screen in the background.  
↓

looking for more modern technology to drive more automation, efficiency, safety and reliability,” he commented.

He stressed on the fact that wireless technology holds key for the oil and gas industry, and said ABB’s clients have increasingly been deploying wireless technology for machine-to-machine data communications.

Within its portfolio, ABB claims it endeavours to provide any wireless technology that its customers would need as part of their automation systems, along with other components, be that measurement products or process automation and control systems in an oilfield, pipeline or in a refinery.

“If you look at any one of these environments – upstream, midstream or downstream - it is difficult to pull wires. To have communications you need either wireless, fibre or copper. In these challenging environments, due to temperature, vibrations, etc. having wires or fibre in place usually is not a viable option so wireless has a pretty wide use right now in the industry,” Rittler explained during the interview.

“I think we are seeing this in a number of industries already. I think what we’ve seen in process automation in oil and gas – casting kind of a white net over it, is already happening. If you look at the process automation that’s happening in unconventional production in the US, it’s impressive and



ABB is a part of it,” he added.

Health, Safety and Environment (HSE) is also of paramount importance when it comes to the oil and gas industry.

US companies see themselves well-positioned to address the needs of improving the regional industry’s safety standards, and say they have found out that companies here are more than willing to implement American HSE solutions.

US industrial services provider Ingersoll Rand has recently tied-up with Famco, part of Dubai-based conglomerate Al-Futtaim Group, to sell its pioneering personnel lifting product – the MR150 Man Rider – in the local market. The two compa-







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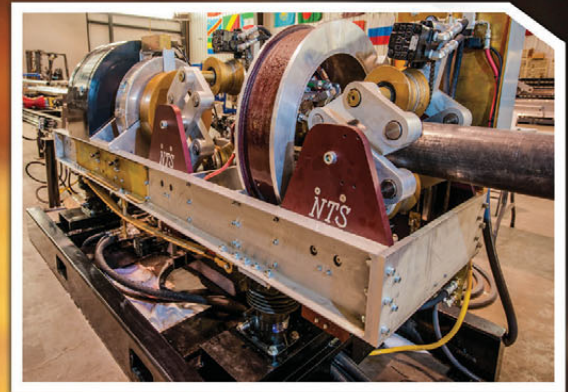
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→ Stephen Pink, NOV Wellbore Technologies.

↗ About 7% of US oil worker fatalities in recent years were caused by falls from higher to lower levels

nies were out in full display at ADIPEC this year and spoke highly of one another.

The MR150 Man Rider winch integrates all the best safety and durability features of Ingersoll Rand's lifting technology as standard features in a single compact package.

The MR150 has built-in safety mechanisms, including a slack line prevention system and an emergency lowering system, as well as a number of intuitive design elements that help rig workers protect themselves and co-workers during operation. The MR150 is fitted with stainless steel components and marine-grade paint to reduce corrosion and withstand harsh environments.

About 7% of US oil worker fatalities in recent years were caused by falls from higher to lower levels, and keeping that in mind Ingersoll has laid special emphasis on the safety features of the product.

"It is unfortunate that a lot of the fatalities in the oil and gas that have happened in the past have been due to fall from heights. In many cases, they could have been averted with the use of proper lifting techniques.

"So we think the MR150 Man Rider is the great product as it has the safest lifting capabilities and has been packaged better than other products," James Green, marketing leader, Ingersoll Rand, said during ADIPEC.

Investment in Research and Development will continue to play an important role in enabling producers to become more efficient in their drilling and exploration operations.

**"INVESTMENT IN TECHNOLOGY, AND IN PARTICULAR AUTOMATION, WILL NOT DECLINE AND IN FACT WILL CONTINUE TO GROW,"**  
STEPHEN PINK, NOV WELLBORE TECHNOLOGIES.

Saudi Aramco's chairman Amin Nasser, at a conference in Norway this year, alluded to the fact that Aramco intended to triple its R&D manpower and to increase its R&D expenditure fivefold over the coming years, whilst ADNOC stated it has seen a year-on-year increase in R&D for the last five years. The need for R&D is further reinforced by a recent survey performed by Lloyds Register Energy, which showed that the five major NOCs of the GCC have increased their research budgets to \$5.3bn.

"Based on our findings at ADIPEC in November, the GCC has a higher level of activity than most of the world. Most notable are Saudi Arabia, Kuwait, and the UAE. If the Iran sanctions are lifted, then they may become a big player for American companies as well," Doyle said.

"With the decreased level of activity in the US, it seems logical that Americans would relocate to where the industry activity levels are higher.

"Due to the decreased activity in North America there should be a large pool of talented people that the GCC companies can access for their expertise and knowledge," he concluded. ○

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46

# HOW SECURE ARE GCC NETWORKS?

**With 2015 witnessing a spate of attacks on the oil and gas industry and 2016 set to see no less, the regional oil and gas industry is investing in securing its systems, providing IT companies a lucrative opportunity to trade its products**

**WORDS:** INDRAJIT SEN

**A** cyber fraud is attempted between the trading unit of Saudi Aramco – the world’s largest oil producing company – and India’s state-owned ONGC (which eventually is foiled). A ‘financially motivated threat group’ known as FIN1, most likely based in Russia or a Russian-speaking country, launches a highly sophisticated malware that

subverts conventional system checks to access sensitive payment data.

The year 2015 witnessed several cyberattacks against not just the energy industry, but the global economy as a whole. The year also saw campaigns from alleged state-sponsored actors, including the group responsible for breaching American health insurance company Anthem’s IT system and stealing personal information on millions of current and former customers and employees.

Security software company Trend Micro Inc found out that 47% of energy industry organisations reported attacks, thus being the highest corporate sector to be at risk of infiltration and breach. In the oil and gas industry, 27% of all attacks are considered advanced and targeted and thus the potential for an attack to inter-

**“IN MY OPINION, THE ATTACK SURFACE HAS INCREASED AND THIS IS KEY FOR US TO RAISE AWARENESS THAT NOW WE ARE MORE PRONE TO ATTACKS, BUT WE MUST BE AGILE AND READY TO RESPOND QUICKLY.”**

RABIH DABBOUSSI, GENERAL MANAGER, CISCO UAE

rupt production activity is high. The steep rise in the number of cyberattacks, known or unknown, in 2015, leads one to ask: How secure are the IT networks of GCC oil and gas companies?

“In general, security is more complex when automation and ICS (Industrial Control System) infrastructure is involved, and not only for the energy industry. ICS infrastructure is more fragile and can be more complex when it comes to implementing security controls as well as security technology,” Jens Monrad, global intel liaison - EMEA, of IT company FireEye, said. “Typically, the ICS environment is operated by professionals outside the security operation. Therefore, there can be a gap in the organisation between the security operations and the people working with network security, and the people operating the ICS environment.”

With IT concepts such as cloud computing and the Industrial Internet of Things (IIoT) rapidly becoming the order of the day, the energy industry too is steadily adopting them for achieving operational excellence. Major IT enterprises too have been trying to popularise these IT trends and the regional industry’s need to utilise them, by reaching out to players at industry events such

↓  
Ossama Tawfick,  
VP Sales - MENA,  
AspenTech.



as ADIPEC. They have been successful in transforming the GCC into a key marketplace for their IT and network security-related products, and continue to launch new ones.

“Now that we are entering the era of internet of everything, we are actually digitising the business. So for all the oil exploration, production and distribution, you now have a trend of digitisation that is opening fantastic opportunities for these organisations to accelerate their business and continue to excel,” Rabih Dabboussi, general manager, Cisco UAE, said.

Industrial automation and information company Rockwell Automation recently published its new, validated resources with strategic alliance partner Cisco. These resources are aimed at helping the automation industry address the security concerns associated with implementing new technologies and trends like IIoT. Offered free of cost, these resources ‘address the dynamic security practices for both information technology (IT) and operational technology (OT) - essential in managing risk from the plant to the Connected Enterprise’, Rockwell Automation said in a press release.

However on the flipside of the trending IT concepts comes the associated security risks, as systems such as cloud computing have been known to be prone to cyber/malware attacks. “It (the concepts) also poses a big challenge, i.e., how do you secure the surface that is expanding. What I mean is, for example, three years ago, we didn’t have sensors that were deployed in pipelines, oil rigs etc.,” Dabboussi told Oil & Gas Middle East.

Awareness of the potential threats on the part of the organisation also forms the backbone of its cyber defence capabilities. “If you think of it from a personal perspective, the attack surface has increased and this is key for us to raise awareness that now we are more prone to attacks, but we must be agile and ready to respond quickly,” Dabboussi remarked.

Monrad feels awareness in the industry can be improved to safeguard the enterprise’s network. “Because of the typical disconnect between ICS environments and security operations, I think awareness can be greatly improved. Cross-team projects can be implemented, where both the ICS and network security staff work together on ensuring uptime, as well as implementing monitoring of the environment, in order to gain more visibility into the infrastructure and to be able to





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GCC energy giants have begun laying emphasis on utilising IT to improve efficiency and make every dime count.

detect breaches and provide a quicker response to potential threats,” he explained.

However, with the current downturn in the oil and gas companies taking a toll on the major NOCs of the region, forcing them to heavily slash capital expenditure, investments in boosting the IT network are presently featuring in the bottom

**\$10.18BN**

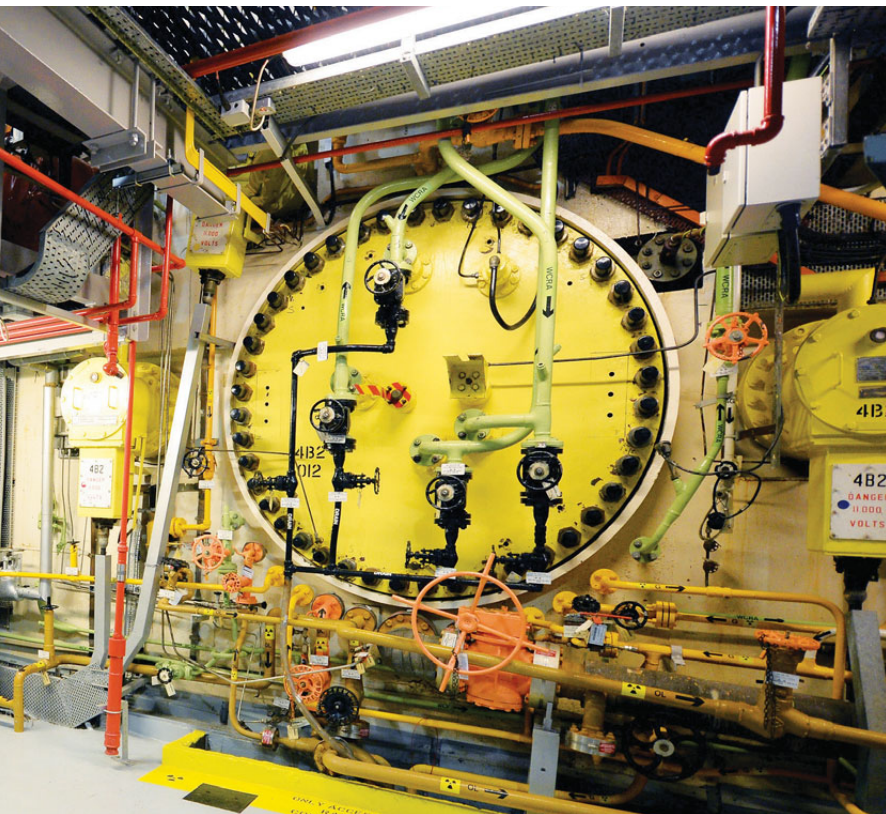
THE IDC ESTIMATES THAT IOT-RELATED EXPENDITURE IN THE MIDDLE EAST IS SET TO RISE AT A FIVE-YEAR GROWTH RATE OF 21.9% TO TOTAL \$10.18BN BY 2018

of their priority lists. “The fluctuating marketplace for feedstock and energy prices means that competitive advantage for Middle East oil and gas, refining, petrochemical and chemical production is being squeezed. The region is focussed on the development of mega-refineries and large integrated petrochemical plants that are world-class in both size and complexity. Therefore, the need for integrated optimisation software is important in today’s market to help drive profitability by optimising assets,” Ossama Tawfick, VP sales - MENA, AspenTech, said.

Dabboussi, although, thinks otherwise. “At a time when there is quite a lot of cost-cutting happening, what I have seen being reflected throughout these organisations (major oil and gas companies) is the paramount importance on security and the fact that security cannot be compromised in any way,” he believes.

GCC energy giants have, since the recent past, begun laying emphasis on utilising IT to not just secure their networks, but also to improve efficiency and make every dime count. The Dubai Government-owned Emirates National Oil Company (ENOC) recently signed a strategic Memorandum of Understanding (MoU) with GE “to explore areas of collaboration for developing innovative technologies that will strengthen energy





Awareness of the potential threats forms part of the organisation's defence capacity.



Jens Monrad,  
global intel liaison  
- EMEA, FireEye



Rabih Dabboussi,  
general manager,  
Cisco UAE

conservation at ENOC's facilities and enhance the performance and efficiency of ENOC's fuel and lubricants solutions', it announced.

GE and ENOC, have partnered in the past and with the recent agreement intend to 'focus on bringing added value to the business units of ENOC Marketing, including aviation fuel, lubricants, and liquefied petroleum gas (LPG) among others. The technology collaboration will draw on the potential of GE's Industrial Internet solutions to help achieve new levels in productivity and operational efficiency', the statement said.

AspenTech, which works with regional giants such as Saudi Aramco, Qatar Petroleum, and ADNOC, among others, claims its aspenONE Advanced Process Control software is 'an excellent return on investment'. "Aspen DMC3 efficiently scales to any control problem size and it has also been successfully applied to virtually every

**"THE FLUCTUATING MARKETPLACE FOR FEEDSTOCK AND ENERGY PRICES MEANS THAT COMPETITIVE ADVANTAGE FOR MIDDLE EAST OIL AND GAS, REFINING, PETROCHEMICAL AND CHEMICAL PRODUCTION IS BEING SQUEEZED."**

OSSAMA TAWFICK, VP SALES - MENA, ASPENTECH

control problem in refining, chemicals and petrochemicals processing. Significantly, this helps improve the financial performance of the plant where companies have experienced benefits ranging from 3 - 5% increase in capacity and 3 - 5% reduction in energy usage," Tawfick said of the product.

"In addition, using AspenTech's integrated process engineering tools deliver significant tangible results, including improving process engineering workflow around 10%, 30% capital and operating cost savings due to inherently better designs, a 10% - 20% improvement in engineering quality and a 10% - 20% improvement in engineering efficiency," he added.

### Cybersecurity predictions

According to FireEye's 2016 Security Predictions, disruption is a valid concern in 2016 and the losses associated with business disruption are considered some of the highest. In certain circumstances, disruption can be more than just the inability to perform regular work operations. "Due to





→  
Ray Kafity, VP -  
META at FireEye

certain high-profile incidents, chief information security officers (CISO) have had to change their risk profile. There is now a chance that someone could just break in and delete everything, without any risks or repercussions involved,” Ray Kafity, VP - META at FireEye, said.

