SPECIAL REPORT: PROPER CLOTHING & EQUIPMENT IS BASIC TO HSE

Oil&Gas MIDDLE EAST

NEWS, DATA AND ANALYSIS FOR

October 2016 • Vol. 12 • Issue 10

ENOC *expansion*
The Dubai Government-owned company has devised a multi-pronged growth strategy / p50

United Arab Emirates *Country focus*
The country's diversification policies are pioneering / p62

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An overview of what to expect at the biggest oil and gas show on Earth / p56

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How an Abu Dhabi-based marine engineering entity is striving for excellence / p68

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INTERVIEW

TEXAN TRAILBLAZER

Bernard J Duroc-Danner – the chief of Weatherford International, elaborates on the company's operations in the Middle East and what is enabling the global oilfield services major to resist the current downturn with laudable grit

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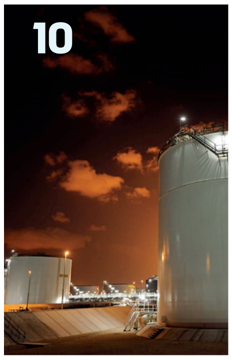

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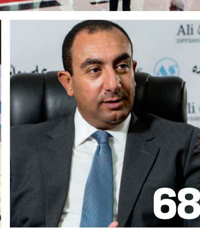

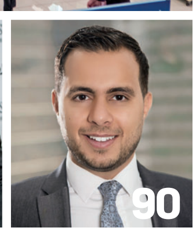

Online

Editor's Choice:
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- *Oil & Gas Middle East* Top 30 EPC Contractors
- *RPME* Top 30 EPC Contractors
- *OGME* Power 50 2016
- Revealed: Top 10 risks in the oil and gas industry

App

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Oil&Gas MIDDLE EAST

Dialogue is undoubtedly the winner

Irrespective of the outcome of the OPEC-Russia talks, it is the maturity of the parties involved that is truly laudable

THIS ISSUE: ADIPEC promises to be bigger and better this year, with over 2,000 exhibiting companies and expecting close to 100,000 attendees.

In the days leading up to the informal talks between OPEC oil ministers and Russia on the sidelines of a major industry event in Algeria in late September, the world media (barring the section based here in the GCC) had intensified its OPEC-bashing – something it always does in the prelude to a gathering of the cartel.

Only this time around, the number of critical media outlets seemed far fewer than the run-up to OPEC's schedule meeting on June 2nd in Vienna or the one before with Russia in Doha on April 4th. Yes the (Western) media remained unconvinced about the Algeria talks too, but was much less vituperative of the bloc this time around. The reason was fathomable.

The very fact that despite the cartel's repeated failures to agree to freeze oil production, its members are volunteering to meet at the negotiating table, is laudable. More importantly, the fact that in spite of being political and ideological adversaries, Saudi Arabia and Iran keeping the diplomacy route open, and even going out of their way to invite Russia in these talks is indeed praiseworthy.

With stakeholders so inherently opposed to each other as Riyadh and Tehran (and even the Latin American members) talking to another swing producer with a completely different set of objectives as Russia, a gold-embossed agreement to emerge out of the negotiations is hoping for too much, too soon.

But the effort that these stakeholders are making to sit and discuss if freezing output at the peak of the market-share battle with other major oil producers (mainly America) is the right way forward, entirely proves that OPEC is far from dying. It still is the most potent force in the realm of oil and gas politics.

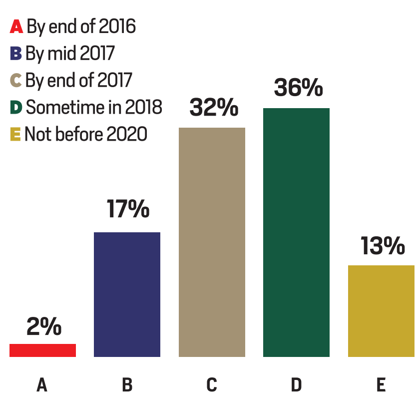
And speaking of positive things, we are now gearing up to celebrate the successes in the Gulf's energy sector at the *Oil & Gas Middle East Awards 2016* (preview on page 34).

In the face of daunting challenges and an unrewarding economic climate, the regional oil and gas industry has been going ahead with its daily operations, without compromising on vital aspects such as health & safety or environmental sustainability. In fact it has been nurturing and inducting the talented local workforce.

That to me is a phenomenal achievement, something that this magazine seeks to celebrate at its annual Awards this year. See you in Abu Dhabi on October 5th.

Indrajit Sen
Deputy Editor, *Oil & Gas Middle East*
indrajit.sen@itp.com

When do you expect oil output to reduce so that it may hike prices?



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Printed by United Printing Press LLC, Abu Dhabi.

Audited by: BPA Worldwide.
Audited Average Monthly Circulation: 8,725
(January – June 2016)

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IPP reliance set to grow

Dependence on the single-buyer model, where a state-owned entity is the only wholesale purchaser from power-generating companies, is rising

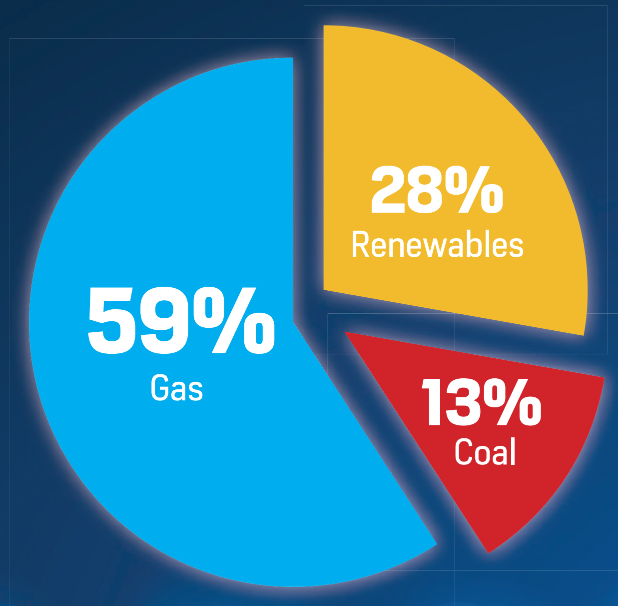
Research by the Arab Petroleum Investments Corporation (APICORP) estimates that GCC power capacity needs will expand at an average annual rate of 8% from 2016 to 2020. To meet rising demand, the GCC will need to invest $85bn to add 69GW of new generating capacity over the next five years. But declining oil revenues mean that GCC governments can no longer support the provision of cheap power and have looked to IPPs to play an increasing role in power generation.

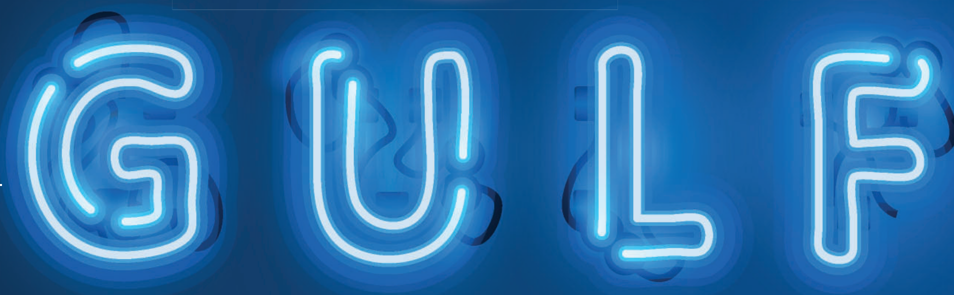
Reforms are gradually picking up pace throughout the GCC, at the heart of which are the recent price hikes. Governments have increased water, electricity and fuel prices to ease the burden on state budgets.

Structural reforms are also taking place. Oman is leading GCC efforts to unbundle the power sector by privatising most of its generating assets, and is considering the privatisation of transmission and distribution. The country will become the first in the GCC to introduce spot trading in the electricity market by the end of the decade. In Saudi Arabia, state utility Saudi Electricity Company (SEC) has recently announced plans to break up into four independent power-generating bodies and an independent transmission company by the end of 2016.

IPPs offer a quick solution for governments, and they now represent the majority of new capacity, continuing to replace government power plants. Over-reliance on this strategy could have potentially negative implications. However, benefits include the ability for investments to be made in power generation without the need for governments to pay the entire upfront cost; the relative cost-effectiveness of IPP projects compared to government power plants; and shorter project execution times.

MAGHREB POWER INVESTMENTS UNDERWAY





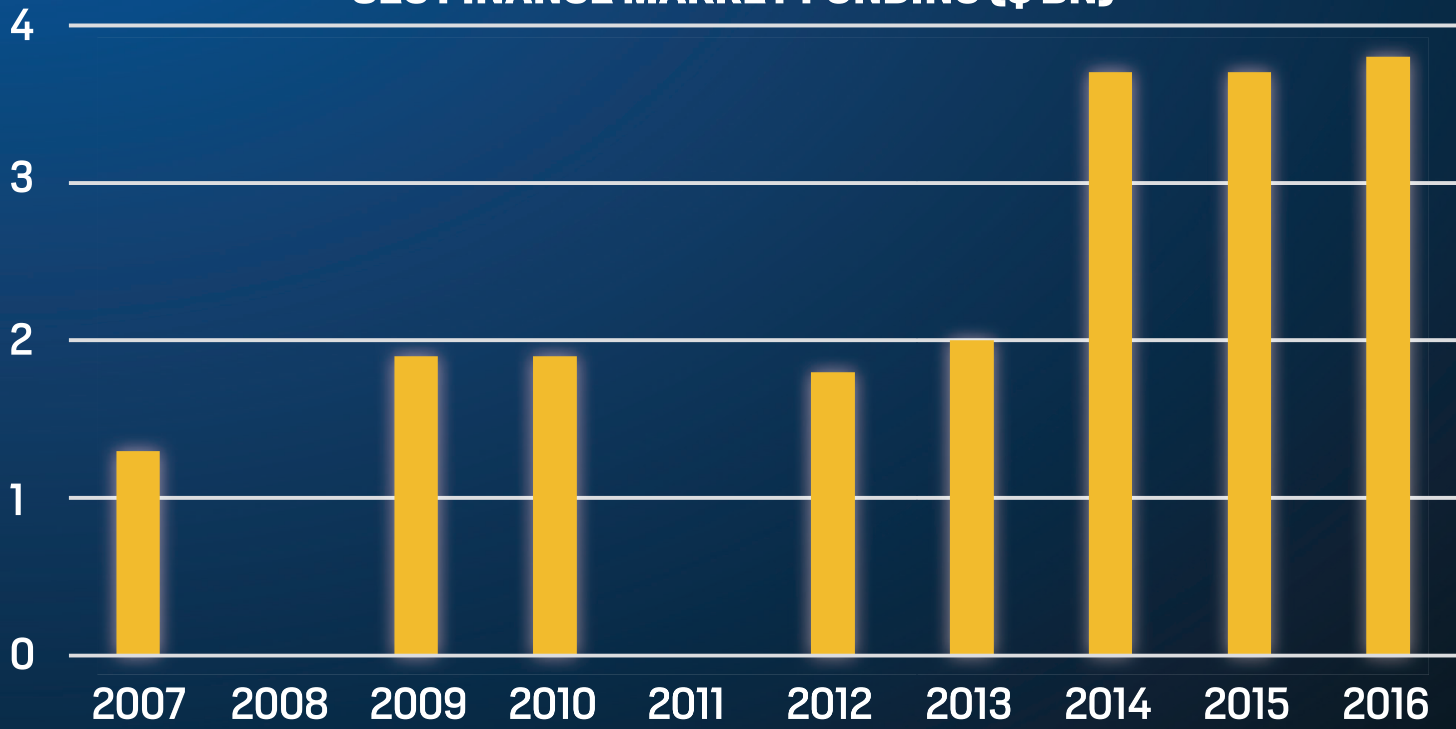
UPCOMING REGIONAL POWER GENERATION PROJECTS

Project	Location	Capacity (MW)	Type	Start
Al-Zour 1	Kuwait	1,500	IWPP	2016
Solar Park 2	Dubai	200	IPP	2017
Mirfa	Abu Dhabi	1,600	IWPP	2017
Rabigh 2	KSA	2,060	IPP	2017
Salalah 2	Oman	445	IPP	2018
Umm Al-Houl	Qatar	2,520	IWPP	2018
Fadhili	KSA	1,500	IPP	2019
Ibri	Oman	1,510	IPP	2019
Sohar 3	Oman	1,710	IPP	2019
Ras Laffan D	Qatar	2,000	IWPP	2019
Solar Park 3	Dubai	800	IPP	2020
Al-Zour 2	Kuwait	1,500	IWPP	2020
Al-Khiran 1	Kuwait	1,500	IWPP	2020

Source: Apicorp research

MAGHREB POWER INVESTMENTS UNDERWAY

SEC FINANCE MARKET FUNDING ($ BN)



Source: MEES, Apicorp research

UPDATE

Coming up:

Aramco, Japan to expand Okinawa crude storage deal

Under a deal with Tokyo, Aramco and ADNOC each store up to 6.3mn barrels of oil in Okinawa, in return allowing Japan a priority claim on the stockpiles

An expansion of approximately 2mn barrels in additonal capacity is expected.

QUASI-JAPAN STOCK
Japan treats the crude oil stored at Okinawa as quasi-government oil reserves, counting in half of the barrels stored by Aramco and ADNOC.

Saudi Aramco and the Japanese government are set to agree on a roughly 2mn barrel expansion of crude storage capacity in Okinawa, used by the state-run firm to store oil, Saudi Aramco CEO Amin Nasser said early in September.

Under an agreement with Tokyo, Saudi Aramco and the Abu Dhabi National Oil Co (ADNOC) each store up to 6.3mn barrels of crude oil in Okinawa, southwest of mainland Japan.

In return for providing free storage space, Japan gets a priority claim on the stockpiles in case of an emergency.

"It would be in the best interest for Saudi Aramco and Japan to increase the capacity," Nasser told reporters in Tokyo. "We are looking at a couple of million (barrels) more than what we have now."

A Japanese Trade Ministry official said no agreement had yet been reached for additional storage, although a source familiar with the matter said the deal was set to be signed in October.

Nasser was accompanying Saudi Arabia's powerful Deputy Crown Prince Mohammed bin Salman on his visit to Japan last month, along with Saudi Arabia's Energy Minister Khalid al-Falih and other ministers.

Japan treats the crude oil stored at Okinawa as quasi-government oil reserves, counting half of the barrels stored by Aramco and ADNOC as national crude reserves.

Saudi Aramco has stored crude in Okinawa since February 2011, and has used the facility to supply oil to China, Japan and South Korea among others.

Also last month, Aramco signed memorandums of understanding on business cooperation in Tokyo with Japanese companies including three major banking groups.

QUOTE: "IT WOULD BE IN THE BEST INTEREST FOR SAUDI ARAMCO AND JAPAN TO INCREASE THE CAPACITY. WE ARE LOOKING AT A COUPLE OF MILLION (BARRELS) MORE THAN WHAT WE HAVE NOW."

Qatar's Barzan gas project is set to start in November

The $10bn project will boost Qatari gas production by the first half of 2017

GAS PRODUCTION Qatar will begin operations at its Barzan gas project in November, two people close to the matter have told *Reuters*, as the Gulf state strives to meet rising domestic energy demand as it prepares to host the FIFA World Cup in 2022.

The $10bn project, a RasGas-operated joint venture between Qatar Petroleum and Exxon Mobil, was originally expected to come online in 2014. It will boost Qatari gas production by up to 2bn cubic feet per day when it reaches capacity in the first half of 2017, the sources said.

Qatar, the world's leading LNG exporter, faces growing domestic energy needs as it pursues a $200bn infrastructure upgrade ahead of the World Cup tournament as well as expansion of its national airline Qatar Airways.

Much of the production from Barzan, located in the North Field gas reservoir off the coast of Qatar, will be directed to the power and water sector, RasGas has said.


Production will increase by around 2bn cubic feet per day when the project reaches full capacity.

$10BN

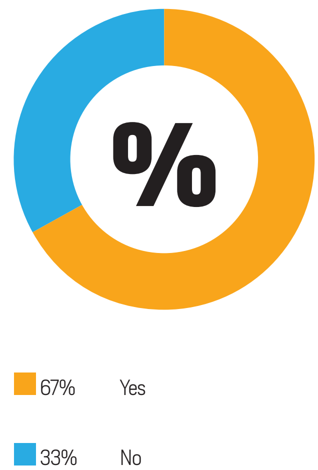
The RasGas-operated project is valued at $10bn.

$200BN

Qatar is pursuing a $200bn infrastructure upgrade ahead of the 2022 FIFA World Cup.

SPOT POLLS

IS YOUR ENTERPRISE PRESSING AHEAD WITH PLANS TO INVEST IN DATA ANALYTICS?



Source: Survey conducted jointly by Honeywell Process Solutions (HPS) and KRC Research Inc.

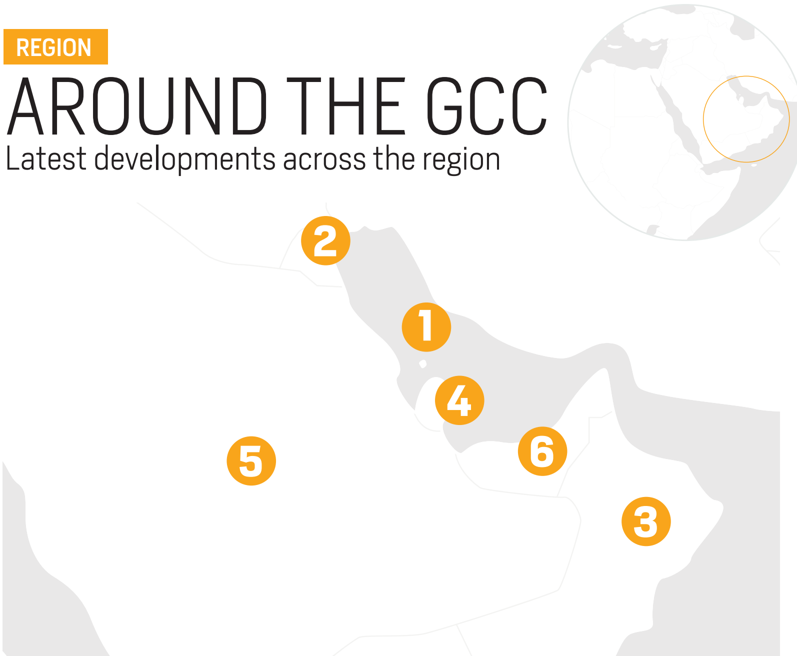
Ruler of Fujairah gifts the UAE its first VLCC jetty in the Indian Ocean

On September 21, His Highness Sheikh Hamad bin Mohammed Al Sharqi, the Ruler of Fujairah, launched the UAE's first very large crude carrier (VLCC) jetty in the Indian Ocean. The Fujairah Government reclaimed over 10.25mn square meters of land to reach the 26m deep-water draft, necessary for VLCCs for 24 hours marine operation.

REGION

AROUND THE GCC

Latest developments across the region



1. BAHRAIN

Russia and Bahrain have agreed to expand cooperation in liquefied natural gas (LNG), with Moscow considering LNG supplies to the kingdom. A memorandum of understanding was signed by Russia's Gazprom and Bahrain's National Oil and Gas Authority (Nogaholding) when Russia's President Vladimir Putin met Bahrain's King Hamad bin Isa al-Khalifa in Moscow early in September.

2. KUWAIT

From September 1, Kuwait implemented unsubsidised fuel prices in the country, after the government announced in August that prices would increase by more than 80%. The price of ultra grade gasoline has been raised to 165 fils per litre from 95 fils earlier, while super grade will retail at 105 fils from 65 and the premium grade at 85 from 60, according to state news agency *KUNA*.

3. OMAN

Singapore-listed Rex International Holding Ltd. last month said that Oman's Ministry of Oil & Gas (MOG) has extended the exploration and production sharing agreement (EPSA) with its subsidiary Masirah Oil Ltd for Block 50 for another three years from the end of the current phase to March 2020. Masirah Oil is finalising plans to drill another exploration well in Block 50 in early 2017.

4. QATAR

International credit ratings agencies have endowed somewhat positive ratings on Qatar. Fitch Ratings has announced it affirmed Qatar's long-term foreign- and local-currency issuer default ratings (IDRs) at AA. The issue ratings on Qatar's senior unsecured foreign-currency bonds are also affirmed at AA; the country ceiling at AA+, and the short-term foreign- and local-currency IDRs at F1+.

5. SAUDI ARABIA

Saudi Aramco has extended bidding for dredging and reclamation work at its marine terminal in Ras al-Khair by almost one month, industry sources told *Reuters*. The extension was given after potential bidders asked for more time to prepare offers. The project is the first phase of a huge ship-repair and shipbuilding complex in the east of the country, part of the kingdom's economic transformation plan.

6. UAE

The UAE has formally ratified the Paris climate change agreement at the United Nations General Assembly in New York on September 21. Dr Thani Al Zeyoudi, UAE Minister of Climate Change and Environment, submitted the UAE's decision after the Cabinet's approval on September 4. In June, the Ministry of Climate Change and Environment began developing the UAE National Climate Change Plan.

Siemens receives Aramco contract

COMPRESSORS Siemens has received a major order from Saudi Aramco to provide compressors for its $2.1bn industrial gas complex in Jazan. The company will supply six model STC-GV nitrogen compressors, seven model STC-GV main air compressors, and six STC-GV booster air compressors to the plant.

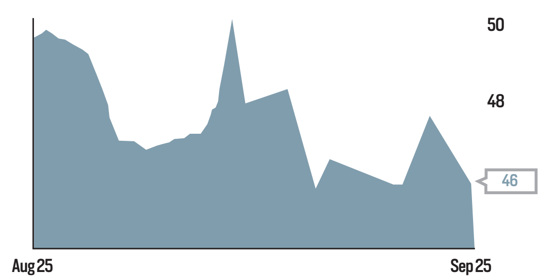
The first compressor units have been successfully tested at the Siemens Mega Test Center in Duisburg, Germany.

With a diameter of 1.8m, the first-stage impeller, is the largest installed on an integrally geared compressor rotor, according to Siemens.

The Jazan Refinery and Terminal, a Saudi Aramco-owned facility will have the capacity to process and store more than 400,000 barrels per day of crude oil into fuels for domestic and international customers.

DATA SNAPSHOT

BRENT CRUDE OIL PRICE



Brent crude oil prices see-sawed within the $45-50 range, on speculation over an OPEC-Russia freeze deal. *Source: oil-price.net*

Aramco awards Fadhili gas pipeline EPC contract to Saudi KAD

The construction firm's work is related to the energy giant's Master Gas System 2 and the Fadhili gas project; contract value estimated to be $1.33bn

CONTRACT Construction company Saudi KAD has announced that it has won a contract from national energy giant Saudi Aramco for extending the role of natural gas in the oil producer's energy mix.

The company will engineer, procure, construct and commission a gas pipeline network totalling 1,118 km in length, its statement said. Supporting systems, such as valve stations, fibre optic cables and metering systems, are also part of the contract. The work is related to the Master Gas System 2 (MGS 2) and the Fadhili gas programme.

The contract could be worth as much as $1.33bn.

No value for the contract was given in the statement, although a source familiar with the matter said it was worth in the region of SAR5bn ($1.33bn).

ABOUT MGS 2

MGS 2 will raise the capacity of kingdom's main gas pipeline to 12.5bn cubic feet per day by 2018.

IN BRIEF

NKT Cables is acquiring ABB's global high-voltage cable system business for $934m. The business is part of ABB's Power Grids division, which is currently undergoing a strategic review. NKT Cables designs, manufactures and supplies power cables.

Saudi Arabia's Arabian Drilling Company (ADC) is considering bidding for Dalma Energy, sources told *Reuters*, in a deal that could value the land rig operator at more than $500mn. ADC is interested in Dalma's assets, including those in Saudi Arabia, Oman and Algeria, a source said, adding that a deal is expected to be completed by the end of October.

IN QUOTES

"We see clients [...] more open to accepting innovative business models that enable them to meet their objectives while addressing their bottom line."

Bernard J Duroc-Danner – chairman, CEO and president, of Weatherford International.

"Our strategy is based on diversification of the group's income sources [...]; we will work on achieving that through the group's integrated strategic plans."

Saif Humaid Al Falasi, ENOC group CEO

"The UAE has [decided to] free-up some of the huge volume of gas being used in EOR through projects like the carbon capture recovery and storage projects, which will drastically change the availability of local natural gas."

Emad Elatreby, general manager of Ali & Sons Marine Engineering Factory.

Qatar Petroleum eyes stake in Italian Eni's gas assets: Report

Qatar Petroleum is reportedly seeking a share in Eni's Mozambique fields

ACQUISITION Qatar Petroleum (QP) might be joining ExxonMobil in purchasing a stake in Eni's gas business in Mozambique, *Reuters* reported.

The firm is reportedly discussing involvement in the project with Eni and Exxon that could potentially see the Qatari NOC enter a joint investment with the US major, one senior company source told *Reuters*.

AREA 4

QP has reportedly been looking at Eni's Area 4 gas field in Mozambique.

50%

Eni has been looking to reduce a 50% share in its Mozambique gas assets.

A second Doha-based source said QP had been looking at Eni's Area 4 field as well as adjoining acreage of Anadarko Petroleum Corp but added the focus was on Eni.

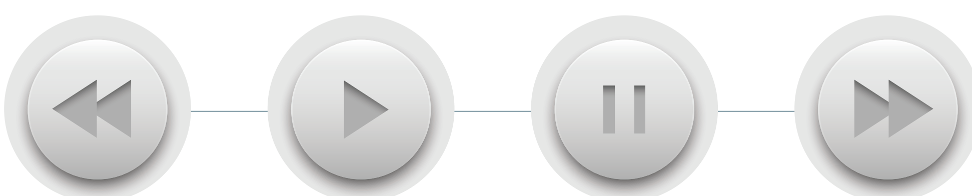
The source said the expectation was on Qatar Petroleum and Exxon to enter an agreement together, adding that QP delegation planned to visit Mozambique before 2016-end.

Eni has been looking to reduce a 50% share in its giant Mozambique gas assets, in which Exxon has reportedly secured an operating stake.

Exxon will operate the onshore liquefied natural gas (LNG) export facility, while Eni retains its share in Area 4 gas fields connected to the plant.

Saad al-Kaabi, Qatar Petroleum CEO, recently confirmed the group was looking at assets in Africa.

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



Global upstream oil and gas investments are expected to plummet 24% this year, with little signs of improvement for 2017, the International Energy Agency has said. This will come on top of 2015's 25% drop.

British major BP has launched the world's first low carbon and carbon neutral PTA technology. The line includes three products that provide "a more sustainable solution for the polyester value chain".

The transformation of markets and business models, driven by climate-change policy commitments, are putting strain on the energy sector at a critical time, finds a new World Energy Council report.

Germany's Wintershall has reportedly signed a memorandum of understanding (MoU) with Iran for cooperation in the oil sector. The details of the MoU are subject to a confidentiality agreement.

IEA: Saudi Arabia has ousted the US as the biggest oil producer

The kingdom has grown production, while the US has cut high-cost projects

GAME OF NUMBERS

While Saudi Arabia has added 400,000 barrels a day of output from low-cost fields since May, about 460,000 barrels a day of 'high-cost' production has been shut down in the US.

CONTEST Saudi Arabia has retaken the position of the world's top oil producer from the US, according to the International Energy Agency (IEA). "Saudi Arabia's elevated oil production has allowed it to overtake the US and become the world's largest oil producer," the Paris-based IEA has said in its monthly report.

While Saudi Arabia has added 400,000 barrels a day of output from low-cost fields since May, about 460,000 barrels a day of 'high-cost' production has been shut down in the US.

US output in August stood at 12.2mn barrels a day, including natural gas liquids, according to the IEA. The drop in US production came as the number of rigs drilling for oil and gas fell to a record low of 404 in May, according to data from Baker Hughes Inc. That number has since recovered to 508 as of September.

Saudi Arabian crude supply climbed to 10.65mn barrels a day in July, before easing to 10.6mn in August. Production has averaged 10.36mn barrels a day in the first eight months of this year, almost 200,000 barrels a day higher than the year-earlier period.

UPCOMING EVENTS
INDUSTRY CALENDAR

- SPE Reservoir Characterisation Workshop – October 11-12, 2016
  W Doha Hotel & Residences, Qatar
- Bottom of the Barrel Technology Conference Middle East & Africa 2016 – October 26-27, 2016
  Four Seasons Hotel Bahrain Bay, Manama
- Gulf Safety Forum 2016 – October 30-31, 2016
  Hilton Hotel, Doha, Qatar
- The Abu Dhabi International Petroleum Exhibition and Conference – November 7-10, 2016
  The Abu Dhabi National Exhibition Centre (ADNEC)

4

FOUR OIL AND GAS COMPANIES ARE NOW POISED TO GET THE EXCLUSIVE LIFETIME RIGHTS TO EXPLORE A LARGE SWATHE OF LAND IN CANADA IN THE CANOL SHALE NEAR NORMAN WELLS.

24BCM

EUROPE'S LARGEST NATURAL GAS FIELD MAY ONLY PRODUCE LESS THAN HALF OF WHAT IT DID FOUR YEARS EARLIER, AS THE NETHERLANDS SEEKS TO REDUCE THE RISK OF EARTHQUAKES LINKED TO OUTPUT.

7.7MN BPD

CHINA'S CRUDE OIL IMPORTS INCREASED TO THE HIGHEST IN FOUR MONTHS, AS DOMESTIC PRODUCTION DECLINED. THE WORLD'S BIGGEST ENERGY USER IMPORTED 32.85MN METRIC TONNES OF CRUDE IN AUGUST, ACCORDING TO DATA FROM THE GENERAL ADMINISTRATION OF CUSTOMS. THAT'S ABOUT 7.77MN BPD.

$100MN

THE GOVERNMENT OF MOZAMBIQUE IS NEGOTIATING WITH US OIL COMPANY DIONNEX ENERGY TERMS UNDER WHICH THE COMPANY COULD EXPLORE FOR OIL AND GAS.

6

MEXICO'S STATE-OWNED OIL AND GAS COMPANY PEMEX HAS ANNOUNCED THE DISCOVERY OF SIX NEW OIL DEPOSITS IN THE GULF OF MEXICO, FOUR OF THEM IN SHALLOW WATERS, AND TWO IN DEEP WATER. THE COMPANY WILL START DRILLING EXPLORATORY WELLS AT THE SITES OF THE DISCOVERIES NEXT YEAR, AIMING FOR A TOTAL OF 30.

1.5MN TONNES

INDIA IS IN DISCUSSIONS WITH THE UAE AND SAUDI ARABIA TO FILL HALF OF THE 1.5MN TONNES OF THE MANGALORE STRATEGIC STORAGE FACILITY.

25%

BRAZIL'S STATE-OWNED ENERGY GIANT PETROBRAS SAID IN A REGULATORY FILING IT WILL BE SPENDING $74.1BN OVER THE NEXT FIVE YEARS – A 25% REDUCTION ON CAPEX.

25.4MMC/D

ALGERIA EXPECTS TO SEE ITS TOUAT, TIMIMOUN, AND REGGANE GAS PROJECTS COME ONSTREAM THROUGHOUT 2017, THAT WOULD LEAD TO A COMBINED GAS PRODUCTION OF 25.4MMC/D FROM THESE FIELDS.


9:41 AM
Accessories
ACCESSORIES COST/PROFIT AVERAGE: DECEMB
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105
70
35
0
COST
PROFIT
MOST POPULAR ACCESSORIES: DECEMBER
5%
6%
11%
Search
100%
9:41
Wednesday, September 7
UP NEXT
Show More
Coffee with Ahmad
Souk Madinat Jumeirah
10:00 - 10:30 AM
WEATHER
Show More
Dubai
Partly Cloudy
Chance of Rain: 2%
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Improving operations through circulation subs

About the author:
Daniel Perez is the Eastern Hemisphere's product line director for Drilling Technologies at NOV Wellbore Technologies.

Daniel Perez says that the growing trend among oilfield technology companies to create tools that feature advanced functionality is exemplified by National Oilwell Varco's second-generation circulation sub tool, MOCS G2

Recent improvements to circulation subs have led to greater success in high inclination wells, MPD environments and aggressive fluid regimes where conventional technology has failed. Operations in these environments require versatile tools that can effectively conquer multiple mud and fluid-loss situations and hole cleaning applications in the same interval.

Oilfield technology companies have created tools with advanced functionality, such as the second-generation circulation sub tool from National Oilwell Varco (NOV), which improves drilling efficiency by providing unlimited, on-demand cycling between the ID of the string and into the annulus, in just 10 seconds. The tool has an enhanced hydrostatic pressure-balancing mechanism and automatically closes ports when incoming flow drops, maintaining well control safety. Through a single activation drop ball that can be preloaded on the surface, the circulation sub can be placed anywhere in the string, and operators can change the flow path despite an obstructed ID above the tool.

This advanced circulation sub technology has been proven in operations in the Middle East.

Case studies: Middle East

One operator in the Middle East had a challenge curing losses in a 16in carbonate section without damaging the directional BHA tools when pumping lost circulation material. Using an 8in circulating sub tool, in conjunction with a 16in HLB directional assembly, the operator directionally drilled the 16in section with 9ppg WBM from vertical to an inclination of 47° from 282ft to TD at 5,010ft, through Dammam and Ahmadi formations. The tool functioned fully through 151 circulating hours, successfully cycling 84 times and meeting the client's requirements. This many cycles would not be physically possible with a conventional multiple drop-ball sub that comes with limited cycling and a delayed response. The next generation circulation sub saves trips to empty an otherwise exhausted tool, and reduces loss curing time.

Another operator in the Middle East activated the circulation sub at a depth of 2,396ft to pump 140bbls of 9ppg super sweep to the annulus. While tripping out to adjust the BHA, the operator pumped another 100bbls of super sweep at a depth of 550ft. The ball was retrieved from the tool and it was picked up again after adjusting the BHA. The operator activated the circulation sub a second time, at a depth of 3,595ft, to pump 300bbls of super sweep to the annulus. In total, the tool successfully cycled 32 times, helping pump a total of 540bbls of super sweep to the annulus, and achieving 252 circulating hours with responsive functionality. The tool protected the directional BHA tools and exceeded expectations when it came to the amount of time that had to be spent bypassing flow.

A third operator in the Middle East picked up and made up a 6½in circulating sub to a 6in clean-out BHA. The tool was activated at a bit depth of 14,453ft MD to circulate the hole clean. A total of 1,010bbls of 1.22sg water-based mud (WBM) was displaced through the tool using a flow rate of 600gpm. The tool was then tripped out after circulation was complete. The tool was shifted three times in this assembly, and used for 36 circulating hours. The same tool was later picked up and made up to the 7in by 9⅝in tandem scraper assembly, and activated at a depth of 14,453ft MD to circulate the hole clean. A total of 656bbls of 1.18sg WBM was displaced through the tool, using a flow rate of 700gpm. The tool was shifted six times in this assembly and was used for 10.5 circulating hours.

Case studies have demonstrated how new circulation sub technology can help operators to improve drilling efficiency and reduce drilling costs. Unlimited cycling alleviates the need for multiple balls, allowing operators to use the tool with one ball. The flexibility of cycling the tool quickly allows drilling operations to resume and, ultimately, reduces the cost of drilling a well. Whether it is quickly curing losses, allowing pumping LCM multiple times and in multiple zones as needed, or circulating out debris from the hole without needing dedicated hole-cleaning runs, the circulation sub tool allows the operator to safely and efficiently improve the performance of the operation. NOV's new second-generation Multiple Opening Circulating Sub (MOCS G2) eliminates the need for trips to remove flasks full of activation/deactivation balls, increasing safety around the rig floor. NOV's new technologies promise to achieve lower drilling costs and deliver efficiency more safely.

Have your say:
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Acknowledging Central Asia's new, pivotal role

Central Asia is increasingly being recognised by the global oil and gas community as a prospective producer of energy and fuels, and as an important transportation link between different parts of Eurasia

About the author:
Colin Chapman is the president of Euro Petroleum Consultants.

The CAR stretches from the Caspian Sea in the west to China in the east, and from Afghanistan in the south to Russia in the north.

The Central Asia region (CAR) includes six republics of the former Soviet Union: Kazakhstan, Turkmenistan, Azerbaijan, Uzbekistan, Kyrgyzstan and Tajikistan. It is sometimes referred to as Middle Asia.

The region stretches from the Caspian Sea in the west to China in the east, and from Afghanistan in the south to Russia in the north.

It has become recognised in global oil and gas circles as a prospective producer of energy and fuels, and as an important transportation link between different parts of Eurasia.

Many countries in the CAR have turned eastwards when considering investment, joint projects execution, trading, and other business activities, in recognition of the importance of these growth markets. This hasn't always been the case, however. Until recently, Central Asia had been overshadowed by larger countries in the region, such as India and China, and by emerging economies in Africa.

The CAR is rich in natural resources, with estimated reserves of between 110 billion and 240 billion barrels of crude oil, at around $4tn in value.

The largest oil producer in Central Asia is Kazakhstan and, together with one of the biggest oil suppliers in Western Asia, Azerbaijan, may be home to reserves as much as three times greater than those of the US. These countries have a strategic location, but geopolitical risks, lack of industrial and civil infrastructure, and demographic problems have all held back the development of their oil and gas sectors.

Presently, almost all European consumers have close long-term supply relations with partners from Russia and the Middle East and, as such, it is unlikely that they will become a final point of trade for Central Asian countries in the foreseeable future. However, due to the location of the region, the most important clients will likely be India and China, the highest-growth countries when it comes to energy demand.

This fact could ensure that the CAR receives more financing for projects, and will be a further incentive to develop the required infrastructure in these countries.

China has been participating in different projects in Central Asia for some time now, particularly in Kazakhstan, investing in construction works and supplying technology and equipment, with a focus mainly on the upstream sector. The key reason for this is China's motivation to expand and diversify the sources of its energy imports.

The Chinese strategy is to feed its growing refining and petrochemicals industry in order to first meet domestic demand, and then to export high-value products to other regions. Another goal is to stabilise the internal energy balance by having long-term contracts with reliable oil producers in the Middle East, Africa and, now, the CAR.

For Central Asia, the first step in looking to provide crude oil to external markets is to further develop its oil and gas fields, and to implement thorough geological surveys in order to confirm and sustain levels of proven oil reserves and production. There are already many joint ventures (JV) with oil majors such as ExxonMobil, Shell, Chevron, Conoco, Eni, and others. These companies bring to the table the latest techniques and know-how, which result in a rapid increase in oil and gas field development.

This strategy has been in place for several years, and there has been a surge of oil crude and condensate production volumes, but the CAR has been particularly vulnerable to the uncertainties caused by the low crude price environment and global stagnation. In 2014-15, the oil extraction rates fell to a very low level, making it even more difficult for local companies to survive and overcome the present market situation.

Infrastructure expansion has been significant in the last decade; the existing pipeline network supports only two routes (northern and western), but as soon as all expected oil pipelines are constructed and commissioned, the CAR will become an important hub that connects many regions and directions, including Europe, China, Russia, India, and the Caspian and Caucasus regions. In terms of gas transportation networks, there needs to be more agreements made in order to allow the implementation of a similar kind of pipeline network.

For the downstream sector in the CAR, gas processing, refining, and petrochemicals production upgrade projects are included in the medium-to long-term plans for the region. In order to implement such plans, it will be necessary to get support from local oil and gas producers, as well as local, Western or Chinese investors, possible JV partners, main customers and governments. Of course, the required infrastructure and feed production facilities also need to be in place.

Nevertheless, some actions have been taken to achieve these goals. China, for example, has financed the construction of two small refineries in Kyrgyzstan, supplied by Kazakhstan, to produce 1.35 million tpa of products. Chinese companies are also involved in the development of a large petrochemicals project for the production of polyolefins at Atirau. This project is still in the development stage and is a JV between China, Kazmunaygas, and private investors.

Co-author Ekaterina Kalinenko is a project manager at Euro Petroleum Consultants' Moscow office.

Kazakhstan is the second largest oil producer in the Asian region, and the 14th largest oil producer, twice as high as Azerbaijan, India or Indonesia. As a result, Kazakhstan has become a key energy partner for China, thanks to the shared border between the two countries, China's role in oil and gas development in Kazakhstan, and a long-lasting partnership with Russia. Chinese companies have taken control of around 20% of the country's oil production and part of its gas production, as well as of the longest existing pipeline between China and the Caspian Sea, which runs through Kazakhstan territory.

Turkmenistan is a major gas exporter in the region. Its two main consumers are Russia (via an agreement in 2009), and China (thanks to a 30-year agreement that started in 2009 for 30bcm of gas through the Central Asia-China Gas Pipeline). Its oil production rates are quite moderate (235,000bpd in 2016), but are comparable to countries such as Australia and Thailand.

An increase in investments in Turkmenistan is expected in the next five years because of its reserves and economic potential. The country is also implementing an interesting methanol to gasoline project, as a route to monetising its natural gas. Rather than exporting natural gas or methanol, this option allows the production of gasoline for local and regional markets.

Uzbekistan's volume of oil production is quite modest compared to its neighbours, but its geopolitical advantages include its central location between all the other countries that constitute the CAR, and the fact that it has the largest population. As a result, the country represents a good partner for CAR market players, as a possible coordinator and integrator of infrastructure projects in the area. In 2013, Uzbekistan acquired an energy contract worth $15bn from China, mainly in gas supply to the country.

Azerbaijan has large gas reserves and also produces relatively sweet crude oil. Ambitious plans for developing a large oil, gas, and petrochemicals project (OGPC) have had to be scaled back due to the present low crude oil price environment. Nevertheless, the project is expected to proceed in stages over the next decade.

The CAR has been monitoring the recent developments in Iran and Turkey, and this will reinforce its plans for closer cooperation with countries to the east and south.

Next month, the focus will turn to recently implemented and future oil, gas, and pipeline infrastructure projects in the region, and to trends in the development of Central Asia's major energy suppliers.

INTERVIEW

A risky business

Oil & Gas Middle East speaks to **Alexander Larsen**, a fellow of the Institute of Risk Management (IRM) and strategic/enterprise & project risk manager for Lukoil in Iraq, about the challenges – and highlights – of life as an energy sector professional in the country

INTERVIEWER: INDRAJIT SEN

How did you get your job?
The first half of my career was as a risk consultant for Marsh, Zurich and DNV. It involved setting up enterprise risk management (ERM) and business continuity management (BCM) frameworks, and running workshops to identify risks within a wide variety of organisations from different industries. The consulting job also took me abroad to Malaysia, which really defined the second half of my career.

I am fortunate to be in a profession that allows extensive travel. I realised pretty quickly that working outside of the UK and Europe was something I wanted to keep doing. As a result, I have spent the last eight years working in the Middle East with Qatar Foundation and Saudi Aramco, before joining Lukoil, which was looking for someone with oil and gas and extensive risk experience for its mega-project in Iraq.

I was made aware of the opportunity through other risk professionals, who I had met at conferences, informal meetings, and through the IRM Qatar and Middle East groups. In fact, all of my jobs since leaving the UK have come out of having a strong network.