Another valid concern in 2016 is the growth of infrastructure-based attacks. As the energy sector continues to invest in new technologies to automate production, the potential for attacks inevitably grows. “We will start to see more visible attacks against industrial control systems (ICS). Additionally, environments shifting to Wi-Fi will broaden the attack surface, potentially opening the doors to increased cyber terrorism aimed at critical infrastructures. To stay ahead of all threats, the C-level and boards will need to address ICS security in their risk reviews and begin allotting a larger budget to protection,” Kafity recommended.

Moreover, though still nascent, the popularity of mobile wallets, magstripe readers and other similar payment systems is growing rapidly, but without the protection needed to secure transactions. The proliferation of these systems gives potential attackers another front to launch cyberattacks, as was demonstrated by the attempted fraud between Aramco Trading and ONGC. “As a result, we will likely see an increase in malware targeting these systems,” Kafity predicts.

On the other hand, the International Data Corporation (IDC) estimates that IoT-related expenditure in the Middle East is set to rise at a five-year growth rate of 21.9% to total \$10.18bn by 2018. New internet-enabled devices are being released regularly these days, and many have weak security controls, allowing for new ways of accessing data. “These “things” could be held hostage by ransomware, which will subsequently lead to extortion. As these pick up in the region, various cybersecurity issues will need to be addressed,” Kafity said.

2015 was characterised by a spate of attacks on the oil and gas industry. The energy sector has long been the mainstay of regional economies and



as the GCC consolidates its position as an economic hub, 2016 will witness further cyberattacks on this sector, experts say. In such a scenario, they insist cybersecurity must assume paramount importance in an oil and gas producing company’s business strategy.

“Due to the sensitivity of ICS environments, companies are advised to implement processes and monitoring capabilities, which can help them in the following three areas: Detect (Monitoring of the environment, corporations with Security Operations and personnel); Respond (Have a tested Incident Response Plan, a workflow, process and documented plan for how to handle incidents discovered, allowing the company to operate during the incident); Contain (Have a tested and functional Disaster Recovery Plan, allowing a move to a non-compromised environment, while mitigating the threat against the compromised environment),” Tawfick said.

“I would advise that security should be the top priority for the organisation. Secondly, a very senior person should take on the responsibility to be the person who is leading the security practice. We advise them to talk to companies who have expertise in that space, and have a track record in providing the right solutions, advisory around securing the infrastructure data and adopt a methodology and strategy that helps to continue to advance and continue to renovate the security environment to keep up with the advancement of attacks,” Dabboussi explained. “And if these steps are implemented, I think that would help in securing the data and networks in the region.” ○

**“WE WILL SEE MORE ATTACKS AGAINST INDUSTRIAL CONTROL SYSTEMS. SHIFTING TO WI-FI WILL BROADEN THE ATTACK SURFACE.”**



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**“ BUILT TO LAST ”**

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# OPERATION SUCCESS

OpExMENA 2015 shed new light on the importance of operational excellence

WORDS: SLAVKA ATANASOVA

→ Delegates at the event.

→ A number of high-profile names attended the conference.

**T**he Middle East oil and gas industry has been described as one of the most resilient globally, bucking the trends of falling oil prices, job cuts and huge operating losses. But as times become more challenging, companies in the region are increasingly having to rethink their strategies and continue to improve and evolve.

This was one of the main messages at the third edition of Operational Excellence in Oil, Gas and Petrochemicals Conference – OpEx MENA 2015, which took place in Abu Dhabi last month.

The event shed new light on operational excellence, drawing hundreds of delegates from all over the world who gave excellent presentations and shared some of their experience with industry peers in the GCC.

Organised by Euro Petroleum Consultants (EPC), the show further highlighted the importance of operational excellence in assisting energy companies to maximise production and improve efficiency.

The conference was inaugurated Stefan Chapman, vice president of EPC.

Chapman commented: “Operational Excellence is an important element of organisational leadership that stresses the application of a variety of principles, systems, and tools toward the sustainable improvement of key performance metrics.

“In other words, operational excellence is the ability to confidently demonstrate and prove that everyone is using resources to do more of the right things, more of the time,” he added.

In a keynote speech, Ahmed Omar Abdullah, Chief Operating Officer of Abu Dhabi Oil Refining



Company (Takreer), urged oil and gas companies in the region to not only focus on efficiency of production, but on safety as well.

A general consensus between speakers at the event was that the human factor is key to the success of reaching operational excellence. Defining a clear goal and communicating effectively across the different departments of the organisation were also identified as some of the ingredients for success.

The two-day event included seven sessions covering key topics related to operational excellence including sustainability and HSE, operational effectiveness, implementation and benchmarking, asset performance and reliability, asset optimisation and productivity as well as enabling technologies.

The event was an opportunity for operating companies in the Middle East to share their success stories in reaching for operational excellence at their plants, as well as learning how they can





## “REGULATORS LOOK FOR INTERNATIONAL BEST PRACTICES IMPLEMENTED ACROSS THE GLOBE, IN ORDER TO ADAPT THEM TO THE REGION AND PRIMARILY BASE THEM ON LEGISLATION FROM THE UK, US AND AUSTRALIA,”

MAISAA NASRALLAH, CHAIRPERSON AT IOSH'S UAE BRANCH.

improve their efforts in the future.

Bassam Al-Bokhari, vice president for Industrial Relations at Petro Rabigh, presented a paper entitled “Transformation roadmap towards sustainable operational excellence,” highlighting some of the milestones the joint venture between Sumitomo and Aramco has recently achieved.

“Accountability, integration, measures and sustainability are key principals to achieve a sustainable operational excellence,” Al-Bokhari said.

As every year, the event hosted an exhibition alongside the conference, where a number of regional producers and technology and service providers showcased their offerings and networked.

“OpEx MENA has cemented its position as a must attend conference given the quality of papers presented and attendees,” said Colin Chapman, president of EPC.

“The fourth edition of the event will take place in Abu Dhabi in December 2016, and we promise our industry colleagues that it will offer all the knowledge that attendees expect from such events,” Chapman concluded.

### Can we have Opex without capex?

For years, oil and gas companies in the GCC have been known for their lavish spending on mega projects, best-in-class facilities and the latest state-of-the-art technology. But as the oil price more than halved since June 2014, revenues have shrunk significantly and CEOs are now having to think twice before making any financial commitments.

Speaking on the sidelines of an oil and gas event, one industry expert told RPME that while in the past he could walk up to a client and sell a piece of technology on the basis of how innovative and revolutionary it is, today he has to answer some pretty tough questions such as: what’s my return on investment; is it going to help me make savings;



and ultimately -- do I really need it?

The current market volatility has without doubt prompted oil and gas producers to exercise caution when it comes to spending cash. But Badar Alam, global solutions architect leader at DuPont, is of the opinion that to stay truly competitive, companies need to invest.

“I don’t think it is a zero sum game. I think you have to invest energy, time and some capital potentially and maybe some infrastructure that you may need to build to drive this change in processes. But it is not anything so significant that should stop any one of us from pursuing operational excellence.”

He added: “What we have to do is rationalise that relatively small investment versus the relative loss that we are experiencing today -- not having operational excellence is costing each organisation a significant amount of money. If we benchmark ourselves versus world-class we are giving up a lot if we are not at that world-class level.”

Alam seems to know what he’s talking about and this is perhaps thanks to his long experience at DuPont, where he has worked for over 15 years. Today DuPont is one of the largest and most renowned chemical companies in the world but this was only possible thanks to its ability as an organisation to evolve and remain profitable even during the most challenging of times.

In the past, the company has experienced a



number of shake-ups and financial downturns, most prominent of which is its massive sell-out of plants during the world economic crisis in 2008. As a result, the company lost significant processing capacity and to stay competitive, it had to realise more value from its existing plants and increase production significantly.

According to Alam, DuPont was only able to adapt to this new environment and quickly readjust to the changes thanks to its so called ‘Production System’, which at the time acted

as the company’s operational excellence strategy.

“For us to remain viable and to maintain stakeholder value we really needed to focus on capacity release to impact our costs.

“In terms of the value that we’ve been able to generate. When we did our benchmarking we felt that due to our improvement we are now world class and we could achieve about \$200-300mn worth of improvement on an annualised basis.

“In terms of the actual value that we were able to deliver, we have been able to get over \$1bn worth of value on an annualised basis from 2009 through 2012 and that continues to this day,” Alam said.

### The human factor

To really round off its operational excellence, DuPont realised its strategy had to address its employees as well, changing their mind-sets and behaviours.

“For a company that has been existent for over 200 years, you would think we have a strong foundation of capability in our organisation and we truly did. But that capability was focused at certain levels of our organisation and it was more technical than it was around leadership.”

As part of its transformation, DuPont decided to introduce specially dedicated teams that would go to the operations experts working in the field and try to motivate them.

“They would do that on an incremental basis. But as soon as those technical professionals were removed from the site, we found ourselves degrading back to the normality we were at before,” Alam explained.

↑  
Mohammed  
Al Haddadi  
presented at the  
event

Attendees  
benefited from  
using an event  
app on their  
smartphones  
↓





# \$2-300MN

DUPONT'S 'PRODUCTION SYSTEM' COULD ACHIEVE ABOUT \$200-300MN WORTH OF IMPROVEMENT ON AN ANNUALISED BASIS

↑  
Delegates enjoyed networking during the event

“The key challenge is really getting the full organisation having the same view, the same priority, the same goals and the same motivation. Until you get that you can apply it in discrete places and you can have people that are really capable and that are highly motivated but as soon as those people change their motivation or are appointed to a different role that improvement process can drop down significantly.

“So, you need an approach where everybody has the same view, the same priorities and the same goals, can see progress and visualise what they are delivering versus what the objectives of the organisation are,” Alam added.

According to OpEx expert Ahmed Al-Mahfoudh, one simple mistake that most oil and gas companies make is focusing on policies and operations, whereas what they really should be doing is working with people directly, instilling their OpEx strategy into people’s minds and really making them buy into it.

“The best people to achieve operational excellence are those [working] on the ground. Most of the times, you will find that both the problem and the solution lies with them.”

As team leader of TASNEE’s award-winning

## Key takeaways from OpEx MENA 2015:

### DuPont:

The key is to initiate the process. The hardest step is always the first step.

Organisational culture change is going to be key for this region.

If you are not improving, you are falling out. Technology is a very important enabler.



### Takreer:

Continuous improvement is a very important aspect of operational excellence. Operational Excellence is a journey that never stops or ends.



### Honeywell:

Operational Excellence is not just an objective to aspire to, it is a mandatory requirement for everyone in the industry. Mobile technology will play a key role in improving performance. Companies must act now and shape the digital trend or risk being shaped by it.



### Tasnee:

If you want to compete on a global scale, operational excellence is a must. Instill your OpEx strategy into people’s minds and make them buy into it. The best people to achieve operational excellence are those [working] on the ground.







Manufacturing Transformation Programme, Al-Mahfoudh is perhaps best placed to share insight on the topic.

The programme was designed and implemented at its 400, 000- tonne High Density Polyethylene (HDPE) Plant in Saudi Arabia, and in 2015 won Operational Strategy of the Year at the *Oil & Gas Middle East Awards*.

With no capital investment whatsoever the MTP team managed to achieve new daily, weekly and monthly production records, as well as 42% reduction in off-grade production and 8%-10% increase of output rate for different grades, while also improving Overall Equipment Effectiveness (OEE) by 25.3%.

“We did something simple,” Al-Mahfoudh explains. “We went to people who work in the plants and asked them to identify the main problems. We then gave them the required technical support. They also underwent training which helped change their behaviour in terms of how they respond to issues within the operations.

“We also ensured that different departments within the company communicate and cooperate sufficiently as well as challenge one another.”

Despite their recent success in significantly improving the company’s performance, Al-Mahfoudh maintains that he and his team still have a lot of work to do.

“We have a long journey ahead of us. We probably completed around 50% of our operational excellence strategy for the current plants and we are due to complete the remaining 50% in five other plants - one plant at a time.

“We also make sure everything is documented in order to make the process sustainable.”

### So far so good, but now what?

Asked how the region is performing compared to the rest of the West, Alam said: “It is a transformational process right now.”

“I think we are moving [but] we are certainly not where everybody here would say we want to be.

“The [oil] price is a negative in a lot of ways but I think it is increasing the motivation in the region. The organisations, the leadership, the stakeholders are really initiating change and that’s key”

However, to really move forward, this region needs to focus on initiating organisation culture change, as Alam explained.

“We have a little bit of a traditional culture. In terms of how we manage in the hierarchy. Each person has their own role and they don’t want to really deviate and dig into levels that are outside of their scope.

“For a plant manager, we believe that they have to get down directly to the operations organisation and into the shift teams, similarly to what we do with safety, and be able to really exhibit ‘felt leadership’, build that priority and value and recognise success.”

“That’s the part that’s probably most challenging here because we tend to be a little bit more traditional in terms of the management and process systems here, in the Middle East,” he added.

Another more long-term challenge not just for oil and gas but for most organisations worldwide is how to stay motivated and continue to drive improvements even when economic conditions improve.

“If you are not improving, you are falling out. If we stay static we know our competitors are going to be moving forward and really moving past us.

“It is a very competitive environment today so even when oil prices go up, your revenue is going to increase, but your profitability is going to depend on how efficient you are. So if we focus on the relative profitability and competitiveness, then we shouldn’t change our mind-set at all,” Alam concluded. ○

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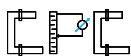


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# MOVING WITH THE TIMES

**Effective logistics and supply chain management are critical to oil and gas operations, especially at a time when margins are being squeezed**

**S**peak to just about anybody in the oil and gas industry at present and you can be sure you'll hear buzzwords such as "improving efficiency", "reducing downtime", and "maximising production". To do so, companies are putting more emphasis on ensuring their logistical operations are as effective and slick as possible.

That can be easier said than done when it comes to oil and gas, where the large-scale nature of many of the projects mean that oversized, heavy loads have to be delivered in a speedy fashion to often remote and harsh areas. That trend is only likely to continue as operators move to



↑  
Large-scale projects have complex supply chain challenges.

↗  
Rod MacGregor, CEO, GlassPoint.

even more challenging environments, whether in deep-water or exposed in the desert.

A prime example of that is the Miraah project in the Omani desert, where GlassPoint and Petroleum Development Oman are working on a 3sqkm solar project, which will produce steam for thermal EOR. Speaking to *Oil & Gas Middle*

**“THERE ARE A NUMBER OF CHALLENGES WHEN IT COMES TO LOGISTICS IN OIL AND GAS IN THE MIDDLE EAST, INCLUDING REMOTE LOCATIONS THAT OFTEN HAVE INADEQUATE INFRASTRUCTURE, AND HEAVY OR OVERSIZED EQUIPMENT.”**



*East* about the challenges posed by the project compared with other sites around the world, Rod MacGregor, CEO of GlassPoint, said: “The main challenge that sticks out in my mind is that most of our projects in North America are close to a city; people come to work in the morning and the go home at night. If you forget something, you can either just bring it back the next day or go to a store down the road and buy it.