What's a typical day like as a risk manager in Iraq?
Working in Iraq is both unique and challenging. I work onsite in shifts (a month on, and a month off). To get to the site, when i first arrive for my shift, we are greeted by several heavily armoured vehicles, six to 10 armoured security guards, and are each provided with a bullet-proof vest. The site is about a two and a half hour drive from the airport.

Once onsite, you are confined to the security perimeter, which is home to an oil treatment facility, well-pads, pipelines, gas power plant and a few other treatment facilities.

We work 12-hour days, which involves a lot of site visits, meetings with managers, superintendents and engineers, to fully understand the risks associated with running the site. Then a lot of quantitative analysis work is undertaken and reports are published for the stakeholders.

"TO GET TO SITE, [...] WE ARE GREETED BY SEVERAL HEAVILY ARMOURED VEHICLES [AND] PROVIDED WITH A BULLET-PROOF VEST."

What do you enjoy about your job?
Risk management is still a very new concept, with very few people understanding it or even being aware of it. This means you always need to sell the concept in different ways, depending on the person you are dealing with. I enjoy finding innovative solutions to build up support for risk management, whether it's through presentations, workshops, providing value to a department, or using risk management inputs to support better decision-making.

Following on from this, assuming you are successful, it becomes very clear how the risk culture within the organisation as a whole improves. It gives you a great sense of satisfaction when you get a call from a department, or facility manager requesting a risk workshop. That's when you know you have been successful in your job.

In terms of working on a major project in Iraq, the most enjoyable aspect of my work is being exposed to extremely unique risks that I would otherwise never get the chance to experience. It will certainly help me in future roles, especially with companies that are considering expansion into new territories.

What are the challenges?
The major challenges of my job are working in shifts. As I work on a month-on/ month-off basis, it means that, for a full month, someone else is responsible for risk management. This can lead to inconsistencies in risks or risk approaches, missed communications, and a lack of continuity. Upon returning to site, it can be quite difficult to catch up with what has been going on for a full month.

WHAT ELSE DO YOU NEED TO KNOW ABOUT ALEXANDER?

He earned a degree in risk management from Caledonian University. He also writes a blog about living and working in Iraq, which can be read at **crystalartblog.wordpress.com**.

In an exclusive interview, Bernard J Duroc-Danner, the chairman, CEO and president of Weatherford International, talks about the company's operations and expansion plans in the Middle East

CHANGING THE REGION'S OILFIELDS

INTERVIEW: INDRAJIT SEN

How did Weatherford International start operating in the Middle East's oil and gas industry?
Weatherford has had a presence in the Middle East for more than 40 years, with operations in Egypt and Abu Dhabi dating back to the 1970s. Our first milestone contracts with Middle Eastern NOCs were for TRS and cementing accessories. We later expanded both our footprint and our capabilities in the region. That was the start of our adventure in what would become our largest region in the eastern hemisphere.

Our journey has progressed exponentially since those early years, and we recently achieved a new measure of success in the region. At the Excellence in Energy Awards presented at ADIPEC last year, Weatherford was awarded 'Best Oilfield Services Company' — an honour that recognises leadership in project management, adherence to timelines, cost control, and overall efficiency and productivity.

How profitable has operating in this region been for the organisation?
The Middle East and Africa (MEA) region makes up a significant part of our business. Over the years, this region has contributed to the growth and strength of Weatherford. Today, the MEA

Weatherford will present its technology to several Middle East NOCs at ADIPEC in November.

region is somewhere we absolutely must be and, over time, it must form an increasing share of our overall activity.

We have been upgrading our offerings, from simple hardware and services to a more complete offering, to become a better partner to our customers in drilling, well construction and production optimisation.

What products have Weatherford recently developed and launched in the market?
In the area of production optimisation, we have a set of sensors, both classical and fiber-optics based; the largest SCADA solution in the industry, which connects 350,000 wells; and production software that optimises more than 110,000 wells.

We are currently upgrading our portfolio to be easier and lighter to use, via the cloud, and are completing our physics-based applications with advanced analytics, as part of our collaboration with IBM. As we extend the link to our sensors by using newly developed Internet of Things (IoT) capabilities, we will be able to deliver a truly intelligent digital oilfield.

One of the motivating factors behind this initiative was increased demand from our clients in the Middle East for advanced well management

350,000

WEATHERFORD'S SCADA SOLUTION CONNECTS 350,000 WELLS, WHILE ITS PRODUCTION SOFTWARE IS USED TO OPTIMISE MORE THAN 110,000 WELLS

solutions. We will be visiting with executives at several Middle Eastern NOCs this fall, following presentations about this technology at both SPE-ATCE (in September) and ADIPEC.

What is the scope of each of Weatherford's business lines – Drilling and Formation Evaluation, Well Construction, Completion and Stimulation, and Production?
In line with our overall focus on operational discipline and meeting client needs, we have refined our offerings in each of our four global business units. As a result, our differentiated portfolio contains highly engineered and integrated technologies that more closely align with the expectations of our clients.

Our distinctive Drilling and Formation Evaluation offerings include high-pressure, high-tem-

"OUR DIFFERENTIATED PORTFOLIO CONTAINS HIGHLY ENGINEERED AND INTEGRATED TECHNOLOGIES THAT MORE CLOSELY ALIGN WITH THE EXPECTATIONS OF OUR CLIENTS."

perature logging-while-drilling (LWD) services and a unique cased-hole reservoir evaluation tool. We also offer world-class laboratory services including core evaluation.

Well Construction, long an area of strength for Weatherford, is becoming increasingly integrated — and innovative — as we tighten our focus on well integrity. Managed pressure drilling, tubular running services, cementing products and pressure control devices remain the cornerstones of this business unit.

Our Completions portfolio has been entirely refreshed from top to bottom. We now have modern completions systems built for today's deep, complex wells, including safety valves and packers certified to the highest industry standards. Additionally, we are the only company within our peer group to offer RFID-enabled downhole tools.

In terms of Production offerings, Weatherford is specialised in the areas of artificial lift and production optimisation. Highlights within our portfolio include comprehensive lift systems, optimisation for all forms of lift, asset management software and our SCADA solution.

Weatherford works closely with NOCs in the Middle East, as well as IOCs.

Which major clients do you work with in the Middle East?

We work with all operators in the Middle East. Our history and DNA make us easy to work with, first as a supplier, then a partner. We have been working very hard so that we are now seen as a full partner with whom strategies can be developed and carried out, not just a simple – although reliable – supplier. The strongest areas of growth in terms of market share are production optimisation, tubular running services, well construction products, surface well testing, surface logging systems and managed pressure drilling.

We work closely with NOCs in the Middle East, as well as with IOCs — ExxonMobil, Total, BP, ENI, Shell, Occidental, OMV and other independents — either directly or via their joint ventures within the MEA region.

We understand our customers' needs and believe that we have been up to the challenge in providing them with unique products and services that, in some cases, would not otherwise have been available to them.

What trends are you seeing in oilfield services in the Middle East, based on your clients' demands?

The extended low-price environment has driven the market towards CAPEX reduction and reprioritisation of projects across MEA. At first, the industry took the simplest path, where clients requested discounts across the board. As things progressed, we began turning more and more toward value-added optimisation and efficiency in operations. We see clients seeking productivity-enhancing solutions, and they are therefore more open to accepting innovative business models that enable them to meet their objectives while addressing their bottom line. This trend seems to be here to stay.

At Weatherford, we see more opportunities surfacing in integrated drilling services, well intervention solutions and fields rejuvenation. We do engage selectively, especially where we see our unique offerings of products and services would help our clients deliver on their plans and meet their objectives.

Again, our services help clients maximise recovery in mature reser-

Bernard J Duroc-Danner is the chairman, CEO and president of Weatherford International.

voirs and conventional and unconventional fields, while minimising associated risks and costs. We are able to do this using our extensive experience, the depth and breadth of services we offer, leading edge technologies, and global footprint.

What major projects are you currently working on in the region?

Our most notable contract wins in the Middle East are centred in Saudi Arabia, Kuwait, Abu Dhabi and Oman, and are dominated by drilling-related services, with some completion add-ons.

Recently, we were awarded a five-year Drilling Services contract by an NOC that effectively doubled our market share in the country. We won this work on the basis of our advanced LWD technology, combined with our outstanding performance record and superior service quality. We have also seen an increase in Formation Evaluation Services contracts in the Middle East.

Formation Evaluation Services contracts are an area of growth for the company in the Middle East.

This comes on top of multiple large well construction contract awards by a number of NOCs that firmly cement our position as the market leader in this space. The awards were based on our significant technological edge and superior service quality delivery that spans many years.

> "EARLIER THIS YEAR, I DESCRIBED THE MARKET AS BRUTAL. THIS WAS NOT AN EXAGGERATION AND IN FACT, IF ANYTHING, MAY UNDERSTATE THE SEVERITY OF THE INDUSTRY DECLINE."

How has Weatherford International performed financially so far this year?

We continue to drive progress both operationally and financially. Our results reflect the impact of our multi-year cost transformation, which has been as structural as it was cyclical.

The second quarter evolved as we expected. In spite of activity drops in select regions, largely in the western hemisphere, operating income actually improved significantly. This is entirely due to cost management and excellent operating execution. In the eastern hemisphere, we believe we have crossed the low point. It is, as a whole, turning, albeit slowly.

To what extent has Weatherford been affected by the low oil prices?

Earlier this year, I described the market as brutal. This was not an exaggeration and, in fact, if anything may understate the severity of the industry decline. However, in spite of the unprecedented challenges to our industry as a whole, Weatherford has not hesitated in pursuit of our ongoing areas of focus: core, cost and client.

Our steadfast direction has resulted in a company that is fundamentally operationally stronger than at any time in our history. With our transformation complete, we are now in the best possible position to benefit from the market recovery. Now

Weatherford is intensifying its focus on operational direction and strategy.

it is time to intensify our focus on our operational direction and strategy.

At the end of the day, the most important measure of success is the long-term and sustainable performance of our clients. One of the ways this is achieved is through safety, which is a moral imperative and the gateway to quality.

In their efforts to slash capital expenditure, NOCs and IOCs often pressure contractors and oilfield services providers for discounts – has this affected your business?

Moving from an environment of $100 per barrel to one of $40–50 per barrel, clients required aggressive discounts from service suppliers to meet cost-cutting initiatives. Moving forward, we will be addressing these requirements through innovative solutions and technologies that reduce costs, rather than continuing to apply these same across-the-board discounts.

How does Weatherford source its workers, and what skillsets do you look for when hiring staff?

The Middle East is a key growth area for us, not only in terms of market share but also in terms of talent. One of the objectives of our new global recruitment initiative, NextGen, is to increase the diversity of our workforce through strategic hiring in growth markets such as Saudi Arabia.

High-potential engineering graduates have many options. What we offer that is unique is an opportunity to grow in many directions, depending on their interests and strengths. Starting with a strong technical base, our training programmes focus on developing strengths in non-technical areas such as finance and relationship management.

Stakeholders in the energy sector worldwide have been compelled to downsize their workforce. To what extent has Weatherford cut jobs?

Our operational transformation is now complete. Most of the workforce reductions are behind us. The structural changes we have made will continue to drive efficiency and productivity as the market turns.

In addition to reducing the support ratio of indirect to direct labour, we have delayered the organisation and have thoroughly upgraded our operating and financial management. As a result, our human resources are more empowered, with an emphasis on training, career development and leadership that promotes accountability at every level.

$4MN

THROUGH LEAN PROCESSES, THE ADM PLANT HAS DELIVERED HARD SAVINGS OF OVER $4MN

> "THROUGH DIVESTMENTS, WE WERE ABLE TO MONETISE OUR NON-CORE BUSINESSES. THIS HAS ALLOWED US TO INCREASE OUR FOCUS ON DRIVING FURTHER INNOVATIONS WITHIN THE AREAS IN WHICH WE LEAD THE INDUSTRY."

Weatherford is striving to grow its Drilling Services, Wireline and Completions product lines in the region.

What are your expansion plans and how are you working to grow Weatherford's business in the Middle East?
Our focus remains on increased deployment of core services. For example, we want to aggressively grow our Drilling Services, Wireline and Completions product lines and further expand our Well Construction and Production product lines while we also look at re-engaging in integrated and turnkey projects that fit our operational and technological strengths. We have been increasing our services breadth and depth by introducing additional products and services that we have not used before in this region.

Weatherford has a number of production complexes in the Middle East, but do you also plan to invest in an innovation facility here – something that will enable you to more effectively reach out to your customers?
Our Abu Dhabi manufacturing (ADM) facility exemplifies how we are investing in centres of excellence and innovation in the Middle East. First, it is the only multi-product line plant in the world. By placing a formidable suite of capabilities under a single roof, we are able to control both quality and cost.

Additionally, our operational leadership and processes are supported by a comprehensive LEAN Six Sigma training and certification programme. Furthermore, the facility is API certified in recognition of our robust quality management systems, and is licenced by the leading tubular suppliers to apply premium connections.

The ADM plant is in line with our overall culture of lean manufacturing. By applying efficient, safe and environmentally sound processes and disciplined operational principles, we have delivered more than $4mn in hard savings in Abu Dhabi alone.

Baker Hughes has bought Weatherford's Pipeline and Specialty Services business, while Lubrizol has acquired your global oilfield chemicals business. What impact has this had for customers?
The transactions we completed in 2014 were part of our overall strategy of core, cost and cash. Through divestments, we were able to monetise our non-core businesses. This has allowed us to increase our focus on driving further innovations within the areas in which we lead the industry.

In an energy sector as heavily populated with oil and gas service providers as the Middle East, how do you tackle competition?
Our portfolio of products and services is both complementary and competitive, relative to our larger peers. There are overlaps in our product lines, especially in completion and formation evaluation. However there are also areas where we stand apart. Weatherford is more dominant in development and production than exploration. Our market shares are greater on land than offshore. We have an extensive global infrastructure, including manufacturing capabilities. For these reasons, we are best positioned to benefit from the first turn in the market.

Let's celebrate the industry's resilience

The seventh annual *Oil & Gas Middle East* and *Refining & Petrochemicals Middle East* Awards 2016 is just days away. The nominations have been shortlisted, and decisions about the winning entries have been made by the highly-qualified and experienced judges, with the magazines' teams supporting them in an advisory capacity.

Despite the oil and gas industry's downturn, we have been overwhelmed with entries from across the board – a definite indication of the regional sector's resilience and optimism. Existing and new categories generated substantial interest from upstream operating companies, service providers, refining and petrochemical producers, as well as suppliers catering to both sectors in the region and worldwide.

The Technical Innovation of the Year category attracted a record number of entries this year, serving as a testimony to the industry's unquenchable thirst for achieving technological advancement and improving implementation of existing technologies. Young Oil & Gas Professional of the Year, too, recorded a high volume of quality nominations – a testimony to the regional industry's commitment towards patronising and encouraging talented and motivated youth to ascend the ladder and assume leadership roles.

Categories pertaining to vital, non-core industry operations aspects such as in-country value (ICV), operational excellence, and environment conservation, also witnessed a significant amount of entries, signalling the regional industry's drive to train and employ more of the local workforce, as well as to invest in preserving and enhancing the environment and the communities in which it operates.

The editorial team successfully introduced two new downstream categories this year, to reflect the rapid growth of the refining and petrochemicals sector in the region; both categories were warmly greeted by the industry, as manifested by an impressive standard of nominations. The judging panel, too, welcomed the introduction of Downstream Project of the Year and Sustainability Initiative of the Year, describing the segments as "pertinent" and "must-haves" in the current oil price environment.

Adjudication is never an easy task, and with so many quality entries vying for an award in their respective categories this year, our judges had to spend ample time carefully considering the merits of each entry. We spoke to some of our judges during and after their deliberations about their impressions of the categories and the corresponding nominations.

***O&GME*: What are your thoughts on this year's nominations?**

Abhay Bhargava, Frost & Sullivan: The nomination categories were well thought of, and pertinent.

Kamlesh Parwani, MEGlobal: Overall, the spread of nominations was reasonably wide in most of the categories. I don't know whether it was industry-specific, but in some categories we could have got more nominations from various organisations that we already know are quite active in those areas. It may have been an issue of timing, I don't know, but it would be nice to have more of them in the future.

Richard Devine, Clyde & Co: I thought the quality of entries was superb. The passion and enthusiasm for excellence really shone through and made the judges' job very difficult.

***O&GME*: Did you feel that both the upstream and downstream industries in the region were well represented?**

Parwani: The downstream industry was reasonably represented. Can more be done? For sure. Can we increase the penetration [of downstream producers in the awards]? It looks like we can. But let's also give us a fair chance and time. It's the seventh edition, not the 40th or 38th. We will get there, but it will take time.

And presently, because of the MENA environment and economic situation, it may have not been so welcoming for organisations to spend on these activities as a new initiative. Those who have been doing it, have a system in place to continue doing it, but for those who have to initiate the first steps, this is probably not the best period, so we have to factor that in as well.

Devine: Absolutely, it was a very good spread of upstream and downstream projects, and midstream was not forgotten either.

***O&GME*: What were some of the things that you were looking for in a winning entry?**

Bhargava: Hard hitting evidence of actual implementation, and proof of impact in a quantified manner, or reflected through recognitions and attainments.

Parwani: First, I look at relevance to the award. Was it a very generic, umbrella statement, some company jargon thrown on paper, or was it a specific activity or event that deserves recognition? It has to be both timely and relevance-driven.

Devine: The standard of competition was very high, so winning entries really needed to distinguish themselves to be successful. I think that those entries that were able to demonstrate significant and measurable results were much easier to select. There were a number of entries that highlighted potentially brilliant projects, but results were always preferred to potential. That's not to say those projects will not be recognised in the future, just that the timing wasn't right at the moment.

***O&GME*: What were some of the topics that stood out to you from the pool of nominations?**

Parwani: I think the balance of individuals, such as Young Professional of the Year, and the inclusivity – to have female talent being recognised with Woman of the Year – right to the very technical element, like innovation and operational excellence. So, from my perspective, it was very well-balanced, thought-through and structured. It will be a great event, almost like the industry's Oscars. People will wait to see who would be recognised as the best musician, director, producer, actor or actress.

Devine: The entries for Young Professional of the Year were very impressive. It was unfortunate that there could only be one winner in this category, as many of the entrants seemed to have achieved so much in a relatively short career.

There were numerous exceptional entries, and we hope we have done justice to all the nominees.

2015 MIDDLE EAST Oil&Gas & Refining & Petrochemicals Middle East AWARDS

Event: *Oil & Gas Middle East & Refining & Petrochemicals Middle East* Awards 2016
Date: Wednesday 5th October, 2016
Location: Sofitel Abu Dhabi Corniche hotel
Dress code: Business attire/ national dress. Evening formal is optional

PROGRAMME OF EVENTS

19.30 – Registration and networking
20.00 – Ballroom doors open
20.15 – Starters served
20.30 – MC welcome
20.40 – First half awards commence
21.15 – Main course served
22.00 – Second half of awards
22.30 – Dessert served
23.00 – Event concludes

Behold the finalists...