“In this project, as is the case with a number of projects in the Gulf, they’re in the middle of nowhere, and that means people can’t go home at night. It means you have to create work camps, so people can live and work in the middle of the desert, so you need food, air con, water, doctors – it’s a bit like a military operation and if you forget something, that’s too bad.

“It’s a ten hour drive from Muscat, so you have to make sure you have everything there, as having a load of people in the desert with nothing to do is not very cost effective. The logistical challenges are huge.”

Picking up on the theme, Vinodkumar Raghohthamarao, oil and gas expert, professional services, MEAI for Epicor, said: “There are a number of challenges when it comes to logistics in oil and gas in the Middle East, including remote locations that often have inadequate infrastructure, strict regulatory compliance, and heavy or oversized equipment.

“But aside from those obvious hurdles, oil and Gas logistics presents complex supply chain challenges. Transportation involves special equipment, strict regulatory compliance and extensive safety procedures and processes. In addition, there will be inevitable spikes in demand, greater



# \$14.39BN

**THE OIL AND GAS SECTOR TRADE IN JAFZA HAS SEEN 462% GROWTH IN THE LAST 10 YEARS GROWING FROM \$3.1BN IN 2005 TO \$14.39BN IN 2014**

urgency and risk of rig downtime and its consequences.

“Logistics companies also have to consider managing the just-in-time requirements of drill sites or ensuring safety compliance. There are a number of critical challenges that plague the oil and gas logistics industry.”

But despite the challenges and the low price of oil, there are reasons for those in the sector to be optimistic. This was evident at the recent ADIPEC 2015 event in Abu Dhabi. The Jebel Ali Free Zone (Jafza), the flagship free zone entity of Dubai and a trade and logistics hub for the wider Middle East region, has received huge interest from oil and gas industry leaders based in the North Sea region.

Particular interest came from the UK, Denmark and France at the recently concluded ADIPEC. These companies are looking forward to estab-

lishing their presence in the wider Middle East region, which still remains an expanding market despite significant fall in oil prices.

The trade promotion officials from Japan and Malaysia also had a meeting with Jafza officials at ADIPEC to explore opportunities for enhancing bilateral trade relations between them both in oil and non-oil sectors.

“The strong interest of companies in oil, gas and allied sectors from England, Scotland, Denmark and France in Jafza reinforces not only the Free Zone’s status as the trade and logistics hub for the wider Middle East region in the oil and gas sector but also Middle East as a dynamic region for the oil and gas industry, despite steep decline in the oil prices,” said Sultan Ahmed Bin Sulayem, chairman, DP World and Ports, Customs and Free Zone Corporation.

The oil and gas sector trade in Jafza has seen 462% growth in the last 10 years growing from \$3.1bn in 2005 to \$14.39bn in 2014, Bin Sulayem added.

It’s impossible to reflect on the oil and gas business without analysing the effect if the oil price. Whilst it cannot be sensibly argued that the fall has been a positive thing for the industry, it does seem that some sectors – or, at least, companies



→  
The pilot 'Miraah' project, by PDO and GlassPoint, is in the middle of the Omani desert.



**“COMPANIES ARE HAVING TO LOOK AT THEIR COSTS BECAUSE OF THE OIL PRICE, SO WHEN THEY GO OUT TO TENDER, WE APPEAR ON THE RADAR. WE TRY TO FIND WAYS OF BEING MORE COMPETITIVE.”**

↑  
(Left) William Hill,  
executive group  
vice-president  
– oil and gas,  
GAC and (right)  
Vinodkumar  
Raghothamarao,  
oil and gas expert,  
professional  
services, MEAI for  
Epicor.

in those sectors – may at least derive opportunities that they did not previously have as a result of the decline.

Speaking to *Oil & Gas Middle East*, William Hill, executive group vice-president – oil and gas, GAC, said: “There is some upside to the low oil price for us. There are a lot of oil and gas customers worldwide that have been doing the same thing for many years [when the oil price was high]. We’re coming in with a co-ordinated approach and we have other capabilities and services, such as warehousing and trucking.

“Companies are having to look at their costs because of the oil price, so when they go out to tender, we appear on the radar. Because of the services we have from other industries we try to find ways of being more competitive. That’s not to say we’re the cheapest, but that we approach things in a different way than has been done before. That’s the opportunity, which is to bid for work, which wasn’t happening so much before – people weren’t bidding. Now they have to, because their prices need to come down.” ○



#### ETIHAD RAIL/ADNOC

Etihad Rail has transported more than 2mn tonnes of sulphur during the past year on behalf of the Abu Dhabi National Oil Company (ADNOC), in a major example of the GCC’s logistics capabilities.

Trials conducted by Etihad Rail’s operating partner, ERDB, ‘are now running on a daily basis’.

Faris Saif Al Mazrouei, CEO of Etihad Rail, said: “Transporting more than 2mn tonnes of sulphur in the past year during our testing and commissioning and trial operations phases is a very proud achievement for Etihad Rail, our operating partner, ERDB, and the UAE as a whole, as it clearly demonstrates Etihad Rail’s unique value proposition as a reliable, safe, and environmentally friendly mode of transport.”

“Our success to date would not have been possible without the tremendous support of our customer and partner, ADNOC. Going forward, we will continue to build on this success as we move towards our target of transporting more than seven-million tonnes of sulphur every year once we enter into full commercial operations,” he added.

Trials have been running on a daily basis since the completion of the 264km Stage One route last year.

Full commercial operations are expected to start shortly, once Etihad Rail is granted its regulatory approvals. In turn, the volume of sulphur transported by rail is likely to increase significantly from 2016 onwards.



# BASRA BOUNCING BACK

In his first interview since announcing plans to establish a company to foreign investment to Basra, Ali Al Faris, chairman of Oil and Gas Committee at Basra Council speaks to *Oil & Gas Middle East*

→ Basra has ambitious plans to become an energy hub in the Middle East.

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**T**he potential for Iraq's and Basra's energy reserves is obvious; Basra Governorate is home to 70% of Iraq proven gas reserves, estimated at almost 112tn cubic feet – the 12th largest in the world according to the US Energy Information Administration. Basra also contains 59% of the Iraq oil reserves.

However, Basra's fields have suffered from years of neglect, sanctions and war.

But there is a renewed determination to realise the potential of these fields once more.

Basra Council – the political authority for Iraq's economic capital – has announced that it is in the process of establishing Basra Company, to attract foreign direct investment in key sectors, including oil, gas and infrastructure.

Speaking at the Basra Oil, Gas and Infrastructure Conference, officials from Basra Council and Basra Governorate announced plans to develop under-utilised and degraded oil and gas fields, as well as a range of new infrastructure projects.

In his first interview since the announcement, *Oil & Gas Middle East* spoke with Ali Al Faris, chairman of Oil and Gas Committee at Basra Council.

**Could you discuss in detail about your plans about this new company? Is this new company going to be exclusively focused on oil and gas and its production?**



Initially, the focus of Basra Company will be on the development of Basra's energy sector (oil, gas and electricity) and related activities including production, refining, transport, distribution and marketing. In the future, we plan to invest in renewable energy such as solar and wind. Beyond the initial focus on energy, there is a need to invest in infrastructure across the board, including water desalination, roads and highways, sewage, highways and specialised hospitals and education, as well as transport and construction.

Finally, we are looking to inject investment in underperforming factories and industrial facilities and restructure them so that they are managed efficiently and can become commercially viable.

**Given the current downturn, do you think this is a good time for the Basra Council to enter the oil market?**

Absolutely. The federal government is currently moving to adopt new economic policies to encour-





↑  
Basra is a far  
more secure  
place than it was  
in past years

age decentralisation and privatisation, so we need to put the right legislation and infrastructure in place to meet that change. Basra Company is the vehicle through which the provincial government will optimise resource utilisation (e.g. increase oil productivity) for the benefit of the all Iraqis.

**What kind of investment are you talking about for this new company?**

We don't have official figure at the moment. However, the size of the investment will depend on the appetite of investors who wish to partner with us. Economic and financial feasible studies will have a key role to play in predicting the size of the financial investments Basra Company requires to achieve its desired goals.

Initially, we expect that we will be looking at investments of \$100mn at the low end – going up to \$700mn or even \$800mn.

**What is your biggest source of finance? Is this company going to be funded by the government, namely the Basra government or Iraq's federal government; in other words a publicly-owned company?**

We are studying a range of options for financing, including partnerships with local and international investors to finance the projects of Basra Company, which could be wholly owned by the council or in partnership with South Oil Company and South Gas



# 12MN BPD

**IRAQ HAS A GOAL OF PRODUCING 12 MILLION BARRELS OF OIL PER DAY BY 2020.**

→  
A number of stakeholders at the recent event in Basra.

Company, as well as other local companies. An IPO is also being considered to allow Basrawis to own shares in the company.

**Are you looking at partnerships with private enterprises and corporations? There are a number of them operating in the region. Are you looking at a Public-Private Partnership (PPP) model?**

Yes. At the moment we are exploring all possibilities. Basra has enormous advantages in terms of geographic location and resource availability. We also have huge needs if we are going to meet the needs of Basra citizens. It makes it a very attractive proposition for investors.

**Are you looking to float the company's shares on any of Iraq's stock markets? If yes, which one?**

Again, we are exploring all possibilities at the moment and looking at the best way to structure investments. An IPO would certainly enable us to ensure that Basrawis are able to have some ownership over and benefits from the company.

**I am sure Basra is an energy-rich region, hence this plan of forming a new company. So how much of oil and gas reserves does Basra have?**

Basra Governorate is home to 70% of Iraq's proven gas reserves, estimated at almost 112trn cubic feet – the 12th largest in the world according to the U.S. Energy Information Administration (EIA). Basra also contains 59% of Iraq's oil reserves estimated at 67.7trn barrels.

**So is this new company going to drill just oil or produce gas as well? What will be your focus?**

Initially the company will develop the oil fields operated by South Oil and gas fields that are not yet subject to licensing rounds.

**How do you plan to tackle competition from regional rivals? Saudi Arabia, the GCC as a whole and now even Iran joining the party in its post-sanctions era?**

We exist in an increasingly competitive global



landscape. But that can actually bring advantages. Much of the world's energy infrastructure is already geared around the Gulf, so our geographic location is a huge benefit. Nonetheless, we recognise that we need to build a world-class company, which is why we are so keen to partner with the world's most respected companies and experts. We believe that Basra Company can help to position Basra as a leading hub for business and trade in the region.

**How about the security factor? IS has already cast its eyes on Basra, attacked it several times. They are also known to have a key interest in oil-rich regions to fund their war machine. How would you counter the ISIS threat and build confidence among your investors and customers alike?**

The security situation in Basra has been stable for

**“WE RECOGNISE THAT WE NEED TO BUILD A WORLD-CLASS COMPANY, WHICH IS WHY WE ARE SO KEEN TO PARTNER WITH THE WORLD'S MOST RESPECTED COMPANIES AND EXPERTS.”**



→ Ali Al Faris announces the new Basra Company

→ Delegates at the event were able to view the information in both Arabic and English



some time. As economic initiatives, like the establishment of Basra Company, come to fruition, the situation will only improve.

On countering ISIS and other terrorists specifically, our armed forces are taking the necessary steps to counter all attacks and are achieving remarkable success in their efforts to ensure stability and security in Basra.

**Oil & Gas Middle East has seen a report that Iran is planning to export gas to Kuwait through Basra. How far is it true? Could you elaborate? Is this part of a larger Iraqi stance to help its neighbour Iran in recovering its lost oil market share?**

I'm not party to the deal, so cannot comment on the specifics, but it is certainly great news for Basrawis and Iraqis to be involved in positive economic development projects with our neighbouring countries. We have a long history of constructive political, economic and social ties. We welcome cooperation which serves all parties.

**What is your opinion of the oil and gas industry's future? Any predictions? Many believe that oil prices will pick up in 2016, while others maintain that it will remain the same or even fall further; your opinion?**

Regardless of current market conditions, there is a consensus that oil and gas will remain important commodities and major sources of energy for the world. That is why many producers are still injecting investments in oil and gas industry. We need to invest in developing the capabilities of our current fields to increase productivity.

**Why is Iraq, or the OPEC as a whole, not cutting its oil output? What is the strategy behind this?**

The production ceiling is under the jurisdiction of the Federal Government. Iraq's target oil output is 12 million bpd by 2020.

Basra Company's planned activities to invest in oil and gas will be in accordance with the strategy and plans of the federal government to meet this target.

**Which GCC countries are you planning to do business in?**

We will work with everyone in order to achieve our goals in developing Basra province. We will not veto any party from investing, unless there is a legal impediment that prevents us from dealing with them or prevents them from entering Iraq. ○





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# SULTANATE BUOYANT DESPITE DOWNTURN

**Despite plummeting oil revenues and economic troubles, the government in Oman has resolved to continue investing in the nation's oil and gas sector, as industry majors move ahead with existing and new projects in 2016**

WORDS: INDRAJIT SEN

## HEAVY OIL CHALLENGE FOR OMAN

Much of the country's hydrocarbons can be costly to produce, as they require EOR techniques.

**T**he Sultanate of Oman, which depends on the oil and gas sector for as much as three-quarters of its income, has seen its economic health weaken last year, with total revenues dropping by 35.9% in the first nine months. Revenues from oil at the end of January 2016 – recorded at \$10.92bn – have nosedived by 45.5%, when com-

pared to \$20.28bn during the same period in 2014, according to official data.

Over 1,600 Omanis working in the country's oil and gas industry have lost their jobs in recent months, according to reports, fuelling trade unions to threaten a strike on Oman's National Day on November 18. Although the strike was later called off after the aggrieved parties said they received 'substantial assurances' from negotiators, the government has acknowledged that the industry is in trouble, when a ministerial committee, tasked with finding a solution to the mass layoffs, suggested that companies first lay off expatriate workers.

The Central Bank of Oman also recently cautioned that the main challenge faced by the country under the current fiscal turmoil (the country's budgetary deficit is estimated to widen by up to 15% of its GDP in 2015) is to avoid any slowdown in economic growth and diversification, along with

**BLOCK 41 WAS RELINQUISHED BY TOTAL, AS THE COMPANY COULD NOT JUSTIFY CONTINUING OPERATIONS AFTER STUDYING THE BLOCK IN DEPTH. THE MINISTRY IS REVIEWING THE MARKETING STRATEGY FOR OPEN BLOCKS THAT WERE NOT SUCCESSFUL IN THE PAST.**

→  
Hamad Al Rumhy,  
Oman's Minister of  
Oil and Gas

the need to increase employment opportunities.

Despite these hardships, Oman has proved to be resilient. "Oman has shown a great deal of resilience in the past particularly between 2000 and 2007, when production fell by more than 26%," Ryan McPherson, general manager – Middle East of ProSep, which works with state oil giant Petroleum Development Oman (PDO), said in retrospect. "Earlier this year oil production increased to record levels, exceeding 1mn bpd (barrels per day). This achievement is quite remarkable and is a real example of how production can be maximised by embracing new technologies."

Moreover, the government has maintained that it has not been deterred by the financial perils caused by the declining oil prices and has revealed that it will press ahead with investments in drilling and exploration in the oil and gas sector by launching new strategic projects.