We are pleased to announce the names of the companies and individuals whose nominations have been shortlisted after intense scrutiny by our jury and editorial team. We wish you all the best and look forward to seeing you at the Awards

CSR Initiative of the Year:

Our Environment, Our Life / Saudi International Petrochemical Company (Sipchem)
Young Scientist Programme / Dow Chemical
Support to 'Children of the Mountain' Foundation in Nepal / Megarme
Al Qabail Park / Orpic
Waste Free Environment / Gulf Petrochemicals and Chemicals Association (GPCA)

Downstream Project of the Year:

Sohar Refinery Improvement Project / Orpic
Muscat Sohar Product Pipeline Project / Orpic
Liwa Plastics Industries Complex Project / Orpic
Sadara $20bn Petrochemical Complex / Sadara Chemical Company
Al Jifnain Oil Terminal Project / Orpic
Kuwait Al Zour Refinery (ZOR) and Petrochemical Complex / Kuwait National Petroleum Company and Petrochemical Industries Company (PIC)

Enhanced Oil Recovery (EOR) Project of the Year:

Technovita / Novas Energy
In-Situ Steam Generation / Saudi Aramco
Saih Rawl Field Depletion Project, Phase 2 / Petroleum Development Oman (PDO)
Shuwaihat Sour Gas Field Chemical EOR Project / ADNOC – Wintershall
Miraah Project / PDO – Glasspoint Solar

HSE Initiative of the Year:

Health & Environment Team, HSE Group / Kuwait Oil Company
'Embedding a Sour Gas Mindset' / Al Hosn Gas
Medical Examination Drive / Kuwait Aviation Fuelling Company
Goal Zero Ambition / Royal Dutch Shell

HSE Product/Application of the Year:

Environmentally Safe Operations and Maintenance Initiatwive / Kuwait Oil Company
Al Hosn Gas Integrated HSE Database / Al Hosn Gas
Rosemount / Emerson Process Management
DurasealHoneywell Process Solutions
MR 150 Man Rider Winch / Ingersoll Rand – Famco

In-Country Value Strategy of the Year:

Drilling Products Utilising Local Resources / Aramco
ICV Department / Orpic
MoU with Oman Centre for Corporate Governance and Sustainability (OCCGS) to Support Localisation / Petroleum Development Oman (PDO)
Qatari SME Support Contracts / Shell Qatar

Oil and Gas Woman of the Year:

Sudha Nakka Papisetty, HSE compliance and audit advisor / Al Hosn Gas
Nada Al Mesfer, senior petroleum engineer / Kuwait Oil Company
Reem Al Anbari, chief financial officer / Borouge
Alia Al Rifai, chief financial officer – Middle East / Siemens

Oilfield Services Company of the Year:

Gulf Drilling International
Megarme
Weatherford International
Schlumberger

Operational Excellence Strategy of the Year:

Occupational Health Management System / Al Hosn Gas
Well Delivery Team – South East Kuwait Asset / Kuwait Oil Company/ Kuwait Petroleum Corporation
Emerson's Control System Solution for Saudi Aramco / Emerson Process Management
Megarme Inspection and Engineering Operations / Megarme

Sustainability Initiative of the Year:

Caring for the Environment / Saudi International Petrochemical Company (Sipchem)
Sustainable Production of Sour Gas / Al Hosn Gas
Biodegradation of Libyan Light Crude Oils / Arabian Gulf Oil Co (AGOCO)
Smart Commissioning / Emerson Process Management
Total Field Care Services / Honeywell Process Solutions
Dubai Growth and Expansion Strategy / Emirates National Oil Company (ENOC)

Technical Innovation of the Year:

Date Seed Based Size Particulate LCM's–ARC Plug / Aramco
High Power Laser Perforation / Saudi Aramco
Resin-Coated Saudi Sand Method / Saudi Aramco
Seawater-Based Fracturing Fluid / Saudi Aramco
Maximum Lock (MAX-LOCK) Cements / Saudi Aramco
Artificial Lifting Solutions / ABB

Training Initiative of the Year:

HSE e-Learning Management System (eLMS) / Al Hosn Gas
Professional Development Programme / Saudi International Petrochemical Company (Sipchem)
Human Energy Management / Saudi Aramco
National Objectives Programme / Petoleum Development Oman

Diraya System by Well Services Group / Kuwait Oil Company (KOC)

Young Oil & Gas Professional of the Year:

Sudha Nakka Papisetty, HSE compliance and audit advisor / Al Hosn Gas
Salma AlSinan, scientist – Advanced Research Centre / Saudi Aramco
Mohammed Geer, working at Advanced Research Centre / Saudi Aramco
Damian P San Roman Alerigi, petroleum scientist – Advanced Research Centre / Aramco
Prerit Goel, group director and board member / Gulf Petrochem Group
Ali Saeed A J Makki, drilling professional / Gulf Drilling International
Mohammed K AlMedallah, offshore specialist engineer and flow assurance unit supervisor / Saudi Aramco

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Oil&Gas MIDDLE EAST

A SPECIAL REPORT ON A KEY SEGMENT OF THE REGIONAL UPSTREAM INDUSTRY

MARKET FOCUS

Investing in safety is a market imperative in the Middle East */p42*

KNOWLEDGE PARTNER

Proper maintenance goes a long way in ensuring safety, says Wood Group Intetech's managing director/*p44*

\+

PRODUCTS & SERVICES

THE LATEST HSE PRODUCT OFFERINGS / P46

SPECIAL REPORT

HSE CLOTHING & EQUIPMENT

This month, *Oil & Gas Middle East* takes an in-depth look at how the region's industry is investing in workplace health and safety

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COMMENT

EDITOR'S LETTER

Indrajit Sen is the deputy editor of *Oil & Gas Middle East*. He can be reached at: indrajit.sen@itp.com

Better safe than sorry, as the saying goes

A spate of recent, minor fire accidents at regional oil and gas facilities serves as a grim reminder that adequate clothing and safety equipment might have saved the day

The past couple of months witnessed a number of fire accidents at petrochemical plants in Iran. Unconfirmed reports emerging from Iran's tightly-controlled state media said a number of workers were injured in each of those incidents. But what is noteworthy is that the Islamic Republic's oil minister, Bijan Zangeneh, said "a lack of HSE funding", and the failure on the part of "some private companies" to provide adequate support for health and safety, was responsible for the fire outbreaks.

Iran's sanctions-burdened oil and gas industry is certainly suffering from a huge shortage of international investments; demonstrated by the occurrence of three (reported) fire accidents in August and September alone. But what happened in the prosperous industry of Saudi Arabia recently has raised many an eyebrow.

On September 20, a fire erupted at the Ras Tanura oil terminal, operated by Saudi Aramco, injuring as many as eight workers (six contractor staff and two Aramco employees). The incident was an eye-opener for the wider industry and sent the message that, if the facilities and staff of Saudi Aramco, the world's largest and richest oil company, can be affected by fire due to just a slight lapse in safety standards, no entity in the energy industry is safe.

There is dire need for the implementation of a comprehensive HSE policy in the regional industry, one that would begin with investing significantly in the most basic aspects – adequate clothing and proper equipment for the workforce.

One wonders whether the workers injured in any of the accidents highlighted were wearing appropriate protective gear, or had conducted a safety check of their operating facilities that day – routine measures that could have averted the mishaps.

At ADIPEC last year, I came across an exhibiting company – a small American firm that was proudly showcasing its range of shower fittings and eye- and face-wash lotions. Staring at their stall at the time, I wondered what the utility of such products might be. I realise now that those shower fittings are meant for installation in remote sites and help workers to thoroughly cleanse themselves, while the creams are actually anti-contaminant solutions that, when applied, help the skin stave off hazardous chemicals and gases.

As we are often reminded, it's the simple things can make a world of difference in day-to-day operations.

Investment in HSE is an imperative

Market studies indicate that, despite oil and gas sector players earning lower revenues, the industry's spending on the improvement of workers' health and safety has not fallen by the wayside

AUTHOR: ADRIAN GANNON

↑ **The safety culture in the Middle East has improved significantly in recent years.**

There is no doubt that the sustained low oil price has had an effect on the industry, but it is hoped that cost-cutting regimes have not had a negative effect on safety. Analysts point out a range of other negative – and some positive – effects that the current trends are having. For those who work in the oil and gas industry, the negative effects of the market are apparent. However, the industry and the culture that has developed may be more resilient than we give it credit for.

Xodus recently completed a safety climate survey as part of a safety culture programme on behalf of an oil and gas operator in the Middle East (the operator does not wish to be named for confidentiality reasons). The results of this survey indicated that the situation was not as bleak as we might have imagined. In fact, the results were very positive, showing both an improved safety culture over a five year period, and a favourable benchmark against international good practice.

Methodology

The survey was completed using an online survey platform and was, therefore, able to be shared with staff in various locations, so long as they had access to a computer with internet facilities. The survey consisted of 25 questions that were completed by over 800 personnel, and resulted in a completion rate of approximately 97%. The completion rate alone was very impressive, indicating that those who were invited to participate, did so gladly.

A range of demographic questions were used, such as length of service, age, nationality and employment status (contractor or staff). The survey did not identify any significant demographic influences on culture.

Results

Survey data identified two features: firstly, that the operator compared positively to an international benchmark and, secondly, that there was a noted improvement since the last study was carried out (2010).

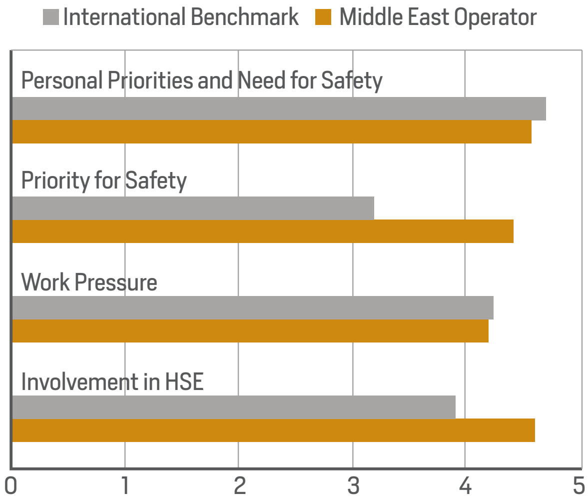
The benchmark data used was the safety climate and risk on offshore oil platforms on the Norwegian continental shelf. When results were analysed across four categories, the analysis demonstrated that the Middle East operator performed favourably when compared against the international benchmark. Results are displayed in the diagram (right).

This operator also completed a study in 2010 and despite that, the results compared very favourably with the 2015 study. Nine questions were asked in the 2010 survey and were repeated in the 2015 exercise. There was an overall improvement in the safety culture in the five-year period, assuming that the last survey was undertaken by a similar group of respondents.

Conclusion

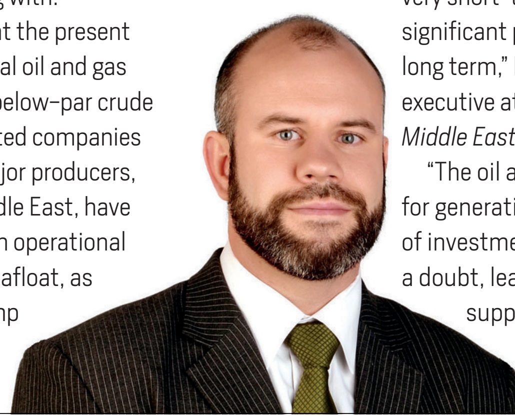
The industry can take satisfaction from the results of the safety climate survey. Although culture is a long and enduring state, the economic climate at the time of the study appears very positive. Although this is just an isolated study, it demonstrates that the values that have developed in this organisation over a substantial period of time will not be eroded easily and are capable of enduring the current challenge posed by low oil prices that the industry is coping with.

It is no wonder that the present downturn in the global oil and gas industry, caused by below-par crude oil prices, has impacted companies across the board. Major producers, especially in the Middle East, have been cutting down on operational costs in a bid to stay afloat, as they continue to pump hard. The NOCs have reportedly been hacking the budgets allocated to any and every aspect of their operation that does not help them produce more oil or gas for less.



Results from the safety climate survey, comparing an anonymous Middle Eastern operator with an international benchmark.

Adrian Gannon is the senior technical safety engineer for Xodus Group.



"Historically, skills and training budgets are a soft target for cost reduction, however, the smart employers do not follow this path. Failing to invest in skills development and the safety of the workforce is a very short-term gain that will bring significant pain in the medium and long term," David Doig, group chief executive at OPITO, tells *Oil & Gas Middle East*.

"The oil and gas industry will exist for generations to come, and a lack of investment [...] now will, without a doubt, lead to an imbalance in supply and demand of skilled people in the future," he says.

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ASSESSING SAFETY PREVENTS DISASTER

Routine checks and proper maintenance of assets can go a long way in ensuring the safety of workers and the facilities housing them. MD of Wood Group Intetech, Dr Liane Smith, explains how the company's security systems enable operators to gauge the actual conditions of their tools and assets, helping them to avert incidents

WORDS: INDRAJIT SEN

The Middle East has, over the years, been known to all and sundry as not just the biggest oil hub in the world, but also for having an established oil and gas industry that can boast of safe and secure operations. Considering that the GCC owns some of the busiest oilfields and offshore drilling rigs, and pumps about 19mn barrels of oil per day, it reports relativey few onsite accidents, fire outbreaks and oil spills.

Major regional players – primarily the NOCs – have traditionally allocated sizable chunks of their budget to securing their daily operations and maintaining overall health, safety, security and environment (HSSE) standards. Spending big on health and safety equipment is a prominent part of that effort.

"Our experience in the GCC shows that oil and gas companies are very safety-conscious," Dr Liane Smith, managing director of British asset integrity company Wood Group Intetech, says. "We recently visited an operator in the region that had safety statistics and signs on every floor of the building. This awareness is prevalent across the GCC, where many organisations have a significant focus on safety across the business."

According to Smith, Wood Group Intetech's products warn operators about the true condition of their assets, enabling them avoid potential risks such as corrosion damage or hydrocarbon leakage. With this advance warning, operators can take preventive action to reduce the likelihood of a major incident, she says.

Wood's Electronic Corrosion Engineer (ECE), a tool for the quantitative estimation of corrosion rates and the selection of materials for oil and gas production systems and processing facilities, has been deployed by Wood Group's clients in Oman and the UAE Smith says, adding: "In the current environment, with reduced resources, operators need to plan optimised risk-based inspection schedules, and this can only be achieved if the potential form of corrosion is known."

Wood Group boasts of an impressive clientele, comprising regional NOCs and IOCs, with regional heavyweights including ADNOC subsidiaries, Qatar Petroleum and PDO, and global majors such as Shell, BP and Exxon-Mobil, all users of the ECE system.

The company's iWIT Well Integrity Toolkit

SCE Leak-Test Report for Capital Territory

Well No.	Tubing String	Well Type	Xmas Tree: Kill Wing Valve Inner	Xmas Tree: Lower Master Valve	Xmas Tree: Production Master Valve	Xmas Tree: Production Wing Valve	Wellhead Valves: A Annulus Master Valve Flow Side	Wellhead Valves: A Annulus Master Valve Kill Side	Wellhead Valves: A Annulus Master Wing Flow Side (outer)	Wellhead Valves: A Annulus Wing Valve Kill Side
			Pass/Fail	Pass/Fail	Pass/Fail	Pass/Fail	Pass/Fail	Pass/Fail	Pass/Fail	Pass/Fail
CAP001	Long String	Abandoned	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
CAP011	Long String	Oil Producer					Pass	Pass	Pass	Pass
CAP021	Long String	Oil Producer	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
CAP031	Long String	Oil Producer		Pass			Pass	Pass	Pass	Pass
CAP041	Long String	Oil Producer				Fail	Pass	Pass	Pass	Pass
CAP051	Long String	Oil Producer	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
CAP061	Long String	Oil Producer	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass
CAP071	Long String	Injection	Pass	Pass	Pass	Pass				
CAP082	Long String	Oil Producer			Fail		Pass	Pass	Pass	Pass

> **"BOTH OF THESE SYSTEMS (ECE AND IWIT) CAN IDENTIFY THE PROBLEMS THAT PRESENT THE GREATEST RISK TO THE ORGANISATION, ENSURING THAT BUDGET IS FOCUSSED ON THE WELLS OR ASSETS THAT NEED ATTENTION."**

↑Dr Liane Smith, MD of Wood Group Intetech.

software can be used for well management and provides high-level visibility of a well's integrity status. This is critical for preventing incidents, Smith continues.

"Both of these systems (ECE and iWIT) can identify the problems that present the greatest risk to the organisation, ensuring that budget is focussed on the wells or assets that need attention, and therefore mitigating the risk of a potential major incident," she claims.

Times are tough for the Middle East's oil and gas industry, with subdued crude oil prices showing no imminent signs of recovery. In such a scenario, when the region's major oil producers are striving to do more with less, it would hardly come as a surprise if the NOCs, or even the IOCs operating in the region, decided to slash spending on HSE and operational security aspects. Smith cries nay!

She is of the opinion that no company can completely avoid critical expenditure on key aspects such as HSE. Some level of expenditure will always be necessary and, if invested correctly, it will prove to be cost-effective and bear fruit in the medium to long-term.

She cites an example of an operational security product to prove her point: "Well integrity management software gives operators a real-time picture of all aspects of well operation. Users of this software can identify immediately when a well goes out of its safe operating envelope and alert the relevant personnel, so that potential problems do not become dangerous incidents.

"Taking this type of mitigating action will avoid unforeseen costs for operators at the same time as providing a substantial barrier to improve operational safety."

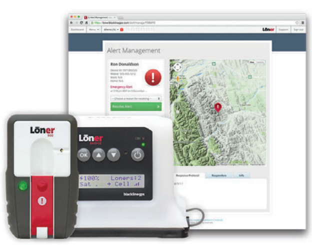
Ingersoll Rand, Famco's tie-up working well

Famco sees demand rising in local markets for Ingersoll Rand's feature-loaded MR150 Man Rider Winch

MAN RIDER Oil and gas industrial services provider, Ingersoll Rand, has recently tied-up with Famco, part of Dubai-based conglomerate Al-Futtaim Group, to sell its personnel lifting product – the MR150 Man Rider – in the local market. 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. One of the significant safety features of the Man Rider is that, if the winch line gets caught or snagged, the slack line prevention system on the MR150 immediately shuts down operation of the winch, stopping the winch from turning out more line, and helping to prevent the rider from falling. The slack arm sits only four inches from the winch drum, providing more clearance for equipment above, and reducing the footprint the winch takes up on the deck of the rig, where space is at a premium.

SELLING POWER

Canadian pipeline company orders Blackline's Lone Bridge worker safety monitoring technology



THE DEAL: Blackline Safety Corp (TSV VENTURE: BLN) recently announced that a Canada-based pipeline company purchased over $440,000 in Loner Bridge Systems and services to monitor its lone workers. EFFECTIVE TECHNOLOGY: Blackline's Loner safety monitoring portfolio offers real-time safety incident awareness, delivering help within minutes, instead of hours – or potentially days – later. Targeting every industry, employee role and location, the Loner solutions are promoted through Blackline's offices in Canada and the UK and sold through a growing network of international distributors. Loner products alert monitoring personnel to a safety incident, locate the employee, and empower the most efficient emergency response. HOW IS BUSINESS FOR BLACKLINE? Although energy sector commodities have softened over the last year, Blackline has received several orders from top-tier upstream and mid-stream organisations since the beginning of Q4 2015.

PRODUCT FOCUS

Bahrain-based Sprung Structures offers immediate, cost-effective construction for the oil and gas industry

An optional fibreglass insulation package provides an energy-efficient structure that can be utilised for a wide range of climate-controlled applications. Sprung Structures are engineered to withstand extreme wind loads.

Each Sprung Structure is manufactured from quality products and materials, and tested using strict performance measures. The products meet the requirements of most building codes and standards.

Sprung Instant Structures manufactures clear-span tensioned membrane structures up to 60m-wide by any length. This relocatable building solution utilises architectural membrane panels placed under high tension within a non-corroding aluminium substructure.

The use of a specialised, high-strength aluminum alloy results in substructures that have excellent durability and an unlimited lifespan, the company claims.

WHERE CAN I BUY IT?

For more information, contact: barry.cruse@sprung.com

Packers Plus takes risk out of HPHT wells

Completion technology lowers operational risk when drilling in challenging formations

DOWNHOLE TECHNOLOGY The Packers Plus StackFRAC Titanium XV multi-stage completion system enables operators to stimulate wells in situations where high treating pressures are required for zones with high fracture gradients or breakdown pressures.

Rock temperatures above 149°C and pressures above 10,000 pounds per square inch (psi) are used to describe high pressure, high temperature (HPHT) wells. For tools to function safely without failure in this environment, it is critical for materials to be carefully selected and tested to ensure performance. The StackFRAC Titanium XV system builds on the benefits and features of the company's existing technology, with the added capability of withstanding HPHT environments.

The burst and collapse pressure rating on all metal parts of the Titanium XV system ensures that the liner and tools do not deteriorate when exposed to high differential pressures up to 15,000psi inside the wellbore. The HPHT capability of this system makes it ideal for deep wells with long laterals and tight stage spacing.

Packers Plus said that the product's HPHT capability was exactly what one operator in Oman was looking for. The operator was working in the Khazzan oilfield and required a completion system with equipment rated for a 15,000psi working pressure. Traditional cemented completions resulted in poor production in the area, and swell packers rated at 10,000psi and above were unproven.

After some consideration, the operator decided to use a ball-activated completion design for the lower toe stages, and a plug-and-perf design for the upper stages. Packers Plus was single-sourced by the operator after an eight-month feasibility study. The Titanium XV tools were successfully tested within just six weeks of the project start date.

Since 2011, Packers Plus has completed more than 215 wells using Titanium XV systems, amounting to over 4,050 stages.

Clothing the workforce

Oil & Gas Middle East speaks to Magus International's general manager, **Lisa Harwood**, about the growing demand for HSSE clothing in the GCC

Lisa Harwood is the Dubai-based general manager of Magus International.

What HSSE clothing and equipment does Magus specialise in, and what are some of its most popular products?
Magus International represents a vast range of personal protective equipment (PPE) and clothing, catering to both general and specialist applications. We currently represent over 40 globally recognised brands that are all experts in their field. The most popular product ranges for the oil and gas sector are our flame retardant (FR) clothing by Workrite; hazmat/chemical/gas protective clothing by Respirex; gas detection equipment by RAE Systems; and fall arrest systems by Capital Safety.

However, safety helmets (Scott), breathing apparatus (Scott), safety glasses (Bolle), gloves (Polyco), and footwear (Cofra), are all also big sellers for us.

Which companies in the GCC do you supply and what are some of your major contracts?
We supply to Saudi Aramco, Saudi Electric, ADNOC Group, Sabic affiliates, Aramco refineries and Samref, to name a few. The FR clothing contracts for Saudi Electric and Samref are a couple of the largest we supply.

What are the particular challenges of designing clothing and products for the Middle East, compared with other regions?
We do not design or manufacture PPE or clothing ourselves; however, we work closely with our suppliers, which support us in terms of product solutions. Due to the climate, the main challenge for this region is manufacturing products that offer a good level of wearer comfort whilst conforming to the relevant safety standards. Wearer comfort is essential to ensure employees use their PPE and clothing correctly. Heat stress is a serious health risk to workers in high temperatures and needs to be minimised through product design wherever [possible].

How much is product design in the oil and gas industry driven by legislation, compared with feedback from customers?
Ultimately, product design is driven by legislation and the requirement to conform to the relevant safety standards. However, as innovators within the industry, our brands are continuously working within these parameters to improve both the design and the materials used. Research and development not only focusses on improving the technical standards, but also on improving wearer comfort, value for money and durability. Customer feedback is an essential part of this process.

What are the typical demands of oil and gas customers in the Middle East when it comes to clothing and equipment?
The oil and gas industry in the Middle East has historically maintained high standards of health and safety policies. The industry typically demands high-quality and high-performing products from globally respected brands.

The Respirex GTB suit.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WORDS: ANEES DAYOUB

EXPANSION THROUGH DIVERSIFICATION

Saif Humaid Al Falasi, the group CEO at the Dubai Government-owned Emirates National Oil Company (ENOC), says he realises that the current period of downturn in the global oil and gas market requires the development of policies and strategies capable of handling these market fluctuations, supporting diversification of income and revenue sources, and boosting the operations of the organisation in the local, regional and international markets alike

The integration and acquisition strategy adopted by ENOC contributes significantly to fulfilling the company's commitment towards Dubai.

The Emirates National Oil Company (ENOC) is present in 60 international markets and has strong partnerships with several companies in the Middle East, South East Asia and Africa, which support its presence and influence in these markets. However, it is the urge to meet the growing demand for energy in all industrial sectors in Dubai, and the UAE as a whole, that is driving the ENOC group to focus on the next phase of studying new opportunities for expansion and acquisition within the country and abroad.

In addition to this, by virtue of the acquisition of international company Dragon Oil in 2015, the scope of the ENOC group's operations has expanded into Iraq, Turkmenistan, Algeria, Egypt, Afghanistan, Tunisia, and the Philippines.

The group's CEO, Saif Humaid Al Falasi, told *Arabian Business Arabic* in an interview that the integration and acquisition strategy adopted by the organisation – through which all avenues of available growth in the regional and international market, including potential acquisitions, are studied – contributes significantly to fulfilling ENOC's commitment towards Dubai.

ENOC's business is segregated into five distinct verticals. Could you elaborate on those?

ENOC's operations fall under five areas: exploration and production (E&P), terminals (storage), supply, trading and processing, marketing and retail. In addition, ENOC Marketing manages a group of oil and gas products, including industrial products and aviation fuel, and gas and lubricants products. This vertical also engages with a wide range of customers across the Middle East, the Indian sub-continent, South and Central Asia, and Africa. The marketing unit covers commercial supply requirements in the Middle East, Asia, Africa and the Commonwealth of Independent States (CIS) countries, and local markets.

The ENOC Lubricants Marketing unit works in over 50 countries in the Middle East, Africa, South East Asia, the Indian sub-continent, and the CIS region. The group owns Emirates Gas LLC, which is considered the biggest network for the distribution of gas and its derivatives in the UAE.

"WE HAVE WITNESSED A DECLINE IN THE RATE OF CONSOLIDATED REVENUE THIS YEAR. HOWEVER, [...] WE WITNESSED A RISE IN THE SALES VOLUMES OF CRUDE OIL AND PETROLEUM PRODUCTS [IN] 2015."

Could you elaborate on ENOC's midstream and storage capabilities, and give details about its retail division?

ENOC maintains a considerable network of storage facilities and has a strong geographic presence around the world. The group's combined storage capacity and large number of tankers contribute to different operations in boosting oil trading and marketing activities. The group manages 11 storage complexes in Morocco, Djibouti, Saudi Arabia, South Korea, Singapore and in the UAE, through its subsidiary, Horizon Storage Sheds.

As part of the group's strategy, focussing on investing in modern technology to enhance customer satisfaction across all business verticals, earlier this year we launched a number of leading initiatives and projects – the 'green stations' project and campaign to install solar panels in service stations, for instance.

Moreover, we have launched a project named VIP (Vehicle Identification Pass) – a system powered by radio waves. The mechanism leads to systematic sale of retail fuel and allows all ENOC or EPPCO customers the convenience of fuelling at the stations through a technology that enables time-efficiency and security, and removes the need to pay by cash or cards.

The group also owns and manages a network of 112 service stations in Dubai and the Northern Emirates, and three service stations in the Kingdom of Saudi Arabia, and plans to add 11 new stations in the kingdom during 2016. We have recently expanded our service stores network and service stations chain in Saudi Arabia through acquiring privileges in those markets.

Currently, we are making huge investments to establish 54 additional service stations in Dubai during the next five years, which would contribute to meeting the growing demand for fuel in the emirate.

How has the oil price slump affected ENOC?

Everyone has been affected by the oil prices decline in the region and the world. The products and merchandise sales returns, linked to the US dollar, have also been impacted by the oil price decline.

“THE OIL PRICE DECLINE HAS LED A LOT OF OUR CUSTOMERS ACROSS DIFFERENT CATEGORIES TO BOOST SPENDING ON NON-OIL PRODUCTS AND SERVICES PROVIDED BY THE GROUP.”

↑ ENOC's strategy is based on diversification of the group's income sources, according to Al Falasi.

As for the ENOC group, we have witnessed a decline in the rate of consolidated revenue over the year. However, despite the challenges posed by the hostile economic situation, we witnessed a 16% rise in the sales volume of crude oil and petroleum products over 2015 that exceeded 220,000 barrels per day, compared to the previous year. This rise in crude sales helped ENOC register a 45% jump in returns – the biggest spike in the last five years. That reflects the strength of operations and sales performance of the company.

Do you have a strategic plan to diversify your scope of business?

Our strategy is based on diversification of the group's income sources via investing in operations that support sustainable growth plans; we will work on achieving that through the group's integrated strategic plans and business portfolio, in addition to attracting the proper talents and retaining them.

In the meantime, we are seeing that the oil price decline has led a lot of our customers across different categories to boost spending on non-oil products and services provided by the group.

What strategic geographic expansion plans does ENOC have?

The company is present in 60 international markets, and it also has several special partnerships with organisations and companies across the regions of the Middle East, Africa and South East Asia, which support its presence and influence in these markets.

Adding to that, by virtue of the completion of the acquisition of the international company Dragon Oil in 2015, the scope of the group's operations has expanded its reach into Iraq, Turkmenistan, Algeria, Egypt, Afghanistan, Tunisia and the Philippines.

At ENOC, we realise that the current period of downturn in the global oil and gas market requires the development of policies and strategies capable of handling these market fluctuations, supporting diversification of income and revenue sources, and boosting the operations of the organisation in the local, regional and international markets alike. Therefore, at ENOC, we have committed to provide Dubai with different energy sources with respect to the highest levels of availability, efficiency and reliability.

To meet the growing demand for energy in all business sectors in Dubai and the country, our group will focus in the next phase on studying new opportunities for expansion and acquisition in this country and abroad. The project for expanding the ENOC refinery for crude oil in Dubai's Jebel Ali Industrial Area is part of this framework, since the group aims to increase the production to meet the growing demand for refined oil products.

ENOC has been looking to expand its Jebel Ali refinery complex for a while now. What sort of plans do you have in mind?

We now intend to commence expansion works in ENOC's crude oil refinery in Jebel Ali Industrial Area to increase production and meet the growing demand for refined products, because of the overall development witnessed by business sectors in Dubai and the UAE. We will start expanding the refinery in 2019 to increase its capacity from the current 140,000 bpd to 210,000 bpd.

ENOC intends to commence expansion works at its crude oil refinery in Jebel Ali Industrial Area.

Our commitment extends towards development of the petrochemicals sector in the country. We intend to build a joint project in the UAE to manufacture maleic anhydride acid, a raw material used in industries such as automobiles, shipbuilding, paint, polish, construction, agricultural, and chemicals. The new project has been named ENOC – IG Petrochemicals, and this is part of our DUGAS project, and an endeavour to diversify our products portfolio.

What do ENOC's strategic investment projects currently involve?

ENOC is currently working on the engineering and preliminary design works of the Falcon project, which entails laying the 19km-long pipeline from storage facilities in Jebel Ali to Al Maktoum International Airport. The project's operation is expected to start during the fourth quarter of 2018, and it has been estimated that it will meet 60% of the airport's needs by 2050.

In addition, the group's investments in assets such Dragon Oil is adding another way to practice exploration and production activities. ENOC is now considered to be an integrated company in the oil and gas industry, holding important partnerships with the biggest international and local companies, and achieving stable growth.

The acquisition of Dragon Oil supports the group with major additional capabilities for exploration, which contribute to supporting the group's presence in the Middle East, North Africa and East Asia.

What other potential acquisition plans does ENOC have at present?

The integration and acquisition strategy adopted by the ENOC group – through which we study all ways of available growth in the regional and international market, including the potential acquisitions – contributes significantly to fulfilling our commitment towards Dubai, by providing various energy sources for all growing business sectors.

This strategy cements our status as a key player in the oil and gas sector and contributes to enhancing our financial performance, including the interest of shareholders, partners and customers. At the same time, we are working on driving growth and expansion in the internal market in order to achieve more growth.

How has the UAE government's decision to remove subsidies on fuel prices impacted the ENOC group?

The Ministry of Energy's decision (implemented from August 1, 2015) to liberalise fuel prices in the country, was made as part of the government's vision to support the sustainable development of the UAE, and in harmony with policies that aim to assure the continuity of sustainable development, rationalisation of fuel consumption, preserving natural resources, and lowering carbon dioxide emissions.

EXPO 2020 will provide ENOC with the chance to highlight sustainability, transition, and opportunities. ↓

45%

A 16% RISE IN ITS CRUDE SALES VOLUMES HELPED ENOC REGISTER A 45% JUMP IN RETURNS, THE BIGGEST SPIKE IN FIVE YEARS

As a key Dubai Government entity, what role is ENOC playing in supporting the plans for the upcoming EXPO 2020?

Dubai is set to witness a rapid growth over the coming years, mainly through investment of approximately AED31bn ($8.43bn) in infrastructure required to host EXPO 2020. It is estimated that EXPO 2020 will help create over 277,000 jobs in Dubai, including about 100,000 jobs in the services sector. For its part, ENOC is managing a first-of-its-kind, comprehensive, professional training programme for the country's citizens, focussed on developing the functional, behavioural, professional, managerial and leadership skills of the national workforce at ENOC through five different aspects: development, training, empowering, talent nurturing and excellence.

The UAE has embarked on a campaign of energy efficiency, and has been promoting its benefits in various ways. How is ENOC helping to achieve the government's energy consumption goals?

Promoting energy efficiency and managing resources is considered to be one of the key areas that Dubai focusses on, especially with EXPO 2020 drawing near. That is to ensure a rational consumption and sustainability of resources in a way that supports the overall development of the city and the country.

For us, EXPO 2020 is a major opportunity to highlight the three sub-topics of the event: sustainability, transition, and opportunities. While the infrastructure development witnesses support and attention, our different businesses witness strong growth as well.

All our businesses and projects contribute significantly to Dubai's hosting of the event – fuel sales trading, retail trading, aviation fuel, as well as the development of the production of bitumen (for paving roads and airport runways), among others. The period of hosting the EXPO is six months, and Dubai expects to welcome around 25 million visitors during that time. Surely, this will contribute significantly to promoting ENOC's businesses.


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full rental line-up of oil-free compressors
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ADIPEC 2016: Emphasis on efficiency

The Abu Dhabi International Petroleum Exhibition & Conference will play a key role in bringing together global industry stakeholders to the massive industry gathering to discuss how to do 'more with less' in this low oil prices era. *O&GME* is proud to be an official regional media partner.

Date: November 7-10, 2016
Venue: The Abu Dhabi National Exhibition Centre (ADNEC)
Exhibitors: 2,000+ companies
Estimated attendance: 95,000+

Driving efficiency in the energy sector will form the cornerstone of the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) 2016, according to oil and gas leaders, particularly those from the UAE.

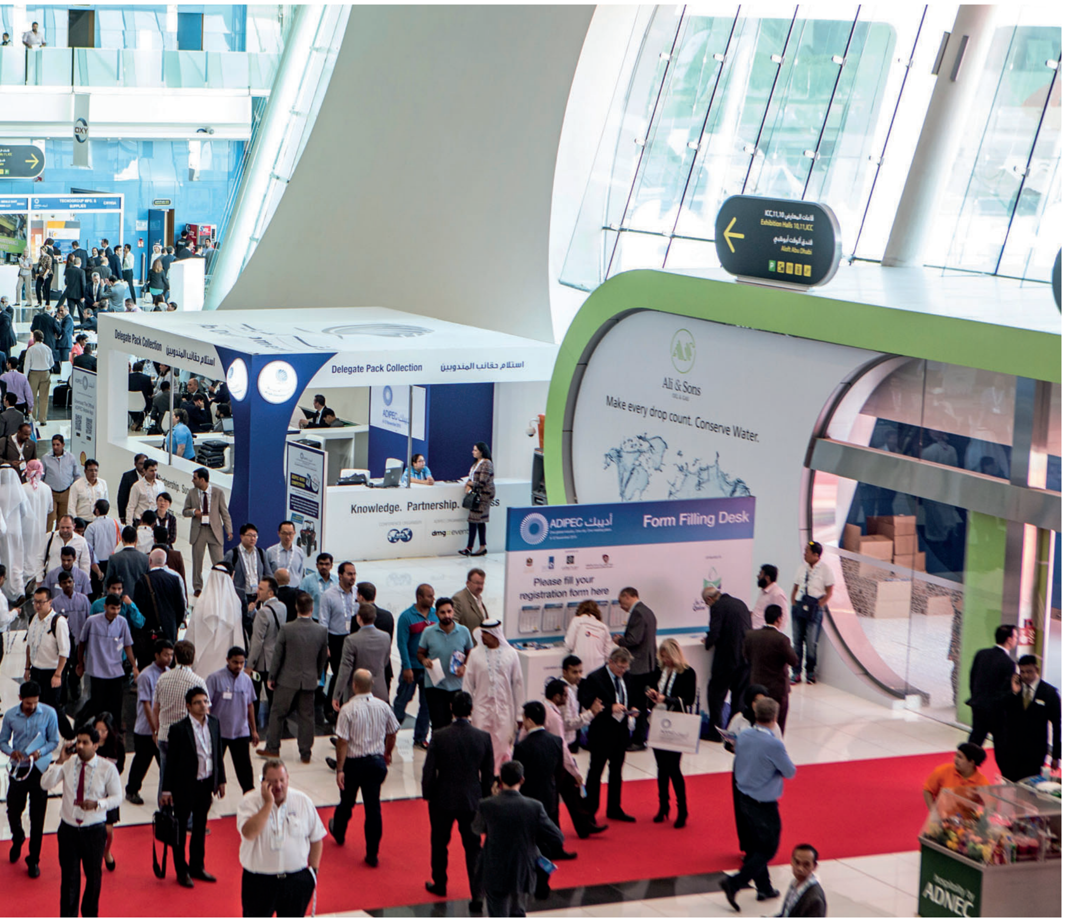
Held under the patronage of His Highness Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE, hosted by the Abu Dhabi National Oil Company (ADNOC), organised by dmg events, and supported by the UAE Ministry of Energy, the Abu Dhabi Chamber, and the Abu Dhabi Tourism & Culture Authority, ADIPEC will take place from 7th to 10th November, 2016 at the Abu Dhabi National Exhibition Centre (ADNEC).

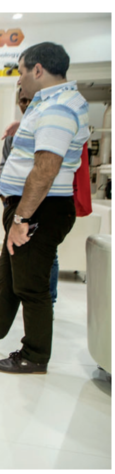
With $9.7bn generated in business last year – nearly double the amount in 2013 – ADIPEC has built a solid track record of consistent growth, bolstered by its capacity to bring international decision makers under one roof for the common goal of advancing the energy sector locally, regionally, and globally.

Billed as the premier meeting place for industry professionals, including C-level executives from the world's oil and gas giants, ADIPEC 2016 will be held under the theme 'Transitional Strategies for an Efficient and Resilient Energy Industry', setting the agenda for the event's distinguished conference programme.

Energy efficiency plays a critical role in limiting world energy demand growth to one-third by 2040, while the global economy grows by 150%, according to the latest International Energy Agency's World Energy Outlook. The report also indicates that energy efficiency measures could reduce demand growth to 60% of what would otherwise be expected in the OPEC countries.

"What we are witnessing today is a transformation of the global energy landscape, one in which research,





technology, and innovation play a fundamental role. We firmly believe that innovation and efficiency today strongly impacts on the economy of tomorrow," Ali Khalifa Al Shamsi, strategy & coordination director at ADNOC and ADIPEC 2016 chairman, said. "At ADIPEC, we are committed to serving the needs of the oil and gas community by providing an international platform where experts from across the globe can share best practices assuring a solid future for our industry."

ADIPEC 2016 builds on the remarkable success of last year's record-breaking event, which welcomed more than 94,000 attendees, 8,500 delegates, 700 speakers, 2,000 exhibitors, and 23 international pavilions.

Christopher Hudson, president – Global Energy at dmg events, said: "Industry professionals recognise that they must stay ahead of the curve to be resilient in today's economic environment. At ADIPEC, we firmly believe that every challenge presents an opportunity, and embracing sustainability and efficiency is key to realising success. The overwhelming response we continue to see year-on-year reflects the industry's thirst for knowledge and information, and we look forward to once again hosting a landmark event that helps enable the progress of the energy sector."

ADIPEC is again providing one of the world's largest-scale conference programmes, organised in collaboration with the Society of Petroleum Engineers, with topics and sub-topics covering both technical and non-technical functions in the oil and gas industry. The globally acclaimed forum will bring together government ministers, CEOs of the world's oil and gas giants, and industry experts to address the current state and future opportunities for the energy sector.

The ADIPEC Conference Programme has become the global platform for sourcing the latest and most credible information in the oil and gas industry, with continuous progress in both the range and the quality of proposals submitted. All abstracts go through a rigorous evaluation process by the Technical Programme Committee, ensuring that attendees and delegates have access to valuable content.

Nearly half of the conference content in 2015 was generated outside the Middle East, cementing the event's position as a global hub for the energy

sector. Last year, the ADIPEC Conference Programme received 2,278 abstracts from 540 organisations across 65 countries, breaking previous records. Organisers have been looking to continue the record-breaking streak, setting a target of gathering more than 2,500 abstracts, on topics ranging from exploration & production Geoscience to offshore & marine.

In line with regional and global efforts to continue exploring and developing offshore production, last year's inaugural ADIPEC Offshore, Marine and Heavy Equipment Zone also witnessed great success, making the event the first oil and gas exhibition in the MENA region to dedicate an entire waterfront section to offshore, subsea, and marine products and services. The dedicated area gave more than 85 exhibitors from across the sector an opportunity to showcase a variety of offshore supplies and services, ranging from ships and rigs to oceanography and mapping equipment.

Also featuring at ADIPEC this year are the ADIPEC Awards, which celebrate excellence in energy, the Women in Industry Conference, which tackles some of the most pressing challenges facing women in energy, Young ADIPEC, a dedicated 'edutainment' programme designed to encourage students to choose a career path in energy, and a VIP conference programme for members of the Middle East Petroleum Club.

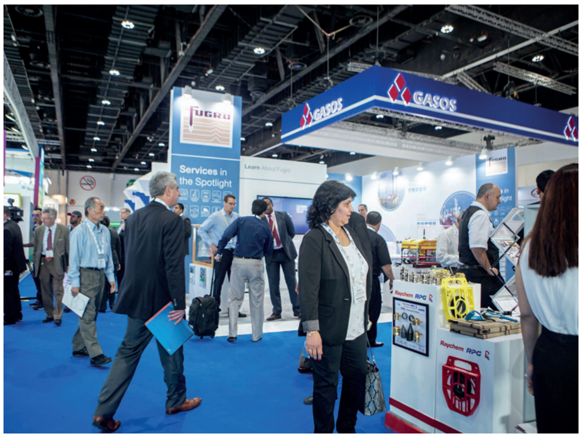
'Industry must embrace the new energy landscape'

Oil and gas giants are calling for greater industry collaboration and an increased focus on operational efficiency, as global energy leaders prepare to gather in the UAE capital for ADIPEC 2016 in November.

The future of the industry depends on its ability to embrace the new energy landscape and drive efficiency, say experts. Speaking ahead of his participation in the ADIPEC Global Business Leaders' panel, where international CEOs will be gathering to address the challenges and opportunities facing the petroleum sector, Patrick Pouyanné, chairman and CEO of French energy giant Total, said industry stakeholders must work in unison towards the common goal of achieving a sustainable energy future.

"The global energy landscape is witnessing a rapid change, influenced by economic challenges and efforts to reduce carbon emissions, which can be addressed by the emerging role of natural gas and renewables. All of this makes it crucial that industry players operate not only more efficiently, but also more closely, in a spirit of cooperation," Pouyanné said.

"Technology, innovation, research –



they all play an instrumental role not only in managing this transitional period, but also in leveraging the many opportunities that it presents. This is what makes ADIPEC an invaluable event for the oil and gas community, because it offers a global platform for stakeholders to collaborate and collectively address not only the imminent challenges in the energy sector, but the longer term picture that is starting to take shape. As CEO of Total, which aims to become the responsible energy major, ADIPEC is an event I would not want to miss," Pouyanné added.

LIST OF CONFIRMED ADIPEC 2016 OPENING CEREMONY AND GLOBAL BUSINESS LEADERS SPEAKERS:

Keynote and opening ceremony speaker:

- Dr Sultan Ahmed Al Jaber, UAE Minister of State and CEO of the ADNOC Group of Companies

Featured speaker:

- Rex W Tillerson, chairman & chief executive officer, ExxonMobil Corporation

Global Business Leaders - Moderators:

- John Simpson, BBC World Affairs editor, broadcaster, author and columnist
- Dr Daniel Yergin, vice chairman, IHS Markit

Global Business Leaders - Panellists:

- Patrick Pouyanné, chairman and chief executive officer, Total
- Bob Dudley, chief executive officer, BP
- Alexander Medvedev, deputy chairman – Management Committee, Gazprom
- Vicki A. Hollub, president and chief executive officer, Occidental Petroleum (Oxy)
- Mark Garrett, chief executive officer, Borealis
- Jeff Miller, president, Halliburton
- Toshiaki Kitamura, president and chief executive officer, Inpex/Jodco
- Paal Kibsgaard, chairman and chief executive officer, Schlumberger
- Lars Christian Bacher, executive vice president – Production and Development International, Statoil

Highlights of ADIPEC 2016

The marquee event this year to set host a range of sessions and panel discussions during the four-day mega event, that include: three Global Business Leaders sessions, eight Executive Panel sessions, 106 Technical sessions, eight Offshore & Marine sessions, two Security in Energy sessions, eight Women in Energy sessions, eight Middle East Petroleum Club VIP Programme sessions, and six breakfast and luncheon sessions

Global Business Leaders sessions:

November 7-8

Topic: Sustaining oil production: how are global companies preparing to keep ahead of oil reserve depletion, squeezing the last drop of conventional oil and maximising recovery rates of existing mature fields, at the same time as harnessing the search to explore new, harder to find oil discoveries? Where does tight oil, heavy oil and shale oil fit within the overall conventional oil mix?