In an interview to a local Arabic daily, Mohammed bin Hamad Al Rumhy, Oman's Minister of Oil and Gas, said his ministry was implementing important projects in cooperation with oil majors operating in the Sultanate 'to add value to projects, which was aimed at boosting employment and training'. He expressed confidence that the country's oil reserves were sufficient to continue pro-



duction for 'several more decades', with the present extraction being just 7% of the total reserves.

The Omani government was expected to spend over a billion dollars for oil and gas exploration in 2015, although another estimate says the actual expected spending on government projects to develop and expand gas facilities and utilities by the end of 2015 stood at about \$5.61bn. Al Rumhy also pointed out that the ministry has invested in many development and infrastructure projects.

### Oil and gas projects galore

The Sultanate has announced or started numerous projects in 2015, with PDO leading the way. The state-owned oil major, apart from its pioneering Miraah thermal enhanced oil recovery (EOR) project in southern Oman with GlassPoint Solar, has also announced four successful EOR field development projects in Marmul, Qarn Alam, Amal West and Harweel. PDO plans to invest up to \$40bn in EOR projects by 2018-19 to increase its production from around 570,000bpd to 600,000bpd.

The state-owned Oman Oil Company Exploration & Production (OOCEP) also plans to invest up to \$4bn over the next five years to boost output. "For us, low oil prices are an opportunity. We have ambitions internationally to acquire companies and enter joint ventures," COO Suleiman al-Zakwani said in Doha in December.

"We plan to spend between \$2-4bn," he said, adding that OOCEP was looking at opportunities in the Middle East, South Asia and mainland Europe, and would be raising its own funds for expansion from the first quarter of next year. Zakwani did not give a precise time frame for the investment drive but said it was part of an effort to reach production





of 200,000bpd by 2020. OOCEP's projected oil production for 2016 was 30,000 to 50,000bpd, he said.

As huge investment is required to drill crude oil in view of the peculiarly difficult nature of reservoirs in the country, the Omani government has been encouraging multinational firms and to undertake exploration to find new reservoirs on a production sharing basis, in a move to sustain production levels.

"Public-private partnership has paid well and resulted in developing standard criteria for the in-country-value (ICV) for the oil companies tenders. The Ministry is considering implementing a number of important projects, including coordination with oil companies to implement an e-system for reporting ICVs by oil and gas sector," Al Ruhay said in the interview.

An earlier local media report said the Omani government has planned to award Block 7 in central Oman 'to an international oil company.' This decision followed authorities awarding Block 54 to Oman Lasso Exploration and Production Karwan in September. Petrogas Kahil, the Omani subsidiary of Petrogas E&P, also announced that it will invest \$40mn in exploring onshore block 55 in south-eastern Oman.

Lebanese oil company CCED also recently invested \$900mn in seismic survey for Block 3 and 4, and said it aims to increase production from

Money is still being invested in the country's oilfields.



# \$900MN

LEBANESE OIL COMPANY CCED ALSO RECENTLY INVESTED \$900MN IN SEISMIC SURVEY FOR BLOCK 3 AND 4.



33,000bpd to 50,000bpd. Meanwhile, Masirah Oil was awarded Block 50 and the company announced it successfully reached the well target depth of over 3,000 metres in the second exploration well in block. 'Hydrocarbons were discovered in several formations with good oil sample extracted', a company statement said.

However, the only setback to Oman in its block awarding programme may have come in April 2015, when "Block 41 was relinquished by Total, as the company could not justify continuing operations after studying the block in depth. The ministry (of Oil & Gas) is reviewing the marketing strategy for open blocks where exploration activities were not successful in the past. This could include executing data-gathering programmes before pushing blocks back on the market," Sudhakar R Rao, managing director of Dubai-based trading enterprise Gemini Energy, told *Oil & Gas Middle East*.

Meanwhile, Oman's National Centre for Statistics and Information in a report said the Sultanate's spending on oil and gas production increased by 23.2% and 95.2% respectively, in an apparent indication that the nation is now looking to boost gas production, more than oil. "Cost of production of gas is cheaper when compared to production of oil in the Sultanate of Oman," Rao said.

As a result, the number of gas projects announced in 2015, outweighed those focussed on oil. PDO has awarded an engineering procurement and construction (EPC) contract to the Spanish joint venture of OHL Industrial and engineering group SENER for modernisation of the Saih Nihayda Gas Plant and the Saih Rawl Central Processing Plant. It also awarded Petrofac a \$900mn EPC contract to develop the Yibal Khuff gas field.

Earlier in the year, BP Oman entered into an Exploration and Production Sharing Agreement (ESPA) with OOCEP to explore the commercial viability of the deep tight gas reservoirs in the Khazazan project in northern Oman's Block 61. The proposed facilities include development of the greenfield tight gas project, a 1,200mn standard cubic feet of gas per day (mmscfd) processing plant, export pipelines, provision of 300 to 400 wells, 600km of flow lines and gathering systems over the life of the project.

OOCEP has also opened a \$1.3bn tight gas processing plant at the Abu Tubul field in Oman. Zakwani said OOCEP's gas production in 2015 would fall short of a target of 70mmscfd, but the company



**“OMAN HAS SHOWN A GREAT DEAL OF RESILIENCE IN THE PAST PARTICULARLY BETWEEN 2000 AND 2007, WHEN PRODUCTION FELL BY MORE THAN 26%. EARLIER THIS YEAR OIL PRODUCTION INCREASED TO RECORD LEVELS, EXCEEDING 1MN BPD ”**

↑  
Ryan McPherson,  
general manager  
– Middle East of  
ProSep

had not slowed down any of its major projects, ‘at least one of which was running at a loss’.

Oman too is pressing ahead with its sour gas production and has two major sour gas processing projects. One is at Yibal Khuff Sudair and is a deep oil and associated sour gas deposit beneath an existing field, with an H<sub>2</sub>S content of 3%. Being developed by PDO approximately 350km southwest of Muscat, the 85,000 t/a sulphur recovery plant is due for completion this year, and commissioning of the gas project is expected in 2019. PDO has also awarded Petrofac the EPC contract for Yibal Khuff.

Oman’s other major sour gas project is the Rabab Harweel Integrated Project, one of the world’s largest miscible sour gas injection projects, for which PDO won the ‘Best Oil and Gas Mega Project’ award at ADIPEC 2015. The project in southern Oman is being developed jointly by PDO and Occidental, and is expected to produce 173mcf per day of gas containing about 4% of H<sub>2</sub>S, by 2019.

### The way forward

Oman has also planned several ambitious oil and gas projects in 2016. Significant among them is the \$6bn-worth Duqm Oil Refinery development project, which is being developed by the Duqm Refinery and Petrochemical Industries Company, a 50:50 joint venture of Oman Oil and Abu Dhabi’s International Petroleum Investment Company (IPIC).

In March 2015, Amec Foster Wheeler was awarded the Front-End Engineering Design (FEED) contract for the project. The first phase will see the development of a 230,000bpd grass-roots merchant export refinery within the Duqm Special Economic Zone (SEZ). Designed as a full conversion refinery, the plant will use delayed coking technology for bottom-of-the-barrel processing. The second phase is being planned as an associated petrochemical complex.

Despite the low oil prices, Oman’s oil exports reached 232.5mn barrels during the first nine months of 2015, with annual increase of 5.7%, according to NSCI data. Exports comprised 87.1% of the total output, compared with 85% for the same period last year. China still ranked at the top of the Omani crude oil-importing countries with a 79.9% stake during the first nine months of 2015.

The Sultanate has also leveraged its working relationship with Iran to strike a considerably im-



→ Stuart Douglas,  
Regional Manager - Middle East,  
PetroTechnics

portant LNG deal. The two countries are expected to soon sign a formal agreement to pump natural gas to Oman to liquefy it and then export it to international markets, mainly in Europe and Asia, while a portion of these supplies would also be used to meet the growing demand for gas in the Sultanate.

According to the MoU which Oman and Iran's energy ministers signed in 2012, the two countries agreed to build a 200km pipeline underwater gas pipeline across the Arabian Gulf, to transfer gas from Iran's Kish field to Oman. As part of the first phase of the project, Iran will export 1mn cubic feet of gas to the Sultanate, and plans to eventually raise it to 3bn cubic feet per day.

On the domestic front, and as another sign of the Omani government's grit to battle the tumultuous economic situation, authorities have insisted that the Sultanate will not remove subsidies on fuel, including petrol and diesel, which are estimated to have cost the exchequer \$2.34bn in 2015, compared to \$2.18bn in 2014.

As a populist measure, Darwish Bin Ismail Al Beloushi, Minister Responsible for Financial Affairs, while asserting that the government had no plans to repeal its fuel subsidies policy, recently told the Shura Council (parliament) 'that living standards of citizens were guaranteed'.

"Oman still is, and will continue to be, a key player in the Middle East," McPherson said. "Operators globally are working a process to maximise their current reserves, and in Oman operators will need to look at reducing OPEX to ensure they are recovering reserves in an efficient and cost effective manner."

Companies have started taking heed of the need to cut down on expenses and adopt technology for operations. Separate to spending on acquisitions,



Zakwani said OOCEP has planned to cut capital expenditure in 2016 by 10% and operating expenses by 20%, against a backdrop of lower crude prices.

Contractors and service providers seem to have a bullish outlook of Oman's oil and gas sector. UK-based software services firm PetroTechnics says 'Proscient', its latest flagship product for the upstream, midstream and downstream segments, has garnered strong interest from clients in Oman.

"We will be continuing to work with our major customer in Oman who will be continuing to deploy Proscient across their assets in 2016. They will also be looking to potentially bring on new capabilities within Proscient to visualise and manage operational risk and expand their use of mobility in their operations. We are also working on a number of other opportunities to help other customers make better operational decisions with Proscient's new way to visualise and manage risk and activity," Stuart Douglas, Regional Manager - Middle East, PetroTechnics, said.

Gemini Energy recently signed a 5-year deal with the Oman Oil Refineries and Petroleum Industries Company (ORPIC) to sell energy sector-related software products by its client, major EMc2.

"Our overall operations in Oman remain strong and we see a very promising future for the country's energy sector," Rao of Gemini Energy said. "The Sultanate of Oman is the second largest country in the Middle East and its importance in the oil and gas sector cannot be undermined." ○



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# INDUSTRY INNOVATIONS

## Ship handling simulator

**MARITIME** Halul Offshore Services Company, a wholly-owned subsidiary of Milaha, has recently procured an Offshore Support Vessel (OSV) Ship Handling Simulator, in Qatar. Halul claims it is now one of the few companies in the GCC to own the Netherlands-built simulator, which is normally used in training schools. “This simulator will significantly add to our crew’s ship handling skills, and help them become better prepared for their next assignment on board our fleet of over 40 vessels,” Vivek Seth, Halul’s CEO, said.



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## NEW LAUNCHES

*A round-up of some of the best releases this month*



### DRILLABLE TURBINE TOOLS

Deep Casing Tools says demand for its recently launched drillable turbine tools has been growing in the Middle East, where it has been awarded an order ‘in excess of’ \$4.7mn, the largest ever secured by the company. The company has provided over 300 Turbocaser Express and Turborunner tools for casing and completions respectively. The Turbocaser Express established a new record for one operator by reaming 3352m through challenging trouble zones to successfully land at 6350m depth. Deep Casing Tools provides drillable turbine tools which enable casing and completions to be landed at target depth to improve the efficiency and reliability of wells.



### COST EFFECTIVE INSPECTION

Seatronics, an Acteon company, has successfully completed a project with marine services organisation Meridian Ocean Services in Mexico. The aim of the project was to inspect and chart existing pipelines along the coast of Ciudad Del Carmen, and required a full survey equipment spread utilising a Forum Comanche ROV. Seatronics proposed the implementation of the RTS Gen 5 Multiplexer as a suitable solution for the identified issue. The technology provided by Seatronics enabled Meridian to run the equipment while utilising the Comanche’s native 300 voltage direct current (VDC) power supply. Additional buoyancy was also added by Meridian.



### EMISSION CURBING VALVES

Parker Bestobell Marine, a supplier of cryogenic globe and check valves for ships, has secured a second order to supply its globe and check valves that will be used in the LNG fuel gas system on the second ferry being built for Swedish owner Rederi AB Gotland. This contract follows Parker Bestobell Marine securing the order to supply valves to the first Gotland Ferry, earlier this year. The ferries will sail between the Swedish mainland and the island of Gotland. By using LNG as its primary fuel source, the ferries will make significant reductions in their emissions of NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub> and particulates, allowing them to comply with the latest IMO Tier III regulations.

# STP delivers storage system to LukOil

NetApp system offers unified storage system on virtual infrastructure



**DATA STORAGE** Dubai-based IT firm STME has provided LukOil with a unified storage system to meet their increasing virtual infrastructure demands. The need for a new solution arose on account of LukOil's growth resulting in increased storage requirements. "At STME, the organisational nature, culture, immediate requirements and trajectory based on the organization's growth and development is considered. It is important to plan for the future scalability of our solutions," Ayman Al Bayaa, CEO of STME, said. The solution implemented was based on the NetApp FAS8060 HA Dual Controller Storage System which is a leading industry standard for unified systems, providing both SAN and NAS capability and scalability with Cluster Data ONTAP, and 50TB usable performance storage capacity. The main challenge during implementation of the system was the migration of data and scalability from the existing system.

# THREE REASONS TO BUY

OTC and Hecate Software introduce new digital pressure testing software



## 1 ANALYSIS

➤ The digital pressure testing software suite which provides reliable pressure analysis and compliance oversight. Greenlight uses proprietary algorithms to conduct, analyse and document a wide variety of pressure tests. Greenlight does not require benchmark testing for a baseline reading, thereby streamlining overall testing time.

## 2 USER-FRIENDLY INTERFACE

➤ The software's user-friendly interface allows for easy onsite annotations and test associations, analysis and reporting. All test results can be thoroughly reviewed by OTC's team of highly experienced petroleum engineers and compliance professionals to ensure regulatory compliance and documentation accuracy.

## 3 DEMO AND TRAINING

➤ OTC offers Greenlight software demonstrations and training for end users at its training centre, as well as 24/7 support which can be accessed through OTC's call centre and operations team. OTC's core business revolves around providing compliance-related services, including regulatory compliance inspections, competency assessments, training and other services.



# SELLING POWER

Amit Yolan, president, on RSA Archer's new Government, Risk and Compliance (GRC) platform

### 1. TALK ABOUT THE GRC PLATFORM'S FEATURES?

New features are engineered to include a walk-up friendly, task-driven user interface and drag-and-drop advanced workflow capabilities to make risk management easy and effective for all 'three lines of defence' – business users, risk managers, and the audit team.

### 2. HOW DOES THE PLATFORM HELP ORGANISATIONS REDUCE RISK?

RSA Archer GRC's new advanced workflow capabilities also are built to enable risk managers and business unit managers to quickly adjust risk management processes without touching a line of code, additionally creating cost and time saving opportunities.

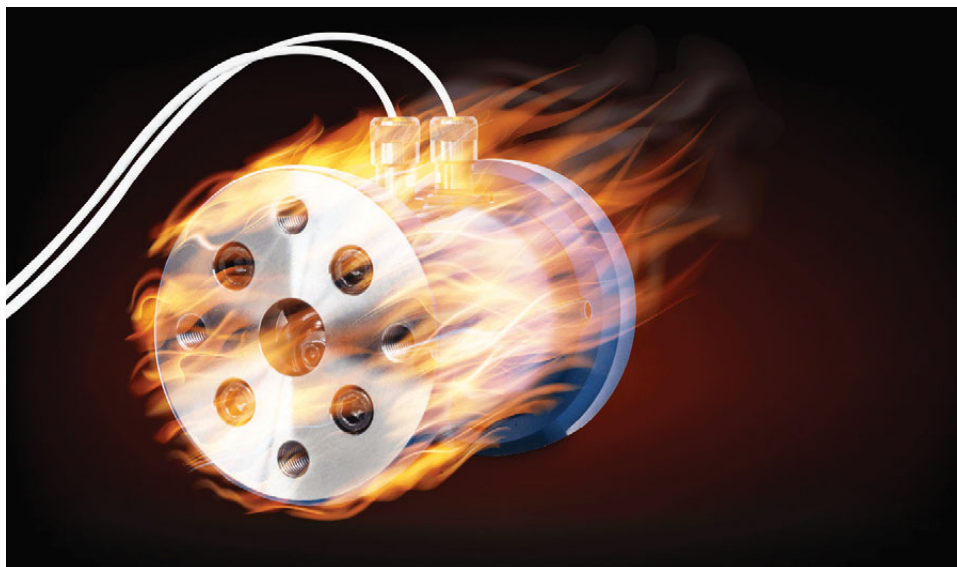
### 3. ANY ADDITIONAL FEATURES YOU WOULD LIKE TO HIGHLIGHT?

Additionally, RSA Archer Operational Risk Management is designed to make it easier for risk managers to manage assessment campaigns, track metrics and loss events, and report on risk with thousands of out-of-the-box reports, risk analytics, dashboards and an ad hoc reporting tool.



# High temperature sensors

Kral launches flowmeter OMP with high temperature sensors of up to 200°C



**SENSOR** Austria-based Kral has recently launched its new range of flowmeters, that are used for lubricating liquids and are fitted with high temperature sensors. The basis for accurate measurement is a core competency: the production of measuring screws and measuring housings to very low tolerances. Sensors limit the maximum operating temperature while the flow volume and direction of flow are registered by means of spindle rotation. In addition to the available standard model for temperatures of up to 125°C, the economically priced OMP series is now also available with high temperature sensors for up to 200°C. For applications requiring up to 250°C, the OMG series is still in the lineup. KRAL Volumeter deliver precision of ±0.1% of the measuring value.

#### REASONS TO HAVE:

- Customised for fuel consumption measurement application including booster module and burner/boiler.
- Flow range from 0.3 to 525 l/min.
- Standard model for temperatures of up to 125°C available
- Maximum operating temperature model for 200°C available. For applications requiring up to 250°C, the OMG series is in the lineup.
- Maximum design pressure 40 bar.
- Accuracy of ± 0.1%.
- PNP output.
- Standard with hybrid bearings. Robust and long life.

## PRODUCT FOCUS

AspenTech adds new enhancements to aspenONE Engineering Version 8.8 software

aspenONE V8.8.2 includes updates to the Aspen Economic Evaluation and the Aspen Exchanger Design and Rating (EDR) product families.

Aspen Capital Cost Estimator (ACCE) software includes the annual Cost Basis update for 2015, which is integrated into the entire Aspen Economic Evaluation suite of products.



ACCE V8.8.2 software allows users to accurately and quickly estimate the total cost of equipment, labour and related services in new markets and locations.

Aspen EDR software V8.8.2 conforms to the latest versions of design codes, including the American Society of Mechanical Engineers (ASME) and European standards.

#### WHERE CAN I BUY IT?

For more information visit: <http://www.aspentech.com/products/aspenone-engineering>

## ALSO IN STOCK



### EMERSON FISHER FIELDVUE DIGITAL VALVE CONTROLLER

*New valve controller offers better control and enhanced safety*

Emerson's Fisher FIELDVUE DVC6200 digital valve controllers are HART communicating, microprocessor-based current-to-pneumatic instruments with linkage-less, non-contact travel feedback. This instrument provides one platform for any pneumatic actuator application. The DVC6200 can be installed on sliding-stem, rotary, single- or double-acting actuators.



### MWCC CAPPING STACK

*The 10000 pound psi capping stack was first used in the US*

US-based Marine Well Containment Company's (MWCC) capping stack, can handle up to 10,000 psi. With a footprint of 9 ft by 9 ft, the 10k psi capping stack is easier to manoeuvre in areas where wellheads and riser systems are closely spaced, such as tension leg platform (TLP) applications where wells are beneath a floating production facility. The new dual ram capping stack can cap a well in depths up to 10,000 feet.

# Breaking ground in the industry

South Australian proppant tester LAB SA opens testing lab in Adelaide



## WHAT ARE PROPPANTS?

Proppants are made of high quality silica sand or ceramics and are used in fracking fluids.

## HOW BIG IS THE PROPPANT

### MARKET?

The global proppant industry is expected to grow to more than \$19bn a year by 2019.

## IS THE LAB IN OPERATION?

The new lab has so far tested silica sands for their proppant suitability for mining companies in the US and Australia.

**TESTING SERVICES** LAB SA has opened a new proppant testing lab in Adelaide to service the emerging unconventional oil and gas industry. The lab to test silica sand and ceramics for their fracking ability is helping LAB SA break new ground in the mining industry. Proppants are made of high quality silica sand or ceramics and are used in fracking fluids. LAB SA general manager Andrew Attard said the company had helped develop ‘shockcrete’ for mining companies at Olympic Dam in South Australia and Broken Hill. The new lab, which received \$100,000 in grant funding from the South Australian Government’s Mining and Petroleum Services Centre of Excellence, has so far tested silica sands for their proppant suitability for mining companies in the United States and the Australian states of Queensland, Western Australia and the Northern Territory.

## BURCKHARDT COMPRESSION GOING STRONG

### Company to host technical events in the GCC in January

As Burckhardt Compression gears up to open its second workshop in the GCC – in Al Jubail, Saudi Arabia, it is also starting a series of Technical User Group events to allow end-users with Reciprocating Compressors of every OEM and all four main types to get

together and discuss key topics to begin the process of finding the best ways to operate, maintain and monitor their equipment. “The busy but exciting programme, which covers three cities in Saudi Arabia and Abu Dhabi plus the capital cities in Kuwait, Qa-



tar and Oman across two consecutive weeks, brings product specialists together for this series of the Technical Events,” Chris Payne, regional sales

manager, who is coordinating the events management, commented. The events are being supported by senior management officials from

# Air Energi bags Qatar Petroleum contract

## Air Energi to supply contractor workforce for QP’s Bul Hanine redevelopment project

**SERVICE DEAL** Air Energi has secured a five-year deal to supply contract personnel to Qatar Petroleum for its \$11bn Bul Hanine redevelopment project. Located 120km from Qatar’s east coast, the project aims to double production rates at the offshore field, where Qatar’s National Oil Company (NOC) plans to drill an additional 150 wells through to 2028. The overall project includes the replacement and upgrade of existing offshore production facilities and the development of a new onshore natural gas to liquids processing plant in Mesaieed. The deal has a two-year extension option and will see Air Energi source candidates across industries, including engineering, construction and health, safety, environment and quality, with a peak of personnel required in 2017. “Air Energi has an excellent track record in working with Qatar Petroleum which, combined with our experience in both the local and international energy markets, made us a natural partner for this project,” Andy Ryan, VP Middle East and Central Asia, Air Energi, said. “One of the main challenges of this project will be sourcing the calibre of personnel required.”





# Cyberhawk completes ROAV tank inspection

UK company claims the aerial internal tank inspection in the UK North Sea was the ‘world’s first’

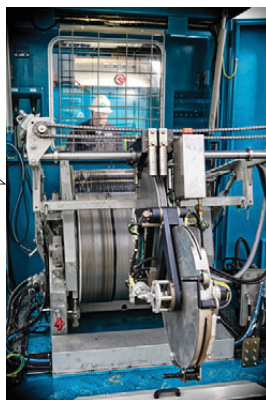


**ROAV** UK-based Cyberhawk Innovations has announced that it has completed its first Remotely Operated Aerial Vehicles (ROAV) inspection of a cargo oil tank, owned by Maersk Oil. The ‘world’s first’ such remote inspection took place on board the Gryphon FPSO, owned and operated by Maersk Oil in the UK North Sea, the company said. Cyberhawk’s ROAV tank inspection allowed Maersk Oil to undertake a quick and safe audit of the tank, in turn allowing them to identify and more efficiently plan for any possible contact based inspections in tanks.

## PRODUCT FOCUS

*Expro wins five-year contract to provide its well intervention and slickline services in Qatar*

Expro’s range of slick-line products provide every slick-line capability from basic completion intervention applications to advanced services.



Expro provides the complete range of tool sets including spring jars, hydro mechanical jars and accelerators.

Complete fishing tool sets are available including spring jars, hydro-mechanical jars, accelerators and specialised fishing tools can be built for any application

Electric line services available to help customers understand and optimise well and reservoir production.

### WHERE CAN I BUY IT?

For more information visit <http://exprogroup.com/products-and-services/well-intervention/>.

## SELL IT TO ME

*Honeywell’s enhanced RTU2020 process controller simplifies management of distributed oil and gas assets*

**PROCESS CONTROL:** The RTU2020, enhanced with native redundancy, expanded input/output (I/O) modules, and wireless I/O, is a modular process controller that provides complete visibility into the most efficient utilisation of distributed assets through expanded remote monitoring, diagnostic and asset management. The unit is designed to withstand harsh environments and can be deployed at remote sites with very low power consumption (1.8 watts), which is ideal for use with solar power. It also allows for remote maintenance and cuts equipment monitoring and diagnostic time from hours to minutes.

**I/O COMMUNICATIONS:** The RTU2020 now increases availability through native controller redundancy – no switch is required for I/O communications. A new integrated onboard solution provides wireless I/O integration of ISA100 instruments, with no specialised module needed. ISA100 instruments appear as ‘native’ I/O to the controller. The RTU2020 controller’s 28 channels of onboard I/O can now be extended by adding one or more of the new 28 channel mixed I/O modules. Like the onboard I/O, the new mixed I/O module is HART-enabled. This approach contrasts with process controllers

requiring separate dedicated HART modules or external multiplexers.

**DESIGN:** RTU2020’s innovative design meets multi-well operational requirements in the oil and gas field, including electronic flow metering for gas per API 21.1 with per meter run licensing. Additionally, RTU2020’s flow calculations have been independently validated against Alberta Energy Regulator (AER) Directive 17. ISO equations have been added to the flow calculation library alongside the existing AGA and API based calculations.

**FEATURES:** Honeywell’s RTU2020 offers numerous best-in-class features, including removable and plug-in terminal blocks to simplify wiring and reduce time for cabinet assembly. Integrated with Honeywell’s Experion supervisory control and data acquisition (SCADA) system, it eases configuration over thousands of assets and enables operational efficiency with an advanced human-machine interface (HMI). Users gain perfect ‘20/20 vision’ into realising the production potential of their distributed assets. Honeywell’s distributed system architecture (DSA) allows multiple Experion SCADA servers to operate as one within a single asset or across the enterprise.



# GAC and ATPI tie-up for training

Companies claim to 'optimise crews' travel' amid new requirements in UK



**SERVICES** GAC Training and Service Solutions (GTSS), has signed an agreement with ATPI Griffinstone. The agreement will provide the first fully training and travel offering for seafarers and crew seeking mandatory training under the UK industry conventions.

#### WHAT DOES THE DEAL OFFER?

- Through the scheme, ship operators, managers and crewing agents can select a convenient location and create a travel, transfer and accommodation package.

## PRODUCT FOCUS

Baker Hughes' introduces Asphaltene Inhibitor to improve production flow in offshore rigs

Low-dosage FATHOM XT SUBSEA525 inhibitor that helps control asphaltene deposition in deepwater wells, providing better flow assurance and reducing remediation costs.



FATHOM XT inhibitor can be applied at low treatment levels during initial production and throughout the life of the well.

Inhibitor was designed and certified for offshore applications using a proprietary qualification protocol.

The low dosage rate simplifies supply logistics, reduces onsite storage and lowers handling risk.

#### WHERE CAN I BUY IT?

For more information visit [www.bakerhughes.com](http://www.bakerhughes.com).

## SELLING POWER

Peter Kirkbride, account manager, Costain on how the company helped Ithaca Energy save money



#### TALK ABOUT ITHACA'S PROJECT?

Costain has been working on Ithaca's Greater Stella Area Development in the central North Sea. The project is driven by the recovery of approximately 60mn barrels of oil equivalent of proven and probable reserves for the GSA co-venturers, since 2010 and will be supporting the project, which is anticipated in mid-2016.

#### WHAT WAS COSTAIN'S INVOLVEMENT?

Costain's involvement started at the concept selection phase, continuing through the definition phase, developing project budgets and assisting in placement of the major contracts. The company then project-managed the subsea facilities, including the design, procurement, fabrication and installation of all of the

## ALSO IN STOCK



### N-KOM COMPLETES REPAIRS OF QATARI VESSEL RASHEEDA

*N-KOM completes MEGI retrofit for Q-Max vessel*



N-KOM has completed a major main engine gas injection (MEGI) retrofit for a STASCo-operated Q-Max vessel, Rasheeda, to run on LNG as an alternative fuel. The modified Q-Max vessel will have the world's first low-speed marine diesel engine that can also run on LNG. Integration and completion works was carried out at the shipyard, with modifications made using MAN Diesel & Turbo's proprietary ME-GI (M-Type Electronically Controlled - Gas Injection) system that will help vessel engines meet current and future emissions standards set by the International Maritime Organisation. The use of ME-GI as an alternative will allow a cleaner fuel technology with a significant reduction in environmental emissions, cleaner burning engines with potential to increase mean time between maintenance, providing flexibility of fuel supply to react to market changes.



# ON THE MOVE



## Ian Phillips

Chairman  
Society of Petroleum Engineers (SPE) Aberdeen

The Society of Petroleum Engineers (SPE) Aberdeen Section Board has elected Ian Phillips, CEO of the Oil and Gas Innovation Centre, as its new chairman. Phillips, a professional with over 30 years' industry experience has held positions within the SPE Aberdeen Section including chairman, treasurer and Continuing Education committee chair.



## Mario Vinicius Clausen Spinelli

Ombudsman-General  
Petrobras

Brazilian oil giant Petrobras

has selected Mario Vinicius Clausen Spinelli as its new ombudsman-general, as the company looks to strengthen its governance, in the face of a major corruption scandal. Spinelli, a professor with experience at the local government level, was one of several candidates chosen by international executive recruitment company Korn Ferry.