Panel sessions:

November 8-10

Topic: The objective of this panel is to have distinguished R&T leaders across the energy sector to share with us how their companies/institutions are successfully managing this transition, including how to: put more focus on low hanging fruits, while maintaining a certain balance on the overall R&T portfolio to preserve a consistent vision; cut costs without hurting the business, improving the overall value; explore systematically for opportunities from adjacent/crossover technologies; retain key competencies and expertise; emerge stronger and more resilient after the transition.

Technical sessions:

November 7-10

The four-day multi-streamed conference reflects the business critical needs of today's industry, providing businesses with a comprehensive programme covering 106 sessions with over 700 speakers. Meet and interact

with over 8,500 delegates from more than 120 countries from major IOCs, plus a multitude of NOCs, engineering contractors, ship builders, manufacturers, distributors and service providers making the ADIPEC conference the ideal platform to gain strategic insights and network with like-minded peers.

Offshore & Marine sessions:

November 8-10

The sessions will deliberate on reducing risks, containing costs and increasing certainty to achieve a successful appraisal offshore oil and gas fields. When more data does not equal more information; analysing the results to create and optimise the development plan. Key strategies for developing the field safely, profitably, responsibly.

Security in energy sessions:

November 8-9

Security in the oil and gas industry is becoming increasingly important on a global scale but especially in the Middle East given the importance of the sector and the requirement to upgrade legacy infrastructure, which till now has typically been upgraded through a system of patches, rather than an effort for full-blown network upgrades.

Women in Energy:

November 9

Venue: Al Maared Hall, ADNEC
Timing: 08:00 – 16:00

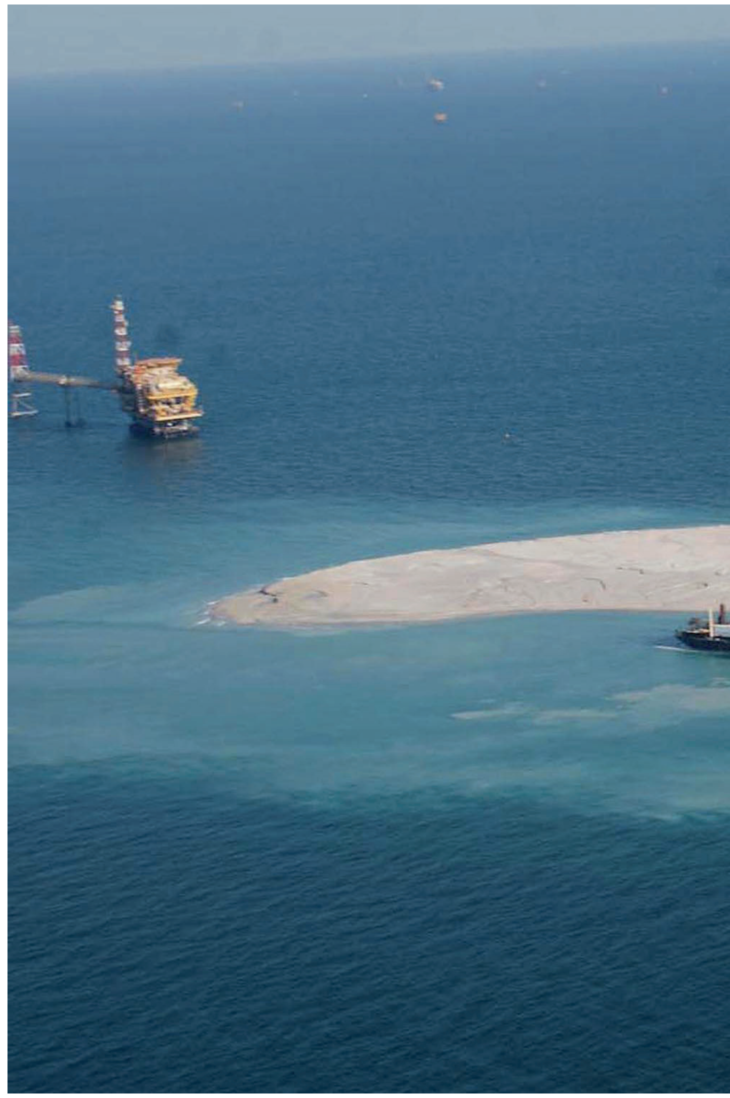
- Celebrating women as Ministers holding significant positions in public office.
- Addressing their day-to-day roles; making and implementing decisions on policy, and creating frameworks for the nation.
- Showcasing exemplary business acumen and leadership skills, inspiring the pursuit of leadership roles.

Middle East Petroleum Club VIP Programme sessions:

November 7-10

Taking place over the four days of ADIPEC, the 2016 VIP Programme caters to the interests of the MEPC members. Hosted within the purpose-built dedicated theatre, the VIP Programme offers members the opportunity to attend a wide range of exclusive industry briefings. Topics scheduled for discussion include cutting edge insights into issues high on the agenda of the C-suite members providing industry insight, intelligence and information in the controlled privacy of the Club for the business elites.

THE UAE'S NEW ENERGY PLAYBOOK



The UAE's energy sector is in the midst of a transformational chapter, as innovation and diversification become invaluable tools to ring-fence Abu Dhabi's oil revenues and bolster the country's questionable gas security

WORDS: MICHELLE MEINEKE

→ Large buffers and foreign assets have helped to reduce the UAE's exposure to fluctuating oil prices.

The UAE's foresight, since gaining independence in 1971, to explore economic realms that both support and diversify the country's hydrocarbon-based economy, is paying off. Oil in the UAE, OPEC's third-biggest producer, only accounted for 30% of the country's total \$1.47tn GDP last year.

Large buffers and foreign assets have reduced the UAE's exposure to fluctuating oil prices, and ratings agency Standard and Poor's reaffirmed the AA/A-1+ sovereign credit rating for Abu Dhabi with a stable outlook in August.

Consequently, global headlines detailing the UAE's energy economics are far more bullish than most. State-owned ADNOC, which accounts for almost all of the UAE's oil output revenues, plans to boost its oil producing capacity of 3.15 million bpd by 11%, to 3.5 million bpd, by 2018, with current production at 3 million bpd.

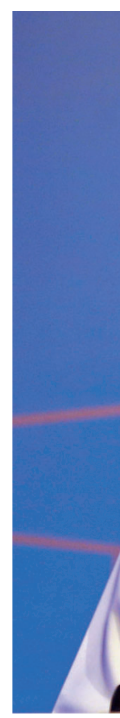
Since February, Sultan Al Jaber, ADNOC's chief executive, has spearheaded change. Costs and bureaucracy have been streamlined and nearly 10% of the company's 55,000-strong workforce will be cut from the payroll by December.

→ HE Dr Matar Al Neyadi, under-secretary at the UAE Ministry of Energy.

"The UAE has an ambitious plan to continue transforming the energy sector and to deliver on the energy goals of the UAE Vision 2021. Low oil prices have not affected our determination to achieve our domestic goals and enhance our many relationships with energy partners around the world," HE Dr Matar Al Neyadi, undersecretary at the UAE Ministry of Energy, tells *Oil & Gas Middle East*.

South Korea's GS Energy, Japan's Inpex Corp, and France's Total have won contracts to develop the country's oilfields under an Abu Dhabi Company for Onshore Oil Operations (ADCO) concession, after a deal with Western majors dating back to the 1970s expired in January 2014. ADNOC holds 60% of ADCO, with 10% for Total, 5% for Inpex, and 3% for GS Energy. Offers are still open for the remaining 22%, which would provide a welcome cash boost for Abu Dhabi.

Despite having the world's seventh largest gas reserves, the UAE's shortage continues. This is due to a rising population (currently 9.3 million), rapid industrialisation, and the injection of most of Abu Dhabi's gas into oil projects to help maintain production levels.



"THE UAE HAS AN AMBITIOUS PLAN TO CONTINUE TRANSFORMING THE ENERGY SECTOR AND TO DELIVER ON THE ENERGY GOALS OF THE UAE VISION 2021."
HIS EXCELLENCY DR MATAR AL NEYADI, UNDERSECRETARY AT THE UAE MINISTRY OF ENERGY

The 230-mile undersea Dolphin pipeline has supplied gas to the UAE from Qatar's North Field, the world's biggest known gas deposit, since 2007. Other supply has been imported by floating storage units. Abu Dhabi Gas Industries Limited (GASCO), a joint venture between ADNOC, Shell, and Total, received its first floating storage vessel to import LNG in August.

ADNOC's decision to stall the first onshore LNG facility at the Port of Fujairah has deepened concerns over the longevity of the country's gas security, however.

"The start-up of ADNOC's LNG import terminal is an important step in adding new gas supplies to the Abu Dhabi market, and providing greater flexibility at a time of low global LNG prices. Continuing subsidy reform, and the start-up of the UAE's nuclear power programme, will be vital to controlling gas demand, while new gas production projects have to be expedited, even at a time of constrained budgets," Robin Mills, chief executive officer of Dubai-based Qamar Energy, tells *Oil & Gas Middle East*.

Fresh thinking

Commercialising ideas that boost operational efficiency to market as innovations is a vital step in the UAE's bid to reduce costs, with ADNOC's spotlight increasingly focussed on ramping up managers' technical expertise on enhanced oil recovery (EOR). The UAE's growing research and development (R&D) ecosystem will sharpen the country's competitive edge in the global oil export market, especially against newcomers Iran, and the US.

ADNOC has invested $100mn into creating a research centre at the Petroleum Institute (PI), with PI offering Emiratis PhDs from early 2017 to support the government's push to create a competitive knowledge-based economy, as per the Vision 2021. The PhDs cover petroleum engineering, mechanical engineering, electrical engineering, chemical engineering, and petroleum geosciences.

"CONTINUING SUBSIDY REFORM, AND THE START-UP OF THE UAE'S NUCLEAR POWER PROGRAMME, WILL BE VITAL TO CONTROLLING GAS DEMAND, WHILE NEW GAS PRODUCTION PROJECTS HAVE TO BE EXPEDITED, EVEN AT A TIME OF CONSTRAINED BUDGETS."
ROBIN MILLS, CEO, QAMAR ENERGY

↑ UAE-based Qamar Energy's CEO, Robin Mills.

According to Dr Thomas Hochstettler, president at PI, the students will examine "cutting-edge technology across the spectrum of the PhD programmes", to ensure that they are not "engaged in dead-end technology". He also explains that they will study "the areas of growth that will be most readily transferable into productive activity in the oil and gas fields".

ADNOC is also working with German company Wintershall to create a roadmap for the development of chemical EOR (cEOR) following a memorandum of understanding (MoU) in late-2015.

Global crossroads

The UAE is leveraging its position at the heart of flourishing East-West trade routes, which include two of the world's top three oil consumers – China and India – as well as strong appetite in Asia, the Middle East, East Africa, and Europe.

"The world-class infrastructure that has been supported by local and international investors has transformed the UAE into a new centre of gravity in terms of energy trade and transportation – the UAE has unequivocally emerged as a vital and global trading hub," Riyan Qirbi, general manager at World Fuel Services Trading DMCC, tells *Oil & Gas Middle East*.

The Port of Fujairah, which lies south of the Strait of Hormuz, has rapidly expanded to become the world's second-largest bunkering hub since operations began in 1983. As a rough comparison, Singapore is the world's largest bunkering hub and was established as a free port in 1819. The Port of Fujairah also plans to increase storage capacity by 55%, to 14 million cubic metres, by 2020, along with the recent launch of a very long crude carrier (VLCC).

The impact of low oil prices has often emerged in the UAE's energy sector, as illustrated by Dubai-based ports operator DP World's decision to delay the addition of 1.5 million twenty-foot equivalent units (TEU) of capacity to Terminal 3 at the Jebel Ali Port until 2017. The expansion of Terminal 4 will also slow.

As part of the Gulf's refining boom, ADNOC's expansion at the Ruwais refinery doubled capacity and made it one of the world's largest such facilities at 800,000 bpd. Meanwhile, Dubai-based Emirates National Oil Company (ENOC) has awarded the EPC contract, the first of three packages of a $1bn-plus project that will increase the capacity of its Jebel Ali refinery by 50%, to 210,000 bpd, by as soon as 2020.

The close proximity of the port – and of the wider UAE – to India has enhanced the countries'

The UAE's infrastructure has been supported by local and international investors, turning the country into an oil and gas trading hub. →

↑ The UAE's plan to increase R&D and innovation in the energy sector relies on the entrepreneurial spirit of SMEs.

trade alliance. The UAE's investments in India rose to $1bn during the last year, with a total $4.3bn from 2000 until March this year.

India has been earmarked by the International Energy Agency (IEA) as the fastest-growing crude consumer up to 2040, with a demand of 6 million bpd. Consequently, New Delhi is ramping up both domestic infrastructure and supply contracts.

More than 10 companies from the UAE are expected to bid for the development of small oil and gas fields in India. The development of 67 such sites will potentially lead to the production of 625 million barrels of oil. In a move that reflects the global storage panic amid the glut of supply, the UAE made the unprecedented move of giving India free oil in exchange for using its maiden strategic petroleum reserve (SPR) facilities.

Unsurprisingly, the number of mergers and acquisitions (M&As) have increased since oil prices plummeted in mid-2014. This is evidenced by the merger currently in process between Abu Dhabi's two largest sovereign investment funds – Mubadala Development and International Petroleum Investment Co (IPIC). The UAE's deputy prime minister, Sheikh Mansour bin Zayed Al Nahyan, and Oil Minister, Suhail Al Mazroui, will be part of the committee that is responsible for shepherding the deal.

"For someone who takes a long-term view, it is an attractive time to invest in the industry," Khaldoon Mubarak, the chief executive officer of Mubadala Development, said to *Gulf News*. "We, as Mubadala, are players in this industry. We will continue to invest in this industry, particularly in such a time where we find valuations at a low and attractive range."

The entrepreneurial spirit of small and medium enterprises (SMEs) is vital for the UAE's plan to increase R&D and innovation in the energy sector. Changes must be made, however, to avoid another expensive exodus of talent, as seen in 2015. SMEs facing financial difficulty fled the UAE last year with their total debt exceeding $1bn.

In response to efforts by industry bodies, including the UAE Banks Federation (UBF), the UAE cabinet approved a draft law on bankruptcy that enables companies in difficulty to restructure, which will likely improve SMEs' access to funding and their ability to bring coveted cost-saving technologies to the energy market.

210,000 BPD

DUBAI-BASED ENOC HAS AWARDED THE EPC DEAL, THE FIRST IN A TRIO OF CONTRACTS FOR A $1BN-PLUS PROJECT TO INCREASE THE TOTAL CAPACITY OF ITS JEBEL ALI REFINERY BY 50%, TO 210,000 BPD, BEFORE 2020.

→ Steven Griffiths, vice president for research at the Masdar Institute.

Green exploration

In the last two years, green energy has become fully integrated into the fabric of the UAE's energy sector, and the government is championing R&D into innovative EOR solutions, such as those seen across the border in Oman. Oman's $600mn Miraah project will deliver the largest peak energy output – 1,021 megawatts – of any solar plant in the world, by harnessing the sun's energy to produce steam that can be injected into an oil reservoir.

↓ The UAE is aiming to generate 25 to 30% of its power from clean energy by 2030.

"Translating R&D into innovative energy solutions is at the heart of the UAE's push to both diversify its energy system and to become a leading knowledge-based economy. In order to achieve such innovation, the Masdar Institute and other leading research institutions are engaging in international partnerships to pursue application-inspired research with both global and local importance," Steven Griffiths, vice president for research at the Masdar Institute, tells *Oil & Gas Middle East*.

$29BN

ENERGY SUBSIDIES COST THE UAE $29BN LAST YEAR, ACCORDING TO THE IMF. THE GOVERNMENT HAS ALREADY REDUCED DIESEL AND GASOLINE SUBSIDIES AND MORE CUTS ARE EXPECTED ACROSS THE PRODUCT RANGE.

The benefit of international R&D partnerships has most recently been illustrated by the photovoltaic solar 'step-cell', which has been developed in a collaboration by the Masdar Institute and Massachusetts Institute of Technology (MIT) in the US. The step-cell combines two different layers of sunlight-absorbing material to harvest a broader range of the sun's energy.

"This new solar cell has the potential to achieve efficiency of more than 40% at low manufacturing costs, therefore enabling application to multiple sectors, such as energy, transportation and space," Griffiths explains.

The UAE is aiming to generate 25 to 30% of its power from clean energy by 2030, which has the potential to save the government between $1bn and $3.7bn. The government has also generated additional funds by reducing diesel and gasoline subsidies from August last year, with more cuts to follow across the product range. Energy subsidies alone cost the UAE $29bn last year, according to the International Monetary Fund (IMF).

The modern transformation of the UAE's energy sector will see one of the world's biggest oil producers also become a creative problem-solver with the capacity to straddle two conflicting worlds – hydrocarbon and clean energy. The UAE's knack for diversification shines through once again.

WORDS: INDRAJIT SEN
PHOTOGRPAHY: LESTER APUNTAR

FABRICATING IN LOCAL WATERS

Ali & Sons Marine Engineering Factory (ASMEF) delivers 'made in Abu Dhabi' products and services to its biggest oil and gas customer – the ADNOC group of companies. Emad Elatreby, the company's general manager, says ASMEF is currently involved in a number of key offshore projects, and is forging ahead with its shipbuilding and repair business

What is the scope of your work with the oil and gas industry in the Middle East?
Ali & Sons Marine Engineering Factory (ASMEF), part of the Ali & Sons industrial conglomerate, is a diversified facility that provides support to the on/offshore industry in many ways. We work directly with operating companies, major EPCs, and other service companies, not only in UAE but throughout the whole region.

We execute full or partial EPC contracts, such as process modules, skid packages, static equipment, offshore platform jackets and topsides, and so on. In the midstream segment, we support the offshore fields through building, repainting, and maintaining all types of cargo barges, transportation vessels, tug boats and dredgers through our ship repair and new-build business unit.

In the upstream segment, we have executed upgrade, repair, re-certification, revamp projects for offshore drilling rigs and accommodation jack-ups that serve the drilling and brown-field industry. ASMEF also provides yard and jetty access, to facilitate the logistics of mega offshore projects like UZ 750, where part of our quayside is serving as the marshalling yard. We also receive oversized packages that need to be sent to the onshore fields, which can be transported easily from our yards, avoiding the bridges and flyovers.

Emad Elatreby, general manager of ASMEF.

As an Abu Dhabi-based company, the ADNOC group is a major client for you. Which of its projects are you working on?
The ADNOC group of companies and its EPC contractors are the main source of projects for ASMEF, and we are aggressively upgrading our prequalification status with them to cover more work groups, both onshore and offshore.

We are working in many projects where the ADNOC group is the end-user, such as supplying and building interconnecting modules for Petrofac/ ZADCO. This project is progressing well.

The substation container for Schneider/ ZADCO,

↑ ASMEF has three main business units – oil and gas, ship repair, and new-build and jack-up/ rig repair and upgrade.

"THE FACILITY SERVES ALL OUR PROJECTS AS NEEDED, AS WE HAVE A MULTI-DISCIPLINARY TEAM. OUR ENGINEERING AND PROCUREMENT DEPARTMENTS CAN EASILY HANDLE DIFFERENT TYPES OF PROJECTS."

which is the biggest E-House built to date in the UAE, is close to completion – the package is ready and waiting for the end-user to decide on the schedule for transportation to site.

Another project is being completed on Das Island for Cape/ ADGAS, replacing pipe supports on the existing facility – this includes site verifications, procurement, engineering, fabrication and site installation. This project was a real challenge as it involved brown-field conditions and had to be planned with different stakeholders.

ASMEF's performance on this project has prompted the recent award of a similar, much larger one on the island, from XERVON/ ADGAS. The project formalities and deliverables for this start very soon.

Another prestigious project for ASMEF this year is a major E-Houses project of 25 containerised packages for TOZZI/ ABB/ ADCO. Engineering and procurement activities for this project are well on schedule and we are planning to start the construction activities this month. The engineering works have also started for another project, to supply chemical storage tanks for GOGAS/ ADMA. This will include the mechanical design, procurement, fabrication and testing for the tanks.

What sort of work is undertaken at the yard?

We have three main business units in ASMEF, namely the oil and gas, ship repair, and new-build and jack-up/rig repair and upgrade. These are the main revenue streams in our organisation.

The facility serves all our projects as needed, as we have a multi-disciplinary team. Our engineering and procurement departments can easily handle different types of projects, as can our proposals and commercial team.

We have one operations team that handles all the construction, and the operations management team is experienced enough to organise all the resources – from manpower to equipment – that are necessary to achieve our quality, productivity, and safety specifications.

↑ ASMEF has developed LTSAs that offer its ship-repair clients a fixed rate, due to pre-agreed terms and conditions.

Which of ASMEF's products or services is proving most popular with your clients?

In the past year or two, we have developed long-term service agreements (LTSA) with our ship-repair clients, which allow clients to benefit from a fixed rate. This means that they can easily estimate the cost of works before putting their vessel in for repair, and they can reduce their overhead costs. The LTSA also have pre-agreed terms and conditions, so no contractual negotiations are usually needed.