## Boris van Thiel

CEO – MENA  
thyssenkrupp Industrial Solutions

The thyssenkrupp Industrial Solutions business area has appointed Boris van Thiel (41) as the new CEO for the MENA regional cluster from December, 2015. In August 2014, van Thiel joined thyssenkrupp, where he was head of business development MENA in the Process Technologies business unit

until July 2015. Van Thiel has already been acting CEO of the MENA regional cluster for the past four months.



## Richard Devine

Partner – Dubai office  
Clyde & Co

Global law firm Clyde & Co has appointed Richard Devine as an energy partner to join the firm's corporate team in Dubai. Devine will spearhead the oil and gas group in MENA. With over 15 years' of experience, Devine advises on the entire spectrum of oil and gas matters, including upstream oil and gas, energy M&A, energy regulation and energy transportation. He has been based in Dubai for the past ten years and has previously worked in London and Cairo. He joins Clyde & Co from Baker Botts where he was a partner in the firm's global projects group.

## Euan Lockhart, CEO Oilfield Services Group

Appointment  
of the  
Month

Stockton-based OES Oilfield Services Group has appointed Euan Lockhart as its new CEO. Lockhart recently served as CEO for Middle East and Africa for ASCO Group and has substantial experience in the oil and gas and facilities management service sectors. OES has global offices including in the UAE, UK, USA, Brazil, Mexico, Saudi Arabia, Abu Dhabi, Singapore, Indonesia, Malaysia and India. "I am delighted to be joining the OES team at an exciting point in the timeline of the business," Lockhart said. "Whilst market conditions in oil and gas remain testing, the OES people, brand reputation and innovative customer solutions have placed OES in an excellent position to deliver business growth, through technology, safety focused, cost effective solutions for our clients." Richard Upshall, OES executive chairman, added: "Euan brings to OES invaluable knowledge and experience for the current market, very much focused on technology, value-adds and performance and I very much look forward to having him work with our exceptional team."



Euan Lockhart

## JOBS

# NOTICE BOARD

The latest jobs available in the oil and gas industry

### QUINN & MCGRATH, KSA

#### Project QA/QC Manager

Quinn & McGrath Services is looking for a Project QA/QC Manager (oil and gas) to work for a EPC division of a Western main contractor in Jizan, Saudi Arabia. Previous experience in Aramco projects will be considered as a plus.

### KENTZ, QATAR

#### Quality Control Inspector

Kentz currently has requirements for Quality Control Inspectors for its operations in Qatar. Civil, Piping and Welding Inspector are asked to apply. Key role is to attend all inspections as per the Inspection and Test Plan (ITP).

### ADNOC DISTRIBUTION, UAE

#### Projects Planning Engineer

The experienced candidate, to be based out of Abu Dhabi, must be proficient with planning software, must have an engineering degree, and have Project Management Certification – PMP or equivalent.

# Kuwait replaces oil minister ahead of OPEC meeting

CAREER NEWS

**CHANGE OF GUARD** Kuwait named Deputy Prime Minister Anas Al Saleh as acting oil minister to replace Ali Al Omair who became minister of public affairs and retained his role as state minister for parliamentary affairs, according to an official decree. Al Saleh, born in 1972 and holder of a bachelor degree in business administration from Portland University in the US, is also Finance Minister, according to the official news agency *Kuna*. The change in portfolio came days before Omair was due to represent Kuwait at the OPEC meeting on December 4 in Vienna. *Kuna* did not say why Omair was leaving the oil minister's post. Sources had earlier told *Reuters* that Omair was expected to be replaced; he had tried recently to introduce some changes to the management of state oil companies but was blocked. Omair swapped the chief executive officers of state companies Kuwait Oil and Kuwait Foreign Petroleum Exploration, unit known as Kufpec.



**ALI AL OMAIR HAD TRIED RECENTLY TO INTRODUCE SOME CHANGES TO THE MANAGEMENT OF KUWAIT'S STATE OIL COMPANIES, BUT WAS BLOCKED.**



## World Energy Council selects UAE's Neyadi for key post

**ACCLAIM** The World Energy Council (WEC) has selected Dr. Matar Al Neyadi, Under-Secretary of the UAE Ministry of Energy and Co-Chair of the UAE National Committee for the World Energy Council, as vice chairman for the Gulf States/Middle East for a three-year term. In his new capacity, Neyadi will represent and support the WEC's expansion and activities in specific regions. Vice chairmen are elected for a three-year term from nominations submitted to the Executive Assembly by the Chairman. Abu Dhabi will host the 2019 World Energy Congress to become the first OPEC member state to organise the high-profile energy forum.



## Sharjah Ruler appoints Secretary-General for Sharjah Oil Council

**OFFICIAL DECREE** His Highness Sheikh Sultan bin Mohammed Al Qasimi, Supreme Council Member and Ruler of Sharjah, has issued an Emiri Decree appointing Hatem Mohammed Diab Al Mousa as the secretary-general of Sharjah Oil Council, at the level of Director-General, and as executive director of Sharjah National Oil Corporation (SNOC). HH Sheikh Sultan established the SNOC through an Emiri decree in November 2010 to take over its share in the Saja field concession. The SNOC is government-owned, but is financial independent and operates commercially. Its remit includes exploration, discovery and extraction.



## OPINION

# Responding to market dynamics

## In a challenging market, there is a definite advantage in having a breadth of products that provides flexibility, says Nicolas Head



“WELLS IN THE MIDDLE EAST CAN STILL BE OPERATED PROFITABLY, BUT FEWER PROJECTS CURRENTLY ARE MAKING THE TRANSITION FROM PLANNING TO EXECUTION.”

80

**About the author** ↑  
 Nicolas Head is the Business Development Manager Oil & Gas for UK-based Fine Tubes and US-based Superior Tube. He leads the Upstream / Topside Projects team as well as EPC sales worldwide and is also responsible for managing the appointed Middle East Agency network that represents both companies in the region.

**W**hile the fall in oil prices has led to reduced activity levels across the global oil and gas industry, its impact on the Middle East is more complicated to analyse than elsewhere.

Because the region has many of the world's lowest-cost extraction sites, the decline in activity has materialised more slowly than in other parts of the world.

Wells in the Middle East can still be operated profitably, but fewer projects currently are making the transition from planning to execution. Moreover, for a range of political and economic reasons, it is difficult to generalise about the region as a whole, since activity levels in some areas have been more greatly affected than in others.

Another distinct characteristic of the region is the relative maturity of many of its oil and gas fields. Projects initiated in the 1970s and '80s are now reaching the end of their working lives, creating opportunities for refurbishment

and upgrade projects utilising materials that, in many cases, simply were not available when the wells were first drilled.

So the question is: How should companies in the Oil & Gas supply chain react to this changing market dynamic in the Middle East? For UK-based Fine Tubes and its sister company, US-based Superior Tube, both suppliers of high precision tubing products for over 70 years, there are a number of answers to that question.

First, in a challenging market, there is a definite advantage in having a wide breadth of product offerings that provides the flexibility to offer customers exactly what they want. Both companies produce a wide range of custom-sized tubing in an

ever expanding range of corrosion-resistant duplex and super alloys, including 625, 825, 904 and 6Mo. Many are available in three different forms, seamless, welded, and welded and redrawn (Weldrawn®). The tubes are available in both coiled and straight lengths in sizes typically from 3 mm OD up to 31mm OD and designed for a wide range of applications:

#### **Downhole Hydraulic Control and Injection Lines**

- Bare line or encapsulated coiled tubing for downhole hydraulic and chemical injection lines in a range of stainless steel and nickel alloys

#### **Downhole Data Logging for Intelligent Well Completions**

- Welded and cold-drawn coiled tubing for the mechanical protection of Tubing Encased Conductor (TEC) and Tubing Encased Fibre (TEF) cables, control lines and sensing cables.

#### **Subsea and Umbilicals**

- Seam-welded and redrawn umbilical control line and chemical injection tubing, offering a lower-cost alternative to traditional seamless subsea umbilicals while delivering equal performance.

#### **Topside Control and Instrumentation**

- Special grade stainless steel and nickel alloy tubing used in the topside construction of offshore floating production storage and offloading (FPSO) vessels, floating liquefied natural gas (FLNG) platform, Spars and tension leg platforms (TLP's).

#### **Pressure Housing**

- Casing tubes for downhole drilling sensors used for directional drilling tools, including Measurements While Drilling (MWD) and Logging While Drilling (LWD).

#### **Subsea Control and Instrumentation**

- Tubing for critical control units for hydraulic pumps, subsea Christmas trees and manifolds deployed up to 2,000 me-



Nicolas Head.


tres under the sea with operating pressure ratings up to 60,000 psi.

A second important factor is having an established presence in the region. Fine Tubes and Superior Tube have a long-established network of local company agents representing them in five of the region's countries - Saudi Arabia, Kuwait, United Arab Emirates, Oman and Qatar. As in many businesses, it is critically important not just to be available but to be available locally.

Having that local presence has helped the two companies to undertake a wide range of major projects that have led to accreditation by many of the most important regional operators, including Saudi Aramco, Kuwait National Petroleum Company, Abu Dhabi National Oil Company and Petroleum Development Oman. Of course, those customer approvals are complemented by a wide range of quality systems approvals from ISO, Nadcap, Norsok and others.

A third factor to mention is the importance of adaptability. The more challenging the market conditions, the more important it is to be responsive to the most-specific requirements of any customer. Fine Tubes, which currently ships tens of thousands of metres of tubing from its Plymouth, UK, manufacturing facility to the Middle East each month, has lengthy experience in delivering exactly what is required when it is required to where it is required.

One final and vital point for any company seeking to win business in the Middle East is to demonstrate a long-term commitment to the region and its ongoing development. In addition to their already established records of working successfully in the region, Fine Tubes and Superior Tube can also point to the fact that they are now part of AMETEK, Inc., a global diversified manufacturing company with some 220 businesses worldwide. It already has an office in Dubai, and many of its businesses have long records of involvement in the Middle East's oil and gas industry. Potential opportunities for further involvement - looking many years into the future - are considerable.

Backed by a long record of product innovation that begins with the technological advances required for subsea developments in the 1970s up to the present day's deep water challenges, both Fine Tubes and Superior Tube have the product offerings, the local presence, the adaptability and the commitment required to continue supporting the region's economic development. 



## ANALYSIS

# New year...new UAE labour laws

## The UAE has issued three new decrees, to be effective from January 2016, for ensuring more transparency and flexibility for workers



THE DECREES DIRECT THAT WORKERS BE PRESENTED WITH A UNIFIED, STANDARD EMPLOYMENT OFFER WITH CLEAR, ENFORCEABLE TERMS AND CONDITIONS, BEFORE THEIR ENTRY INTO THE UAE.

### ↑ About the authors

Andrea Hewitt-Sims and Luke Tapp are senior associates at global law firm Pinset Masons' Dubai office. Hewitt-Sims is a solicitor who specialises in employment law, having practiced in both the UK and Asia. Tapp leads the firm's UAE and Middle East employment practice. He also advises clients based in the GCC.

**H**E Saqr Ghubash Saeed Ghubash, the UAE Minister of Labour had issued three new ministerial decrees in October with the intention of ensuring greater transparency and encouraging more flexible labour mobility for workers. The rules will take effect from January 1, 2016.

The rules protect the rights of an estimated 4.6mn workers in the UAE by preventing employers in the region from unfairly manipulating contracts and will see the introduction of a new unified, standard labour contract. The changes are established on the free consent of both parties to an employment contract.

The decrees direct that workers be presented with a unified, standard employment offer with clear, enforceable terms and conditions, before their entry to the UAE. This will, hopefully, eradicate so-called 'ghost contracts' or contract substitution, in which an employee who has signed up abroad discovers on arrival in the UAE that the terms

of the job have fundamentally changed to their detriment.

Under the new rules, no changes to the contract will be allowed unless they extend a worker's benefits with that person's agreement.

Ghubash has described the new rules as representing a 'major milestone' and a 'qualitative leap in our quest to improve labour conditions in the UAE'. We explore the potential impact of these new rule on employers in the oil and gas sector.

### 1. Standard Work Contract (Decree 764)

This decree requires employers to provide all workers with a standard form employment contract. The contract is intended to

be much more effective and detailed than the existing Ministry of Labour employment contract.

#### The key facts:

- 1.1** Any employment offers provided to employees are required to be consistent with the standard contract.
- 1.2** The standard contract, which is divided into 11 clauses, details the rights and obligations of both employer and employee. The contract sets out a worker's profession, job title and basic remuneration allowances.
- 1.3** Fixed term contracts must not exceed two years.
- 1.4** Any renewals of existing employment contracts must also comply with the new standard contract and the terms cannot be altered without approval by the Ministry of Labour.

## 2. Terminating the employment contract (Decree 765)

This decree outlines the conditions when a contract can be terminated and applies to both term and non-term contracts to ensure the termination is lawful.

#### The key facts:

- 2.1** Notice periods must be between one and three months only.
- 2.2** It is possible to terminate fixed term contracts part way through the fixed term. However, this is subject to the party providing the other with notice and paying an agreed level of compensation to the other. The compensation continues to be capped at three months remuneration.

## 3. Granting a new labour permit (Decree 766)

This decree sets out the conditions which must be satisfied to enable employees to obtain new work permits following the termination of their previous employment.

#### The key facts:

- 3.1** There are a number of circumstances in which an employee will be able to obtain a new work permit. The key scenarios which will be of interest to employers and employees are the following:



Andrea Hewitt-Sims



Luke Iapp

- 3.1.1** Upon termination of employment due to expiry of the fixed term;
  - 3.1.2** When both the worker and employer mutually consent to terminating the contract
  - 3.1.3** the worker is terminated without reason, provided that the worker has completed at least six months employment (this is waived in respect of particular categories of employees);
  - 3.1.4** the labour ministry confirms that the employing company has been inactive for more than two months and the worker reports to the ministry during the company shutdown;
  - 3.1.5** a labour complaint is referred by the ministry to the labour court and the final ruling is in favour of the worker who is terminated early or is owed outstanding wages less than two months of dues for end of service.
- 3.2** The Ministry of Labour may refuse to provide a work permit for up to one year to a worker who does not meet any of the conditions described within the Decree.

### Practical implications for oil and gas employers

The impact of the new rules will primarily be felt by those employers who have misrepresented terms to expatriate employees by the use of 'ghost-contracts' as all employers will be required to consent with a standard unified contract which cannot be changed without approval of the Ministry of Labour. Many employers within the energy sector will be relatively unaffected by this change.

However, it is no secret that there have been significant pressures on the oil and gas industry recently as a result of falling oil prices. This has had an impact on both recruitment and job losses for oil workers as many businesses have been pushed to save expenditure where possible.

According to the Monster Employment Index report for last month, the index reading for online listings of oil and gas jobs in the UAE fell about 30% to 73 from 103 in August last year. In the Middle East generally, hydrocarbons industry job postings declined by 21%.

The wider impact of the new labour laws should assist the oil and gas sector in creating a more flexible labour market. The rules ensure that employers have less of an administrative headache when employing new workers and should provide access to more qualified workers with lower administrative and recruitment costs. ○



# Ongoing and upcoming projects

Information is supplied by Ventures Middle East. Tel: +971 2 622 2455. www.ventures-uk.com

BAHRAIN					
Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
BAPCO Modernization Program (BMP) – Crude Unit	Bapco	Technip	Not Appointed	1000	Feed
BAPCO Modernization Program (BMP) – Hydrocracker Unit	Bapco	Technip	Not Appointed	1000	Feed
BAPCO Modernization Program (BMP) – Fluid Catalytic Cracker Unit	Bapco	Technip	JGC Gulf International Co. Ltd.	200	Feed
LNG Import Terminal	National Oil and Gas Authority (NOGA)	WorleyParsons/ Galway Energy Advisors LLC	Not Appointed	600	EPC Bid
KUWAIT					
Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Sulphur Handling Facilities at Mina Al Ahmadi	KNPC	Thyssenkrupp	Daelim Industrial Company	516	Execution
Gas Transit Pipeline – BSI71 to Mina Al Ahmadi Processing Plant	KOC	-	Consolidated Contractors Company (CCC)	70	Execution
Debottlenecking of GC-17 in North Kuwait	KOC	-	Not Appointed	100	EPC Bid
Lower Fars Heavy Oil Field Development – Phase 1	KOC / ExxonMobil Corporation	Foster Wheeler Arabia Ltd. / Energy Services Group	CCC / Petrofac International	4200	Execution
Maintenance of Production Facilities in South and West Kuwait	KOC	KOC	Gulf Spic General Trading & Construction Company	97	Execution
Kuwait New Refinery Project (NRP) – Package 1, 2, 3	KNPC	Fluor Corporation	Not Appointed	5000	EPC Bid
Clean Fuels Project – Fluid Catalytic Cracker	KNPC	Fluor Corporation	Daelim Industrial Company	175	Execution
Construction of Flow Lines in SEK	KOC	-	Mechanical Engineering & Contracting Company	274	Execution
Crude Oil Flow Pipelines in Jurassic Field	KOC	-	Mechanical Engineering & Contracting Company / Arabi Enertech	250	Execution
Clean Fuels Project – Mina Abdullah 2	KNPC	Jacobs Engineering	Daewoo Engineering and Construction Company / Hyundai Heavy Industries (HHI) / Fluor Corporation	3400	Execution
Maintenance of KOC Gas Production Facilities in Kuwait	KOC	-	Not Appointed	265.27	EPC Bid
Maintenance of Storage Tanks and Associated Works at Shuaiba Refinery	KNPC	-	Tariq Alghanim General Trading & Contracting Co. (Almen)	15	Execution
Effluent Water Treatment and Injection Plant in North Kuwait	KOC	-	Not Appointed	1600	EPC Bid
Kuwait New Refinery Project (NRP) – Package 4 – Tank Farms	KNPC	Fluor Corporation	Not Appointed	1200	EPC Bid
KOC Crude Gathering Centers 29, 30 & 31	KOC	AMEC	Dodsal / Larsen & Toubro (L&T) Limited / Petrofac International	2287	Execution
Gas Pipeline at Magwa	KOC	-	Combined Group Contracting Company	16	Execution
Gas Pipelines at Burgan	KOC	-	Al Khadda International General Trading & Contracting Co. W.L.L.	28	Execution
LNG Import Terminal in Al Zour	KNPC	Foster Wheeler International Corporation	Not Appointed	500	EPC Bid
Clean Fuels Project – Mina Abdullah 2	KNPC	Jacobs Engineering	Daewoo Engineering and Construction Company / Hyundai Heavy Industries (HHI) / Fluor Corporation	3400	Execution
Crude Oil Flow Pipelines in SEK	KOC	KOC	Khalifa Daij Al Dabbous & Brothers Co.	21.45	Execution
Emitted Gases Retrieving Unit at Mina Al Ahmadi Refinery	KNPC	-	Gulf Spic General Trading & Construction Company	30	Execution

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Flowlines in North Kuwait Area	Kuwait Oil Company (KOC)	Gulf Consult	Combined Group Contracting Company	279	Execution
Flow Lines and Associated Works in West Kuwait	Kuwait Oil Company (KOC)	-	Heavy Engineering Industries & Shipbuilding Company (Heisco)	150	Execution
Clean Fuels Project - Mina Abdullah 1	KNPC	Jacobs Engineering	Consolidated Contractors Company (CCC)/ Chicago Bridge & Iron (CB&I)/ Samsung Engineering Company/ Petrofac Limited	3800	Execution
Remote Header Manifolds at SEK	KOC	KOC	Not Appointed	300	EPC Bid
Fifth Gas and Condensate Train at Mina Al Ahmadi Refinery	KNPC	AMEC	Al Ajran General Trading & Contracting/ Tecnicas Reunidas (TR)	1440	Execution
<b>Oman</b>					
Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Ras Markaz Crude Oil Park	Takamol Investment Company / Oman Oil Company (OOC)	AMEC Foster Wheeler	Not Appointed	1000	Feed
Expansion of Sohar Refinery - Hydrogen Generation Unit	Oman Oil Refineries and Petroleum Industries Co.	CB&I Lummus	Petrofac International / Daelim Industrial Co Ltd.	300	Execution
Liwa Plastics Project - Package 1	Oman Oil Refineries and Petroleum Industries Co (ORPIC)	Chicago Bridge & Iron (CB&I)	Not Appointed	500	Feed
Crude Storage Terminal at Ras Markaz	Oman Oil Company (OOC)	Amec Foster Wheeler	Not Appointed	500	Feed
Salalah LPG Project	Salalah Free Zone / Oman Gas Company	Petrofac International / CB&I Lummus	Not Appointed	300	Feed
Rabab - Harweel Field Development	PDO	Petrofac International/ WorleyParsons Engineering LLC	Al Hassan Engineering	1100	Execution
Expansion of Sohar Refinery - Solvent De-asphalting Unit	Oman Refinery Company	Foster Wheeler International Corporation / CB&I Lummus	Petrofac International / Daelim Industrial Co Ltd.	600	Execution
Duqm Refinery & Petrochemical Complex	Oman Oil Company (OOC) / International Petroleum Investment Co. (IPIC)	Foster Wheeler International Corporation	Not Appointed	7000	Feed
O & M of PDO Facilities - North of Oman	PDO	Tebodin & Partner LLC	Special Technical Services	500	Execution
Zauliyah Gas Compression Project	PDO	-	Al Hassan Engineering	36	Execution
Muscat-Sohar Production Pipeline (MSPP)	ORPIC/ Compania Logistica de Hidrocarburos CLH, SA	Compania Logistica de Hidrocarburos CLH, SA	Gulf Petrochemical Services & Trading / Abantia / Diseprosa	320	Execution
O & M of PDO Offshore Facilities	Petroleum Development Oman (PDO)	-	Consolidated Contractors International Company (CCC) / Wood Group	800	Execution
Central Oman-Raz Markaz Crude Oil Pipeline	Government of Oman / Oman Gas Company	Amec Foster Wheeler	Not Appointed	100	Feed
Expansion of Sohar Refinery - Hydrocracker Unit	Oman Oil Refineries and Petroleum Industries Co (ORPIC)	Chevron Lummus Global (US)	Petrofac International / Daelim Industrial Co. Ltd.	600	Execution
Bunkering Facility in Duqm Port	Oman Oil Marketing Company (OOMCO)	-	Not Appointed	50	Feed
Oman Khazzan Gas Project - Condensate Export Line	BP Exploration (Epsilon) LTD, Oman (BP Global) / Government of Oman	-	Not Appointed	20	EPC Bid
Ammonia Plant in Salalah	OOC/ Takamol Investment Company	Linde AG	Not Appointed	200	Feed
Oman Khazzan Gas Project - Central Processing Facility	BP Exploration (Epsilon) LTD (BP Global) / Government of Oman	-	Petrofac International/ Consolidated Contractors International Company (CCC)	1200	Execution
Block 3 & 4 Oil Field Development	Ministry of Oil & Gas	-	Mitsui & Company/ Tethys Oil Oman Ltd / CC Energy Development SAL	250	Execution
<b>Qatar</b>					
Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Tanks Rehabilitation Works QPGO (Mesaieed) - Contract No: GC131119AO	Qatar Petroleum (QP)	-	Petroserv Limited	11.4	Execution



## PROJECT

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
GRVE Integrity Improvement Programme – Pearl GTL Plant	Shell, Qatar / Royal Dutch / Qatar Petroleum (QP)	-	Kentz Corporation Limited	70	Execution
New LGO Tank 2114FI and Conversion of LC Tank 2145FA	Qatar Petroleum (QP)	-	Etimaad Qatar	16	Execution
INU of Khuff Gas to Arab D Gas Cap Using NFIS	Qatar Petroleum (QP)	-	Doha Petroleum Construction Co. Ltd. (DPCC) Dopet	19	Execution
Lusail Infrastructure – Package 13D	Qatari Diar Real Estate Investment Company (QDREIC)	Hyder Consulting / COWI A/S / Halcrow Group	Not Appointed	30	EPC Bid
North Field Alpha Gas Development	Qatar Petroleum (QP)	-	McDermott International	150	Execution
New Sour Gas Compressor Project NGL-3 Messaied	Qatar Petroleum (QP)	-	Qatar Engineering & Construction Company	22	Execution
Idd El Shargi North Dome Field – Phase 5	Occidental Petroleum Corporation (Oxy) / Qatar Petroleum (QP)	-	Not Appointed	3000	EPC Bid
Block A Exploration	Qatar Petroleum (QP)	-	JX Nippon Oil & Gas Exploration Corporation	100	Execution
Condensate Refinery at Ras Laffan – Phase 2	Laffan Refinery Company	Technip	Chiyoda / CTCI Corporation	1500	Execution
Modification to Ethylene Production Facility in MIC	Qapco	-	CTCI Corporation	166	Execution
Wellhead Industrial Control Systems	Qatar Petroleum (QP)	-	Qatar Kentz	190	Execution
Wet Gas Pipeline Between KM & KS	Qatar Petroleum (QP)	Tebodin	Panorama Contracting & Engineering Services	18	Execution
Barzan North Field Development – Process Area (A000) & Buildings Packages	ExxonMobil / Qatar Petroleum (QP)	Chiyoda Corporation	Consolidated Contractors Company (CCC)	330	Execution
Gas Supply to RAF Power Stations	Qatar Petroleum (QP)	-	Medgulf Construction Co. WLL	24	Execution
NGL-3 AGRU 1 & 2 Amine Regenerators and Associated Equipment Revamp Project at Mesaieed	Qatar Petroleum (QP)	-	Doha Petroleum Construction Co. Ltd. (DPCC) Dopet	20	Execution
Jackup Rig – Halul	Gulf Drilling International	-	Keppel Offshore & Marine	227	Execution
Qapco – New Seawater Intake Project	Qapco	-	Not Appointed	60	EPC Bid
Bul Hanine Redevelopment	Qatar Petroleum (QP)	-	Not Appointed	11000	Study
Expansion of Ethylene Plant at Mesaieed – EP3	Qapco	Shaw Group	Not Appointed	550	FEED
Barzan North Field Development	ExxonMobil / Qatar Petroleum (QP)	Chiyoda Corporation / Ray McDermott	Hyundai Heavy Industries (HHI) / JGC Corporation	8000	Execution
Tanks Rehabilitation Works QPGO (Mesaieed) – Contract No: GC13119B0	Qatar Petroleum (QP)	-	Trading & Agency Services (Trags)	18.7	Execution
Replacement of Crude Oil Tank QJA-8 in Mesaieed	Qatar Petroleum (QP)	Black Cat Consulting & Engineering Services	Not Appointed	60	FEED
New Crude Oil Storage Tanks in Dukhan	Qatar Petroleum (QP)	Energoprojekt Entel, Qatar	Not Appointed	60	FEED
Hook-Up of Oil Flow Lines	Qatar Petroleum (QP)	-	Galifar Al Misnad Engineering & Contracting, Qatar	111	Execution

## SAUDI

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Jizan Economic City – Export Refinery – North Tanks	Saudi Aramco	Kellogg Brown & Root (KBR)	Petrofac Limited / CCC	1000	Execution
Jizan Refinery – Air Separation Unit	Saudi Aramco	KBR Middle East	Air Product & Chemical / ACWA Holding	500	Execution
Northern Saudi Non-Conventional Project	Saudi Aramco	-	Not Appointed	500	EPC Bid
Saudi Offshore Maintain Potential Program – Pipelines & Power Cables	Saudi Aramco	WorleyParsons	McDermott International	200	Execution

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Karan 45 - Offshore Structures & Flowlines	Saudi Aramco	-	McDermott International	200	Execution
Jubail Petrochemical Complex - Phase 3 - MMA Plant	Lucite / Saudi Basic Industries Corporation (Sabic) / Saudi International Petrochemical Company (Sipchem)	WorleyParsons/ Tecnicas Reunidas Gulf (Tecnicas Reunidas -TR)	Not Appointed	250	Feed
Northern Saudi Non-Conventional Project	Saudi Aramco	-	Not Appointed	500	EPC Bid
Shaybah NGL Recovery Program - GOSP Plant (Package 4)	Saudi Aramco	Kellogg Brown & Root (KBR)	Samsung Engineering	700	Execution
Upgrade of Hout Crude Facilities	Al Khafji Joint Operations (KJO)	WorleyParsons	Techint Compagnia Tecnica Internazionale S.p.A.	150	Execution
Shaybah Gas Development - NGL Facilities at Berri Gas Plant - Phase 1	Saudi Aramco	Kellogg Brown & Root (KBR)	Samsung Engineering	700	Execution
Shaybah Gas Development - Juaymah Gas Plant Pipeline	Saudi Aramco	Kellogg Brown & Root (KBR)	Samsung Engineering	700	Execution
Kayan Petrochemicals Complex at Jubail - Oleo-Chemical Plant	Sabic / Saudi Kayan Petrochemical Company	Lurgi AG	Sinopec	100	Execution
Jizan Economic City - Export Refinery - South Tanks	Saudi Aramco	Kellogg Brown & Root (KBR)/ Purvin & Gertz	Petrofac Limited / CCC	700	Execution
Arabiyah and Hasbah Oilfield - Wellhead Platforms	Saudi Aramco	SNC Lavalin	Saipem	2100	Execution
Arabiyah and Hasbah Oilfield - Hasbah Pipelines	Saudi Aramco	SNC Lavalin	Saipem	700	Execution
Elastomers Plant at Kemya - MTBE Plant	Sabic / ExxonMobil / Al Jubail Petrochemical Co. ( Kemya)	Fluor Arabia Limited / Fluor Arabia Limited / Mitsui Engineering & Shipbuilding Co. Ltd (MES) / Jacobs	Daelim Industrial Company	500	Execution
Carbon Dioxide Utilization Project	United Jubail Petrochemical Company (UNITED)	-	Linde Arabian Contracting Co. Ltd.	300	Execution
Calcined Petroleum Coke (CPC) Plant	Petrobras / Modern Mining Holding Company	Technip	Hanwha Engineering & Construction	350	Execution
Master Gas System Expansion (MGSE) - Phase 2 - Package 1	Saudi Aramco	Foster Wheeler Arabia Ltd., Saudi Arabia	Not Appointed	830	EPC Bid
Jizan Refinery - Gasification Unit	Saudi Aramco	KBR Middle East	Saipem Limited	1500	Execution
Fadhili Gas Processing Plant	Saudi Aramco	Foster Wheeler Arabia Ltd.	Not Appointed	500	EPC Bid
Jubail Petrochemical Complex - Phase 3 - PMMA Plant	Lucite / Saudi Basic Industries Corporation (Sabic) / Saudi International Petrochemical Company (Sipchem)	WorleyParsons / Tecnicas Reunidas Gulf (Tecnicas Reunidas -TR)	Not Appointed	250	FEED
Shaybah NGL Recovery Program - Phase 1 : NGL Recovery Plant and Utilities -	Saudi Aramco	Kellogg Brown & Root (KBR)	Samsung Engineering	700	Execution
Manifa Oil Field Redevelopment - Khursaniyah Gas Plant Expansion (Onshore Package - Package 4)	Saudi Aramco	Foster Wheeler	GS Engineering & Construction Company	607	Execution
Elastomers Plant at Kemya - Halo-butyl Rubber Plant	Sabic / ExxonMobil / Al Jubail Petrochemical Co. ( Kemya)	Fluor Arabia Limited/ Jacobs Engineering / Mitsui Engineering & Shipbuilding Co. Ltd (MES)	Technip	500	Execution
Jizan Economic City (JEC) - Export Refinery - Crude Distillation Unit	Saudi Aramco	Purvin & Gertz / Kellogg Brown & Root (KBR)	SK Engineering & Construction	1000	Execution
Jizan Economic City (JEC) - Export Refinery - Sour Water Stripper & Amine Regeneration	Saudi Aramco	Kellogg Brown & Root (KBR), / Purvin & Gertz	Hyundai Heavy Industries (HHI)	350	Execution
Midyan Gas Processing Project	Saudi Aramco	Mustang Engineering	Larsen & Toubro (L&T) Limited	300	Execution
Shouaiba Bulk Plant	Saudi Aramco	Petrofac International, Sharjah	Not Appointed	600	FEED
Extension of Shedgum - Yanbu Gas Pipeline	Saudi Aramco	-	Saipem Limited	600	Execution
Jubail 2 - Sadara Petrochemical Complex - Feed Gases Plant	Saudi Aramco / Dow Chemical Company, Saudi Arabia / Sadara	-	Linde Arabian Contracting Co. Ltd. / CCC	380	Execution