Another product trend in the oil and gas business is that operating companies, along with the major EPCs, have come up with the E-House concept, where they have developed a different design to replace the electrical switchgear, transformers, UPS and battery concrete buildings with steel, containerised, transportable packages. With this 'plug and play' concept, the savings in terms of cost and time are massive, as the packages are built in the controlled environment of the yard, where all the resources and facilities are available, as opposed to the conventional way of building it as console onsite. ASMEF is currently executing two of this type of project, and our bid pipeline has a significant number of this type.

> "WE OPT TO HAVE A DIVERSIFIED BUSINESS MODEL IN ORDER TO NOT ONLY CONTROL OUR COSTS, BUT ALSO TO HAVE DIFFERENT SOURCES OF INCOME THAT MAINTAIN AND SUSTAIN THE BUSINESS FINANCIALS."

How profitable is the manufacturing and fabrication of offshore structures and what is your specialism in this area?

It is difficult to set any standard measures for the profitability, as it differs from project to project and from one business to another. The fact is, however, that the margins levels are normally linked with the risks involved in a project, so it differs all the time.

Personally, coming from an offshore oil and gas background, I can tell that the risks are high in this business, and lots of times there are those unknown risks that no-one could predict. At ASMEF, we opt to have a diversified business model in order to not only control our costs, but also to have different sources of income that maintain and sustain the business financials.

ASMEF believes the UAE's LNG import plan, and other strategies to boost the availability and utilisation of local gas, will result in opportunities for its facility.

What is your opinion of Abu Dhabi's LNG market, and how is ADNOC coping with the challenge of meeting the emirate's natural gas demand?
With the strong economic growth and rapid population increase, not only in Abu Dhabi but throughout the UAE, there is a growing demand for power, which in turn means the supply of natural gas will have to be developed. Building LNG terminals would help to partially meet this demand, and the UAE is taking steady steps to develop LNG and regasification plants with the international companies, but these projects are long-term and take years to develop.

The UAE currently uses almost 50% of its natural gas in the enhanced oil recovery (EOR) process, which increases the production from oilfields but reduces natural gas availability to the power generation. As a result, the UAE has taken a strategic decision to free-up some of the huge volume of gas being used in EOR through projects like the carbon capture recovery and storage projects, which will drastically change the availability of local natural gas.

The investment being made in developing other resources, including sour and tight gas projects, will also boost the availability and utilisation of local gas, as will the LNG import plan. At ASMEF, we are keeping a close eye on those plans as they will result in major developments that will need the likes of our facility to support this effort.

What kind of impact has the low oil price had on ASMEF's business?
Having been in the industry for almost 25 years now, this is the third time I've seen this kind of drastic drop in the oil prices. It was only 15 years ago that the prices were at the $40 level, so I think it is time to look back and see why the cost has inflated and try to adapt to the current situation.

For ASMEF, we still see lots of opportunities, as the major capex will now be diverted to asset management, preventive maintenance, and upgrade projects, in order to maximise the throughput from the existing operating facilities.

It has been proven over the years that oil price changes are unpredictable and lots of factors may have another sudden impact on the prices – only time will tell.

What are ASMEF's growth plans in the Middle East and internationally?
We have been targeting projects outside the UAE

and are bidding on two major modularisation programmes, both for projects in other GCC countries. We have also submitted our prices for packages that would be installed as far away as Brazil.

We are marketing our facility with the international clients, as well as the local ones, and the ASMEF team has been travelling to Europe and the US for that purpose. In the UAE, we are working on plans to extend our services and operations to other emirates as well.

We have set our growth strategy and are moving ahead with it. We have a capex project plan that was approved by the group's board of directors. With the approved development budget, we have completed our jetty expansion and dock basin project, increasing our waterfront from 350m to 545m and creating a dock basin that allows work from land on three different sides, and can accommodate much bigger vessels, ships and jack-ups.

We are also progressing well with our dredging programme, which will enable us to receive vessels with bigger draft at the jetty-side, and involves dredging below our floating dock to accommodate sizable ships, barges and vessels. This will be available to our customers in October.

We are also about to award our new office-compound project to a specialist contractor. When finished, the new office building will provide better facilities for all our current and future staff and clients, besides freeing-up yard space. New warehouse and training facilities also are planned.

545M

ASMEF HAS SUCCESSFULLY COMPLETED A JETTY EXPANSION AND DOCK BASIN PROJECT THAT HAS INCREASED THE FACILITY'S WATERFRONT FROM 350M TO 545M

One of the most important developments for the company is a one-stop-shop concept that was initiated by the ASMEF chairman, Shamis Al Dhaheri, last year. This project will serve the needs of all of the company's business units, and our clients, offering specialised services like rotary equipment and valve repair, refurbishment and overhauling; electrical and instrumentation calibration; top-drive repairs, and motor rewinding. It will also be audited by international OEMs in order to be recognised as their certified repair shop in the UAE.

With all of this, ASMEF will be adapting to market dynamics and developing our organisation and facility to be flexible enough to cope with market changes in the future.

ASMEF chairman, Shamis Al Dhaheri, initiated the company's 'one-stop-shop' concept last year.

INDUSTRY INNOVATIONS

Mirmorax launches new oil-in-water analyser

NEW PRODUCT Mirmorax AS, a Norway-based provider of sampling and oil-in-water analyser solutions, has announced the launch of its desktop oil-in-water analyser – the DT250. The portable instrument, based on Mirmorax's third-generation ultrasonic technology, provides efficient, flexible and highly accurate sample analysis, as well as live measurements of oil and solids in produced water. For operators, this will lead to improved monitoring capabilities and the flexibility to overcome bottlenecks in various parts of the processing system. This will bring new value and optimisation possibilities to existing separators and filters, enable targeted use of chemicals, and ensure that all environmental requirements are met. The DT250 will also be particularly suited to challenging fields that host separation from different tie-backs with various oil types in the same produced water.

Zilift and Auscoil sign agreement

The new partnership looks set to challenge conventional CSG water reduction methods

COLLABORATION Zilift, a developer of permanent magnet technologies for artificial lift applications for the energy sector, has signed an agreement with Auscoil, an oilfield services solutions provider for the Australian Coal Seam Gas (CSG) industry. The two companies have been collaborating for the past year, their work resulting in a coiled tubing deployment of a TorqueDrive – an electric submersible progressing cavity pump operating under live well conditions. This new method of completion, CoilDrive, is free from rod strings, completion rigs and kill fluids, and has the potential to revolutionise artificial lift processes for CSG in the region, and beyond. Jamie Cochran, Zilift's TorqueDrive director, said that combining the benefits of Zilift's magnetic gear technology and downhole drives with the advantages of live well coiled tubing deployment "presents a number of unique and exciting opportunities".

THREE REASONS TO BUY

Honeywell launches ControlEdge programmable logic controller, which provides connectivity throughout all levels of process and business operations

1 SECURE CONNECTIVITY

ControlEdge PLC, combined with Honeywell's Experion Process Knowledge System (PKS), provides secure connectivity and tight integration to devices from multiple vendors. It offers easy configuration and reduced maintenance, and uses OPC UA protocol and built-in cyber security for smooth integration.

2 SUITABLE FOR OIL AND GAS

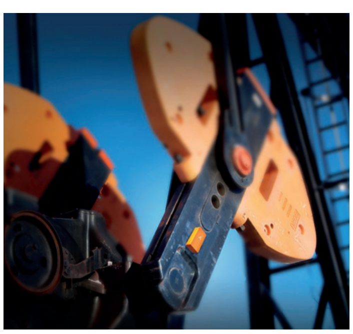
ControlEdge PLC is designed for end users, original equipment manufacturers, and engineering, procurement and construction companies in process industries that need discrete control for specific PLC applications such as water treatment, balance of plant modular equipment, terminal automation, and coal/ash handling.

3 ALLIGNED WITH IIOT

The emergence of the Industrial Internet of Things (IIoT) represents a digital transformation of manufacturing that shifts the source of competitive advantage away from physical machinery and towards information. ControlEdge provides an IIoT-ready open platform that enables users to better leverage data across assets.

SELLING POWER

Nav Dhunay, ambyint president and CEO, says the new ambyControl for EPM enables Big Data-powered well performance analysis



HOW DOES AMBYCONTROL WORK?
The proprietary ambyControl for EPM device instantly links any electric motor operated oil well to the ambyint platform where, through sophisticated algorithms, well managers gain detailed, real-time, well analysis and operational recommendations to ensure each well is running at optimal performance.

HOW COST-EFFICIENT IS THIS SYSTEM?
Through leveraging sophisticated technology to connect these machines and effectively make them 'smart', the ambyControl device is able to entirely change this model, putting detailed real-time well performance data and remote well control directly in the palm of every operator's hand.

WHAT ABOUT REMOTE ACCESS?
Well managers are given the ability to remotely control each of their well assets via the ambyint mobile and web app. Operators are able to monitor their wells 24/7 and receive instant alerts about any faults or interruption to onsite operations so that they are able to react to them quickly, no matter where they might be working.

MSPEC leads the way in NDT service provision in the GCC

NDT is a demand that cannot be compromised, according to Chris Muir, senior NDT/drill stem consultant at MSPEC, which delivers non-destructive testing solutions for the regional oil and gas industry

What does MSPEC offer in the non-destructive testing (NDT) space in the region?
We provide a full range of NDT equipment, calibration, repair services and training/certification, specialising in the oilfield (drill stem and OCTG) sector. MSPEC supports the MENA and CIS region with local support from Abu Dhabi, offering assistance to inspections companies, service providers, drilling contractors and operators. Our equipment range extends from simple hand-held magnets to multi-channel, full-length ultrasonic testing systems. Our services reach from Latin America to the Far East and Australia, providing training and third-party consultancy at the stages of manufacture, in-process, inspection and failure analysis.

How strong is the demand for NDT products and services in the GCC?
NDT is a demand that cannot be compromised – we see and remember that when things go wrong that when something goes wrong. NDT equipment has improved over the years, but the presentation of data, storage, call-back, and the ability to communicate results, have moved much faster. As applied specifications to NDT processes have become more stringent and diverse, higher levels of competency are sought. Continuous performance assessments are key to maintaining competency. MSPEC is subject to the same influences as any other enterprise, as market and demand fluctuations define the environment we work in. The current climate has our clients tightening their belts and multi-tasking to meet pre-set targets and commitments, this presents tougher challenges. MSPEC has seen changes in its equipment enquiries – the demand for used and refurbished equipment has increased, due to client budgetary restrictions. Calibration, training, Level III services and third-party consultancy have remained constant, however. MSPEC has constantly grown since it started in 2009, tripling its staff and moving to a new, purpose-built training and service centre in Mussafah a year ago.

What plans does MSPEC have to enhance its NDT offering?
MSPEC is in the process of establishing its new facility to ISO and society (ASNT/BINDT) approvals by Q1 2017. Our system is already approved against ISO:9001 for NDT/drill stem training and certification, calibrations, and consultancy services. Our next objective is to upgrade our training system to digital examinations, offering an online search of the current status so employers/clients can access it remotely. We will also be exhibiting at ADIPEC 2016.

Bureau Veritas' new software

Lube oil analysis management system software launched

TECHNOLOGY Testing, inspection and certification services specialist, Bureau Veritas, has launched Lube Oil Analysis Management System (LOAMSSM) software at its Dubai Oil Condition Monitoring (OCM) lab.

Bureau Veritas provides lubricant and oil analytical services in the Middle East, assisting maintenance managers in the industrial, heavy-duty equipment and aviation markets to predict failures and prevent catastrophic maintenance events. The continuing global expansion of the OCM programme within the company's network has now provided the laboratory with access to the LOAMS software, which enables clients access to equipment testing and analysis data from international locations via one application.

The LOAMS software provides on-line tools that bring clarity and meaning to complex laboratory results, provide maintenance recommendations that improve production and save money, and deliver programmes and support that foster collaborative customer partnerships. Used oil analysis identifies trends in wear and contamination and monitors changes in the physical properties of lubricants and hydraulic oils.

Ametek Land boosts portable gas analyser

Company announces a number of enhancements to its Lancom 4 portable gas analyser to improve usability and provide enhanced features as standard

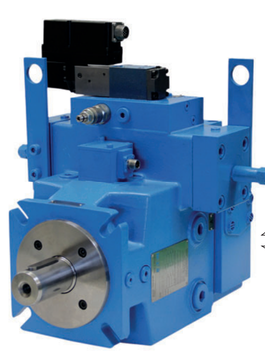
ANALYSIS Now available as a free download, Lancom 4's data acquisition software, Insight, allows users to interface their analyser with a PC for remote control and data logging. Insight offers graphing and analysis tools for data visualisation and reporting purposes, providing easy access to data. Communications between Insight and the user's PC require a USB-RS232 interface converter, which is now supplied with every Lancom 4. Hardware items, such as external printers or analogue output modules, can be simply plugged in, with no firmware configuration needed for upgrades.

PRODUCT FOCUS

Eaton's new digital PpQ control for Hydrokraft pumps improves performance, lowers costs and reduces environmental impact

The PpQ unit electronically controls displacement (flow), pressure and power on the pump. The control unit allows the pump to be used overcenter, enabling energy recovery.

The Hydrokraft swash plate design variable axial piston pumps provide reliable operation.



Reliability and safety is enhanced with oversize shafts and bearings, with pressure balancing of rotating and pressure-loaded parts.

The key features of these pumps make them ideal for marine and other similarly demanding offshore and onshore applications.

WHERE CAN I BUY IT?

To learn more about Eaton's Hydrokraft pumps with digital PpQ control, visit www.eaton.com.

SELL IT TO ME

Emerson introduces Rosemount-guided wave radar verification service to help users to avoid unnecessary process disruptions and improve process safety

IMPROVES PROCESS SAFETY: Emerson has introduced the Rosemount guided wave radar (GWR) verification service to help users verify their Rosemount level instrument performance. Standards, regulations and calibration requirements for GWR instruments used to measure tank level must be adhered to by process plants. Verifying GWR level instrument operation traditionally involves climbing to the top of the tank, opening an access port, and taking a reading by hand. In order to get the multiple measurement points often required for accuracy, product has to be transferred in, out, or both — disrupting the process. It is an expensive, time-consuming and labour-intensive process, with serious safety considerations due to the height at which the work is performed, and the potential for exposure to hydrogen sulfide and other hazardous chemicals. With Emerson's new service, technicians go to the client's location and provide verification without any disturbance to normal operations. A five-point accuracy verification is performed using calibration hardware with traceability to recognised standards. In addition to verifying accuracy and making any required adjustments, the GWR level instrument's condition and configuration are evaluated to ensure optimum performance.

RELIABLE INSPECTIONS: The plant receives a certificate showing the level instrument meets specifications designed to comply with the ANSI Z540-1-1994 standard. When used in oil and gas applications, this service can provide the inspections required by regulatory organisations, and can also verify measurement accuracy for custody transfers. "Most GWR level instruments have to be verified annually," said Christoffer Widahl, senior strategic product manager at Emerson.

CONVENIENT AND SAFE: Companies can schedule this service during normal operations, or during planned shutdowns or turnarounds. This service is currently available for Rosemount R Series 3308 and the 5300 GWR level instruments, with more GWR level instruments being covered in the near future. "Companies don't like sending their people up on top of tanks, and moving enough product in and out of a tank to provide the required range of calibration points is a major disruption. Our service can verify performance across full range without breaking the tank's seal. This is much quicker, more accurate, and safer than alternative methods," according to Widahl.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ON THE MOVE

Khalid al-Buraik
Vice president – southern area
Saudi Aramco

Saudi Aramco has appointed a new vice president for its southern area operations, replacing Zuhair al-Hussain, who retired after working at the state oil giant for more than three decades. Industry sources told *Reuters* that Khalid al-Buraik, vice president of petroleum engineering and development, would assume the role.

Tina Campbell
Marketing coordinator
Elite Control Systems

Tina Campbell has been appointed marketing coordinator by systems integrator Elite Control Systems, which provides various engineering support services to customers in the UK and globally. In her new role, Campbell is responsible for planning and executing both online and offline marketing strategies and campaigns. She manages media relations, contributes to website and social media content, carries out web analytics, produces promotional films, and conducts market and product-related research.

Paul de Leusse
Chief executive officer
Indosuez Wealth Management

Paul de Leusse has been appointed chief executive officer of Indosuez Wealth Management. De Leusse also joined Crédit Agricole SA's Extended Executive Committee. De Leusse started his career in management consulting in 1997 and became managing partner of Mercer Oliver Wyman in 2004. He joined Bain & Company as a partner in 2006 and, in 2009, joined Crédit Agricole Group as director of group strategy. He was appointed chief financial officer of Crédit Agricole CIB in 2011, and became deputy CEO in 2013.

Manoj Mordani
Business development manager – UAE mobile devices
TP-Link

TP-LINK Technologies has appointed Manoj Mordani as the new business development manager for its mobile devices division in the UAE. In this role, he will be responsible for developing and growing TP-LINK's mobile devices business in the UAE channel, providing support to the traditional dealer channels, independent mobile devices retailers, and power retailers.

Guido Jouret

Appointment of the Month

Chief digital officer
ABB

ABB has appointed Guido Jouret, former head of technical operations at Nokia Technologies, as its first chief digital officer. The appointment, which comes into effect on October 1, will see Jouret lead the development of ABB's digital technologies in different markets globally. Jouret, both a US and Belgian citizen, has extensive experience in Silicon Valley. He served for 20 years at Cisco after obtaining a PhD in Computer Science. His most recent role at Cisco was as general manager of the Internet of Things division, which aims to connect billions of devices to the internet across a wide range of industries. Prior to that, he was chief technology officer and general manager of Cisco's Emerging Technologies Group, a unit responsible for incubating new businesses. Under his leadership, the team created nine new start-ups, including those that became Cisco's TelePresence and Internet of Things groups.

JOBS

NOTICE BOARD

The latest job vacancies in the oil and gas industry

BLAKE ANDERSON, ABU DHABI

Senior project coordinator/director
Blake Anderson is recruiting for a senior project coordinator/director from a mechanical background for an oil and gas project in Abu Dhabi. The successful candidate will have worked on projects in the construction sector.

VOYAGE GLOBAL ENERGY, MUSCAT

Senior production engineer
Responsibilities will include production engineering support for heavy oil/steam flood operations, well monitoring and optimisation for heavy oil production, steam pattern surveillance, as well as recommendations and implementation.

DAVIDSON CONSULTING, QATAR

Rig manager
The role involves observing load variations on strain gauges, mud pumps, and motor pressure indicators; and listening to engines, rotary chains, and other equipment to detect faulty operations or unusual well conditions.

CAREER NEWS

Siemens announces the appointment of Qatar CEO

APPOINTMENT Siemens has appointed Adrian Wood as chief executive officer (CEO) of the company's operations in Qatar. Wood assumed his new role after almost four years as CEO of Siemens in Kuwait, replacing Fatih Sakiz. Wood's career at Siemens started in 1990 in the UK. He was then employed in Germany before pursuing different senior managerial roles within the company, in the UAE, Bahrain, the Philippines, and Kuwait. During his tenure in Kuwait, Wood was instrumental in driving growth across the company's divisions, leading to a 10% increase in the number of employees, to around 300, and more than doubling Siemens' business in the country. "Wood brings to Qatar a wealth of regional and international experience from his successful career at Siemens. I am confident he will make valuable contributions to our growth story in Qatar," said Dietmar Siersdorfer, CEO of Siemens Middle East and UAE.

> "WOOD BRINGS TO QATAR A WEALTH OF REGIONAL AND INTERNATIONAL EXPERIENCE FROM HIS SUCCESSFUL CAREER AT SIEMENS (KUWAIT)."

Legal advisory firm opens new Iran desk within its Dubai office

EXPANSION Legal advisory firm Fitch & Co has announced the establishment of an Iran desk at its Dubai office. In addition to its presence in Iran, which has existed for more than 10 years, the firm now has the capacity to facilitate its clients' Iran-related business from its Dubai office. The Iran team consists of international, cross-practice, and local lawyers, led by Atousa Mahmoudpour, who has has five years' experience of running an international legal practice in Iran. "Our approach is to [...] utilise our Iranian and internationally-trained experts to advise clients on recent updates on the sanctions regime, business development, Iranian laws and regulations, corresponding international laws and regulations, updates on business opportunities, and to link them to the right entities through our [...] network," said Mahmoudpour.

GAC Group announces major reshuffle of global management

RESHUFFLE Global provider of integrated shipping, logistics and marine services, the GAC Group, has announced a swathe of management changes and transfers. On a group level, Erland Ebbersten has been named group vice president (VP) – Marine, heading a newly established Marine region that covers Abu Dhabi, Turkmenistan and Kazakhstan; Thomas Okbo has taken over as group VP for Africa; Lars Bergström is now group VP for the Asia Pacific Region and Indian subcontinent region, including Pakistan; and Fredrik Nyström is the new group VP – Middle East. On a company level, GAC Hong Kong's new company manager is Maria Lam; Mikko Wieru has been named company manager of GAC Marine Abu Dhabi; Daniel Nordberg is now GAC Qatar company manager; and Johan Fulke has taken the reins at GAC Oman.

OPINION

Gulf employment undergoes adjustment

Corporate restructuring and consolidation in the regional oil and gas sector are having an impact on the GCC's employment arena

"START DISCUSSING THE TRANSFER WITH AFFECTED EMPLOYEES AT AN EARLY STAGE. IT WILL BE IMPORTANT THAT [THEY] COOPERATE IN THE PROCESS."

About the authors: Sara Khoja and Ben Brown are senior partners at law firm Clyde & Co. Khoja is a partner in the MENA Employment Group and advises multinationals and local companies on employment issues. Brown advises on employment law in the UK, the UAE and its freezones (including the Dubai International Financial Centre), and the wider Middle East.