## PROJECT

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Kayan Petrochemicals Complex at Jubail - N-Butanol Plant	Saudi Aramco / SAAC / Dow Chemical Company / Saudi Kayan Petrochemical Company	Dow Chemical Company	Daelim Industrial Co.Ltd	500	Execution
Jubail 2 - Sadara Petrochemical Complex - Chem III	Saudi Aramco / Dow Chemical Company		Tecnicas Reunidas Gulf (Tecnicas Reunidas -TR)	800	Execution
Jubail 2 - Sadara Petrochemical Complex - POD Package	Saudi Aramco / Dow Chemical Company / Sadara Chemical Company (Sadara)	Kellogg Brown & Root (KBR)	Tecnicas Reunidas Gulf (Tecnicas Reunidas -TR)	300	Execution
Shaybah NGL Recovery Program - Package 1: Inlet and Gas Treatment Facility	Saudi Aramco	Kellogg Brown & Root (KBR)	Samsung Engineering	700	Execution
Yanbu Export Refinery - Crude Unit Package	Saudi Aramco	Kellogg Brown & Root (KBR)/ WorleyParsons	SK Engineering and Construction	1000	Execution
Shaybah Gas Development - Shaybah to Abqaiq Pipeline	Saudi Aramco	-	Rajeh H. Al Marri & Sons Company	240	Execution
Jizan Refinery - Sulphur Recovery	Saudi Aramco	KBR Middle East	Saipem Limited	500	Execution
Yanbu Export Refinery - Battery Limits and Solids Handling - Package 6	Saudi Aramco	Kellogg Brown & Root (KBR)	Techint	450	Execution
Khurais Oilfield Expansion	Saudi Aramco	Foster Wheeler Arabia Ltd.	Saipem Limited	2000	Execution

## UNITED ARAB EMIRATES

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
North East Bab (NEB): Rumaitha and Shanayel Phase 3 - CO2 Enhanced Oil Recovery (EOR)	ADCO	Technip	Dodsal / GS Engineering & Construction	1000	Execution
Nitrogen Gas Injection (Pure Case)	ADCO	Mott MacDonald-Oil & Gas Division (Namamott)	Alsa Engineering Company LLC	200	Execution
Sour Gas Development - Offsites & Utilities	ADNOC / Occidental Oil & Gas International / Abu Dhabi Gas Development Company	Fluor Mideast Limited (Fluor Corporation)	Samsung Engineering	1500	Execution
Modification of OS-11 at Bunduq Oilfield	The Bunduq Oil Company	-	NPCC	200	Execution
Nasr Full Field Development - Phase 2 - Package 2	Adma-Opc	Kellogg Brown & Root (KBR)	Kellogg Brown & Root (KBR)/ Hyundai Heavy Industries (HHI)	1000	Execution
Madeenat Chemaweya at Al Gharbia (MCAG) Project	IPIC / ADIC / ADNOC / ChemaWEyaat	Neste Jacobs (Finland)	Not Appointed	20000	EPC Bid
Hail and Ghasha Oil Fields Development	Occidental Petroleum Corporation (Oxy) / ADNOC	-	Not Appointed	500	Study
Integrated Gas Development (IGD) Expansion	Gasco	Fluor Mideast Limited (Fluor Corporation)	Tecnicas Reunidas (TR)	700	Execution
JIFF Expansion at DIA	Emirates National Oil Company	-	Not Appointed	200	EPC Bid
Upper Zakum Production Facilities - Surface Facilities (Crude Processing)	Zakum Development Company (Zadco)	Technip / Engineers India Limited (EIL)	Petrofac International/ Daewoo Shipbuilding & Heavy Industries	3790	Execution
Replacement of Liquid Storage Tanks in Das Island	ADGAS	Shaw Group (Stone & Webster)	Target Engineering	40	Execution
Umm Al Lulu Full Field Development - Package 1	Abu Dhabi Marine Operating Company (Adma-Opc)		NPCC	800	Execution
Yas Island - Mina Zayed Port Gas Pipeline	Abu Dhabi Gas Industries Company (Gasco)	CH2M Hill	Petrojet	45	Execution
Umm Al Lulu Full Field Development - Package 2	Abu Dhabi Marine Operating Company (Adma-Opc)	Tebodin Middle East / Fluor Mideast Limited (Fluor Corporation)	Technip / NPCC	1690	Execution
Zora Gas Field Development	Dana Gas / Sharjah Petroleum Council / Crescent Petroleum	SPD Drilling Consultant	Exterran / NPCC	150	Execution
Pilot Carbon Dioxide Injection Project	Masdar / ADCO	-	Alsa Engineering Company LLC	300	Execution
Biofuel Refinery in Fujairah	Petrixo Oil and Gas	-	Not Appointed	800	EPC Bid
Sharafco Oil Storage Terminal	Sharafco Petroleum FZC	-	Developer Building Contracting / Arabian Marine Services	150	Execution
Bab Gas Compression Expansion	ADCO	SK Engineering & Construction Company	Petrofac International	500	Execution

Project Title	Client	Consultant	EPC Contractor	Budget (\$M)	Status
Condensate Pipeline from Habshan to Ruwais	Gasco	Tebodin Middle East	Essar Projects Limited	55	Execution
Halon Replacement at Zakum Oilfield	Zadco	Tebodin Middle East	Tyco Fire & Security	11	Execution
Expansion of Ruwais Refinery - Carbon Black and Delayed Coker (CBDC)	Takreer	Honeywell / Bechtel / WorleyParsons Engineering Pty Ltd.	Samsung Engineering	2470	Execution
Sarb Oil Field - Package 3 - Pipeline & Platforms	Adma-Opco	Fluor Mideast Limited ( Fluor Corporation), Abu Dhabi	Petrofac International	515	Execution
Bab - Habshan 1 Field Development	ADCO	Tebodin Middle / CH2M Hill	Petrofac International	187	Execution
Qusahwira Field Development - Phase 2	ADCO	SNC Lavalin International	Not Appointed	350	EPC Bid
Sarb Oil Field - Package 4 - Main Processing Plant	Adma-Opco	COWI Gulf AS / Fluor Mideast Limited	Hyundai Engineering & Construction Company	1880	Execution
Crude Oil Storage Tank at Zirku	Zadco	Chevron Lummus Global	Belleli Energy	50	Execution
North East Bab - Phase 3 (NEB 3) - Al Dabbiya	ADCO	Technip	Tecnimont SpA	2254	Execution
Gasco - Habshan Direct Depressurization (HDDI)	Gasco	Tebodin Middle East	Not Appointed	250	EPC Bid
BPGIC Oil Storage Terminal in Fujairah	BPGIC	MUC Oil & Gas Engineering Consultancy	Audex Fujairah LL FZE	150	Execution
Revamp of Flaring System at Das Island	Adma-Opco	Tebodin Middle East	Technip	50	Execution
Two Drilling Rigs for NDC	Abu Dhabi National Drilling Company	-	Lamprell LLC	167	Execution
IPIC Petroleum Refinery in Fujairah	IPIC	Technip	Not Appointed	4000	EPC Bid
Socar - Aurora Storage Terminal - Phase 2	Socar - Aurora	MUC Engineering	Belleli Energy	100	Execution
IGDE Onshore Pipeline Habshan Modification - Multiple Pipe Slug Catcher	Abu Dhabi Gas Industries Company (Gasco) / Tecnicas Reunidas (TR), Abu Dhabi	-	Not Appointed	0.5	EPC Bid
WHPT Sump Tank Upgradation and Installation of New Sump Casing	Zakum Development Company (Zadco)	-	Not Appointed	0.5	EPC Bid
O & M of Sajaa Gas Plant	Sharjah National Oil Corporation (SNOC)	-	Petrofac International	250	Execution
Foam and Water Spray System Upgrade at Ruwais Refinery	Takreer	Tebodin Middle East	Tyco Fire & Security	19	Execution
Mender Full Field Development Project	ADCO	WorleyParsons Engineering Pty Ltd.	China Petroleum Engineering Construction Corporation (CPECC)	300	Execution
Gas Exploration Facilities - Kahaif, Moveyid and Sajaa	BP Exploration Operating Co Ltd (BP Global), / Government of Sharjah	AMEC	Petrofac International	300	Execution
Satah Full Field Development - Gas Injection & Gas Lift	Zadco	Tebodin Middle East	Technip / NPCC	300	Execution
Northern Emirates Pipeline Project	Dolphin Energy Ltd. (DEL)	ILF Consulting Engineers	Not Appointed	100	FEED
Upper Zakum Development Project - 7 Drilling Rigs	Zadco / NDC	Lahmeyer International GmbH	Columbia Industries	600	Execution
Emirates LNG Terminal Fujairah	Mubadala / IPIC	Technip	Not Appointed	400	EPC Bid
Debottlenecking of ENOC Jebel Ali Refinery	Emirates National Oil Company	Kellogg Brown & Root (KBR), Dubai	Not Appointed	100	Feed
IL&FS Prime Tank Terminal (IPTT) Fujairah	Primestar Energy FZE	MUC Engineering	IOT Engineering & Construction Services / Infrastructure Leasing & Financial Service Engineering Construction Co.	160	Execution
Upper Zakum - UZ750 - EPC Package 1	Zadco	Technip	Technip / NPCC	817	Execution
Lower Zakum Oil Lines Replacement	Adma-Opco	Technip	NPCC	250	Execution
Sarb Oil Field - Package 1 - Offshore Jetty & Sea Water Intake Facilities	Adma-Opco	COWI Gulf A/S / Fluor Mideast Limited ( Fluor Corporation)	Archirodon Constructions Overseas	200	Execution
Tacaamol - Gasoline and Aromatics Complex	Abu Dhabi Investment Council / IPIC / ADNOC/ChemaWEyaat	CH2M Hill	Not Appointed	1000	EPC Bid

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**ABOUT THE INTERVIEWEE:**

Sudhakar R. Rao heads the Gemini Energy Group's operations in India and the GCC. An experienced professional in the field of testing and inspection, Rao is responsible for diversifying the group's business.

# Sudhakar R. Rao, Managing Director, Gemini Energy



*Oil & Gas Middle East* delves below the corporate strategy to understand what really makes the industry's leaders tick

0.00

**Could you kindly give me a brief overview of Gemini Energy?**

Even prior to the Gemini Energy venture we were with the oil and gas sector. So we had been catering to NOCs such as Saudi Aramco, PDO and ADNOC in the region, as well as in India. That is as far as our previous business which went by the name of Sievert, which started in 1986 from India and has been now been divested completely. In between, we had started our Gemini Energy venture. We are representing overseas manufacturers, suppliers and service providers in this part of the world, primarily in the UAE and Oman.

90

1.05

**Talk about the clients that you are working with.**

We have got some contracts with ENOC for providing power to their temporary facilities in Abu Dhabi for two years. We have also signed a deal with US software major EMC2 about six to eight months back to sell their energy sector-related software products in the region. We are negotiating with the Oman Oil Refineries and Petroleum Industries Company (ORPIC) to sell its EMC2 cloud computing service. Even in the UAE, we are talking to two or three companies.

2.55

**How has Gemini Energy been impacted by the oil price drop?**

Absolutely, without any denial, it has affected our business. It has affected our entire spectrum related to the services and supply for the oil and gas sector. Yes volumes and profitability are

low. But there are no new difficulties; whatever difficulties existed in the past, the same ones are there. By difficulties I mean profitability, sustainability. It has made a dent in the business, no denial. Again, we are planning expansion of our energy products in the Middle East and in parts of Africa. We are waiting for market conditions to get better than what it is today.

**How do you intend to grow your energy business in the region?**

The UAE is our base and stronghold for sure. We do have a strong presence in Oman, as well as in Saudi Arabia, Qatar and Iraq. Iran too is coming online. So we do have plans for the wider region. Given the evolution of the service providers and suppliers in the oil and gas industry, there is definitely a big need for affordable kind of suppliers and service providers, like ourselves.

3.35

**“ABSOLUTELY, WITHOUT ANY DENIAL, IT (LOW OIL PRICES) HAS AFFECTED OUR BUSINESS. IT HAS AFFECTED OUR ENTIRE SPECTRUM RELATED TO THE SERVICES AND SUPPLY FOR THE OIL AND GAS SECTOR.”**

4.10

**What is your opinion of the oil and gas industry's future?**

The UAE Energy Minister himself has said that oil prices will rebound. How far and soon this will happen is speculative. I strongly believe that the oil price decline is more of a political ploy in nature. 2016 is going to be challenging for most. I think if they see through 2016, by the beginning of 2017 things will get better. I think by the end of 2016 or Q1 2017, we can hope to see prices at \$55-60 a barrel, if not more.



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Refining & Middle East  
**& Petrochemicals**  
AWARDS

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