The energy industry is predicted to experience a wave of consolidation as capital expenditure and cash flows weaken. Within the GCC, we have seen subsidies cut and employers embark on large-scale restructures pending further M&A activity and, most notably, the announcement that Saudi Aramco will publicly list 5% of its business.

Types of business transfers

A key feature of share acquisitions (as distinguished from asset acquisitions) is that all of the assets and liabilities (including those relating to employees) of the target company will be acquired by the purchaser upon completion of the acquisition of the shares. There will be no change to the identity of the employing entity as a result of a share acquisition, so no transfer of employment will be necessary. If there is a change of name, employment visas and registrations can be updated when they expire.

In an asset acquisition, the parties agree which assets and liabilities are to be acquired by the purchaser. Upon completion of the transaction, ownership of these will transfer from the seller to the purchaser. From an employment perspective, employees who are assigned to the assets being transferred will often need to be transferred from the seller to the purchaser. The identity of their employer will, therefore, change. A key point in these transactions is that the purchasers will often agree to take on all employees from the sold business unit, on equally favourable terms, for a lock-in period of one year.

Globally, the trend for companies operating in the energy industry since the oil glut has been for asset sales, as they seek to offload underperforming or expensive assets. If oil and gas companies in the GCC are to follow suit, the following employment considerations will be important.

Transfer of employment

There are no laws in the UAE, Bahrain or Kuwait providing for the automatic transfer of employment from one company to another. Therefore, the transfer of employment in these countries can only be achieved by terminating an employee's employment with their existing employer and the employee being hired by the new employer.

The labour laws of Oman, KSA, Qatar and Bahrain contain ambiguous provisions for the automatic transfer of employment although, in practice, most companies tend to adopt the termination and re-hire approach.

Residence visa and work permit

Where a termination and re-hire process is followed, the employee's residence visa and work permit will need to be cancelled and updated ones issued in the name of the new sponsor. Transferring employees and their dependents may not be able to travel abroad during the visa renewal process.

The new sponsor must ensure that they have a sufficient quota of visas and office space available for the transferring employees. There will usually be a limit on the number of visas that can be obtained by a company at any one time, so applications for large numbers of visas will often have to be made in tranches, which could affect the timeline of the whole transfer process.

In some GCC countries, the seller and purchaser may apply to transfer employees' sponsorship, and will need to submit a joint application to the labour authority. This means the visa would not be cancelled, but would transfer across until its expiration date, when the new employer would have to renew it. An agreement would also need to be reached about when responsibility for payroll is handed over, as each GCC country operates a form of the Wages Protection System, which requires the operation of a local payroll. Failure to comply with this could result in the employer no longer being able to deal with the Ministry of Labour.

Sara Khoja, senior partner at Clyde & Co and partner in the firm's MENA Employment Group.

Ben Brown, senior partner at Clyde & Co, specialising in employment law in the UK, UAE, and wider Middle East.

Accrued entitlements

If an employee is transferred to their new sponsor by way of termination and re-hire, upon termination of their employment any notice pay, holiday pay, end-of-service gratuity, and other contractual entitlements will become payable to the employee, in accordance with the applicable labour law. Employees can insist that the entitlements are paid to them upon termination. However, most employees agree to roll over the accrued entitlements into their new employment. This type of agreement should be clearly documented.

The labour laws of the UAE, Oman, KSA and Qatar state that, following a business transfer, both the previous employer and the new employer are jointly (and, in KSA, severally) liable for the accrued entitlements. In practice, however, it is common for the parties to apportion these liabilities by way of indemnification in the relevant purchase documentation.

Consultation/notice

Although there is no statutory requirement to consult with employees in relation to a potential business transfer, it is advisable to start discussing the transfer with all affected employees at an early stage. It will be important that the transferring employees cooperate in the process, and giving them as much information as possible from the outset should help to ensure this.

As the transfer process involves terminating the employee's employment, the requisite notice of termination should be issued to the employee. In practice, the requirement to give notice is often built into the transfer arrangements agreed with the employee.

Other considerations

It is also necessary to bear the following important considerations in mind when transferring – or terminating and re-hiring – employees:

- Transferring employees may need a letter confirming the details of the change of their employer to submit to their bank.
- Will the purchaser try to cherry-pick employees from the seller, or will the seller try to off-load underperforming employees onto the purchaser?
- Where will the transferring employees fit within the purchaser's organisation?
- Will transferring employees be required to relocate?
- Will the purchaser recognise the transferring employees' continuity of service for the purposes of calculating any end-of-service benefits?

KNPC – Mina Al Ahmadi Refinery Fifth Gas Train

Mina Al Ahmadi Refinery (MAA) was built in 1949 as a simple refinery, with a refining capacity not exceeding 25,000 barrels per day (bpd), to supply the local market's gasoline, kerosene and diesel requirements. The refinery is located 45km south of Kuwait City on the Arabian Gulf. It covers a total area of 10,534,000m². The Kuwait National Petroleum Company (KNPC) is in the process of building and installing an additional fifth liquefied petroleum gas (LPG) train to the Mina Al Ahmadi Refinery. The fourth LPG train and the new fifth train are part of a long-term strategy to increase the domestic production of associated and non-associated gases. The plan was formulated by the Kuwait Petroleum Corporation, parent company of the KNPC.

PROJECT FINANCE

- The Kuwait National Petroleum Company (KNPC) is the client.

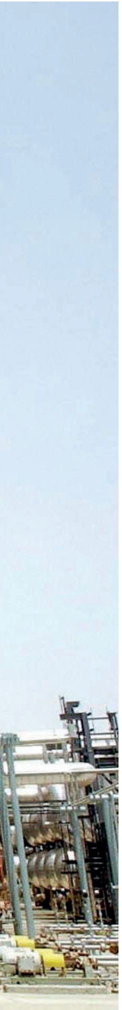
PROJECT SCOPE

The scope of the scheme involves:
- Feed gas compressor
- Feed gas dehydration
- LPG dehydration
- NGL recovery
- Fractionation & product treating unit
- Substation
- Flare system
- Nitrogen generation & distribution system
- Air compression system

The fifth gas train is designed to process associated gas and condensate from KOC gathering centres in southeast Kuwait and north Kuwait oil fields. It will also be supplied with refinery gases from the acid gas removal plants at the two other refineries owned and operated by the KNPC, Shuaibah refinery and Mina Abdullah refinery.

The renewed scope of the fifth gas train will also include:
- Pre-treatment unit
- Natural gas liquid (NGL) recovery unit
- Fractionation column
- Product treatment unit
- Propane refrigeration unit
- Deep refrigeration unit
- Sour water stripper
- De-mineralised water plant
- Fuel gas treatment unit
- Utilities

The KNPC has specified that the new gas liquefaction unit should have a design capacity of 805 million cubic feet per day (cfd) of gas and 106.3 million barrels per day (bpd) of external condensate, in addition to the condensate produced in the NGL recovery section of the process. Product recoveries should be at least 75% ethane, 97% propane and 99% butane. Current and future non-associated gas from the Jurassic and Dorra gas fields will also be considered in the gas train's design.



FAST FACTS

Name of Client
The KNPC

Estimated Budget ($ US)
2,000,000,000

Facility Type
Gas production

Sector
Gas

Status
Construction

Location
Mina Al Ahmadi

Project Start
Q4 2010

End Date
Q4 2017

Last Updated
7 September, 2016

FEED
AMEC

PMC
AMEC

Main Contractor
Tecnicas Reunidas

Contract Value ($ US)
1.4 billion

Award Date
Q2 2015

PROJECT SCHEDULES

Feasibility Study	Q4 2010
PMC	Q2 2011
FEED	Q2 2011
EPC ITB	Q3 2014
Engineering & Procurement	Q2 2015
Construction	Q1 2016
Completed	Q4 2017

CONTRACTORS

Contract Type	Pre-Qualified	Bidders	Awarded
PMC	–	–	• AMEC
EPC	• Hyundai Heavy Industries • Hyundai Engineering & Construction • Daelim Industrial Company • Petrofac • Saipem • Samsung Engineering Company • SK Engineering & Construction • Tecnicas Reunidas • GS Engineering & Construction	• Daelim Industrial Company • Petrofac • Tecnicas Reunidas • GS Engineering & Construction	• Tecnicas Reunidas
FEED	–	–	• AMEC

PROJECT STATUS

Date	Status
Aug 2016	Construction works on the substation unit have commenced and the project is on track to be completed in December 2017.
May 2016	Construction works were at an early stage and on schedule to be completed before the end of 2017.
Jan 2016	Engineering and procurement activities were completed and construction works commenced.
Sep 2015	Construction was still on schedule to commence in the fourth quarter of 2015.
Jul 2015	Engineering works were ongoing.
Jun 2015	The KNPC raised security levels to the highest on all its refineries and ongoing projects.
May 2015	Tecnicas Reunidas won the contract to build the fifth gas train at Kuwait's Mina Al Ahmadi refinery.
Apr 2015	The contract for the fifth gas train was expected to be awarded by the end of June 2015.
Mar 2015	Several companies presented their bids. Tecnicas Reunidas submitted the lowest bid ($1.45bn).
Feb 2015	The deadline to submit bids was extended again, to 10 March, 2015.
Nov 2014	The deadline to submit bids was extended. The new deadline to submit bids was 25 January, 2015.
Sep 2014	The KNPC floated tenders for the construction of the fifth gas train. The deadline to submit bids was 7 December, 2014.
Feb 2014	Several pre-qualified companies were invited to submit their bids.
Dec 2013	The ITB for the EPC contract was issued.
Sep 2013	Completion of the scheme was expected to be in December 2017.
Jul 2013	The invitation to bid (ITB) for the EPC contract was due to be issued in December 2013.
Oct 2011	The FEED study was continuing.

Ongoing and upcoming projects

Information is supplied by DMS Projects

GCC GAS – SEPTEMBER 2016						
Project	Country	City/ Region	Facility	Budget	Status	Completion Date
ADCO- Bab TH-F Peripheral Development	UAE	Abu Dhabi	Nitrogen	400,000,000	FEED ITB	Q4 2017
ADCO- Bu Hasa Shuaiba South- Gas Lift Network	UAE	Abu Dhabi	Gas Network	800,000,000	Construction	Q1 2018
ADGAS – Das Island Flaring & Emission Reduction	UAE	Abu Dhabi	Gas Production	100,000,000	Construction	Q1 2018
ADGAS- Integrated Facilities Project (IGD-S) Expansion (Phase 4)	UAE	Abu Dhabi	Gas Field Development	1,057,000,000	EPC ITB	Q3 2019
ADGAS- Integrated Gas Development (IGD) – Expansion (Overview)	UAE	Abu Dhabi	Gas Field Development	1,057,000,000	EPC ITB	Q1 2019
ADGAS- Integrated Gas Development (IGD) – Expansion (Phase 1)	UAE	Abu Dhabi	Gas Field Development	1,057,000,000	Construction	Q3 2017
ADMA OPCO – Umm Shaif Super Complex- Additional Gas Supply & Flexibility Assurance	UAE	Abu Dhabi	Gas Production	494,000,000	Construction	Q2 2016
ADMA OPCO- Nitrogen Plant Upgrade	UAE	Abu Dhabi	Nitrogen	55,000,000	Design	Q1 2017
ADMA-OPCO – Nasr Full Field Development – (Overview)	UAE	Abu Dhabi	Oil Field Development	1,700,000,000	Construction	Q4 2018
ADMA-OPCO – SARB Offshore Oil Field Development – Package 2	UAE	Abu Dhabi	Oil & Gas Field	500,000,000	Construction	Q4 2016
ADMA-OPCO – SARB Offshore Oil Field Development – Package 3	UAE	Abu Dhabi	Gas Pipeline	600,000,000	Construction	Q1 2016
ADMA-OPCO – SARB Offshore Oil Field Development – Package 4	UAE	Abu Dhabi	Gas Processing	500,000,000	Construction	Q3 2017
ADNOC – LNG Import Terminal	UAE	Abu Dhabi	LNG Storage Tanks	1,000,000,000	Feasibility Study	NA
Al Hosn Gas- Shah Field- Expansion	UAE	Abu Dhabi	Gas Network	NA	Feasibility Study	Q4 2021
Bahrain LNG WLL – Liquefied Natural Gas Receiving and Regasification Terminal	Bahrain	Hidd	Liquefied Natural Gas (LNG)	660,000,000	Engineering & Procurement	Q4 2018
Banagas – Central Gas plant 3	Bahrain	Sitra	Gas Treatment Plant	600,000,000	Engineering & Procurement	Q3 2018
Banagas – Fuel Pipelines And Storage Facilities Expansion	Bahrain	Sitra	Gas Storage Tanks	80,000,000	Engineering & Procurement	Q2 2018
BP – Block 61 – Khazzan and Makarem Gas Fields Development	Oman	Oman	Gas Field Development	24,000,000,000	Construction	Q1 2022
BP – Block 61 – Khazzan Gas Fields Development – Phase 1 – Central Processing Facility	Oman	Al Dahirah	Gas Processing	1,200,000,000	Construction	Q2 2017
BP – Block 61 – Khazzan Gas Fields Development – Phase 1 – Overview	Oman	Al Dahirah	Gas Field Development	15,000,000,000	Construction	Q4 2017
BP – Block 61 – Khazzan Gas Fields Development – Phase 1 – Package 1	Oman	Al Dahirah	Gas Field Development	1,500,000,000	Construction	Q4 2018
BP – Block 61 – Khazzan Gas Fields Development – Phase 1 – Package 2	Oman	Al Dahirah	Gas Field Development	130,000,000	Construction	Q3 2017
BP – Block 61 – Khazzan Gas Fields Development – Phase 2	Oman	Al Dahirah	Gas Field Development	5,000,000,000	Design	Q4 2020
Dana Gas – Zora Gas Field	UAE	Sharjah	Gas Exploration	100,000,000	Construction	Q4 2016
DNO – Block 8 Oil & Gas Field Development	Oman	West Bukha	Gas Field	45,000,000	Construction	Q4 2018
Emirates LNG – Fujairah LNG	UAE	Fujairah	Liquefied Natural Gas (LNG)	3,000,000,000	Feasibility Study	Q3 2016
GASCO – Abu Dhabi Sales Gas Network- Compression Station	UAE	Abu Dhabi	Gas Pipeline	900,000,000	Feasibility Study	Q2 2018
GASCO – Black Powder Management	UAE	Abu Dhabi	Gas Pipeline	44,000,000	Construction	Q4 2017
GASCO – Habshan to Ruwais – 16 inch Condensate Replacement Pipeline	UAE	Abu Dhabi	Gas Pipeline	90,000,000	Construction	Q4 2016
GASCO – Integrated Gas Development (IGD) – Expansion (Onshore Pipeline)	UAE	Abu Dhabi	Gas Production	12,000,000,000	Construction	Q4 2016
GASCO – Taweelah – Gas Compressor Station	UAE	Abu Dhabi	Gas Processing	70,000,000	Engineering & Procurement	Q1 2019
GASCO – Yas – Mina Zayed Gas Pipeline	UAE	Abu Dhabi	Gas Processing	45,000,000	Construction	Q1 2015
GASCO- Gas Turbine Replacement (Phase 1 – Asab & Buhasa)	UAE	Abu Dhabi	Gas Processing	130,000,000	FEED	Q4 2017
GASCO- Habshan 5 – New Compression Train	UAE	Abu Dhabi	Gas Processing	800,000,000	EPC ITB	Q1 2018

Project	Country	City/ Region	Facility	Budget	Status	Completion Date
KGOC – Wafra Central Gas Utilization Project	Kuwait	Wafra	Gas Processing	1,000,000,000	EPC ITB	Q1 2018
KNPC – Mina Abdulla Refinery Sulphur Recovery Units	Kuwait	Mina Abdullah	Sulphur Recovery	1,000,000,000	EPC ITB	Q2 2018
KNPC – Al Zour LNG Import and Regasification Terminal	Kuwait	Al Zour	Liquefied Natural Gas (LNG)	3,330,000,000	Engineering & Procurement	Q3 2020
KNPC – Mina Al Ahmadi Refinery Fifth Gas Train	Kuwait	Mina Al Ahmadi	Gas Production	2,000,000,000	Construction	Q4 2017
KNPC – Mina Al Ahmadi Refinery Sulphur Recovery Units	Kuwait	Mina Al Ahmadi	Sulphur Recovery	50,000,000	EPC ITB	Q2 2018
KOC – North Kuwait Gathering Center (GC) 32	Kuwait	Northern Kuwait	Gas Gathering Centre	2,000,000,000	EPC ITB	Q4 2017
KOC – North Kuwait Manifold Gathering System for Gathering Centers (GC) 29, 30, 31	Kuwait	Northern Kuwait	Gas Gathering Centre	2,500,000,000	Construction	Q4 2017
MASDAR – Carbon Dioxide Capture and Storage – Phase I (Mussafah Steel Rolling Mill)	UAE	Abu Dhabi	Carbon Dioxide	280,000,000	Construction	Q2 2016
MASDAR – Carbon Dioxide Capture and Storage – Phase I (Overview)	UAE	Abu Dhabi	Carbon Dioxide	2,500,000,000	Construction	Q2 2016
NOGA – Gazprom – Liquefied Natural Gas (LNG) Distribution Centre	Bahrain	Various	Liquefied Natural Gas (LNG)	600,000,000	Feasibility Study	Q2 2018
NOGA – Onshore Deep Gas Exploration	Bahrain	Various	Gas Exploration	200,000,000	Engineering & Procurement	Q4 2015
Oman Gas Company – Murayrat PLS Upgrade	Oman	Adam Ad Dakhliya	Gas Processing	100,000,000	Construction	Q4 2017
Oman Gas Company – Muscat Gas Network	Oman	Muscat	Gas Network	100,000,000	FEED ITB	Q1 2020
Oman Gas Company – Salalah Loopline	Oman	Salalah	Gas Pipeline	70,000,000	Construction	Q4 2016
Oman Gas Company – Salalah LPG Extraction	Oman	Salalah	Liquefied Petroleum Gas (LPG)	600,000,000	EPC ITB	Q2 2019
Orpic – Liwa Plastics Industries Complex – NGL Extraction Units	Oman	Sohar	Natural Gas Liquefaction (NGL)	400,000,000	Engineering & Procurement	Q1 2019
Orpic – Nitrogen Gas Plant	Oman	Sohar	Nitrogen	50,000,000	EPC ITB	Q3 2018
Oryx GTL – Expansion of Gas To Liquids Plant	Qatar	Ras Laffan	Gas to Liquids (GTL)	1,500,000,000	Feasibility Study	Q4 2019
PDO – Ghaba North Gas Field Re-Development	Oman	Northern Oman	Gas Field Development	60,000,000	Construction	Q3 2016
PDO – Kauther Depletion Compression Phase 2 (KDC2)	Oman	Al Dakhiliya	Gas Compression	190,000,000	Engineering & Procurement	Q2 2019
PDO – Khulud Tight Gas Development Project (KLD)	Oman	Kauther Field	Gas Field Development	100,000,000	Feasibility Study	Q4 2021
PDO – Mabrouk Deep Phase-3 (Gathering & Surface Facilities)	Oman	Saih Rawl	Gas Gathering	200,000,000	Engineering & Procurement	Q2 2018
PDO – Rabab-Harweel Integrated Plant (RHIP) – Overview	Oman	Harweel	Gas Processing	3,000,000,000	Construction	Q1 2019
PDO – Saih Nahaydah Depletion Compression Phase-2 (SNDC2)	Oman	Saih Nihayda	Gas Compression	180,000,000	Engineering & Procurement	Q2 2019
PDO – Saih Nihayda Condensate Stabilization Plant	Oman	Saih Nihayda	Gas Treatment Plant	115,000,000	Construction	Q4 2017
PDO – SRCPP & SNGP Condensate Recovery Maximisation	Oman	Saih Nihayda	Gas Processing	300,000,000	Construction	Q1 2017
PDO – Yibal Depletion Compression – Phase 3 (Y3DC)	Oman	Yibal	Gas Processing	300,000,000	Construction	Q4 2016
PDO – Zauliah Gas Plant Project	Oman	Al Wusta	Gas Processing	110,000,000	Construction	Q4 2016
Qatar Petroleum (QP) – Air Compressor Replacement at Mesaieed Refinery	Qatar	Mesaieed	Gas Processing	50,000,000	Construction	Q4 2016
Qatar Petroleum (QP) – Bi-directional Pipeline Between KM and KS	Qatar	Doha	Gas Pipeline	80,000,000	Construction	Q3 2015
Qatar Petroleum (QP) – Vapour Recovery System at Multi Product Berth	Qatar	Mesaieed	Gas Processing	50,000,000	EPC ITB	Q2 2017
RasGas – Qatar Barzan Gas Field Development Project (Overview)	Qatar	North Field	Gas Field Development	10,300,000,000	Construction	Q4 2021
RasGas – Qatar Barzan Gas Field Development Project – Offshore – Phase 2	Qatar	North Field	Gas Field Development	700,000,000	Engineering & Procurement	Q4 2019
RasGas – Qatar Barzan Gas Field Development Project – Offshore – Phase 3	Qatar	North Field	Gas Field Development	300,000,000	Engineering & Procurement	Q4 2023
RasGas – Qatar Barzan Gas Field Development Project – Onshore – Phase 2	Qatar	North Field	Gas Field Development	2,000,000,000	Feasibility Study	Q4 2019
Saudi Aramco – Arabiyah and Hasbah Gas Field Development	Saudi Arabia	Arabiyah	Gas Field	3,000,000,000	Construction	Q1 2019
Saudi Aramco – Dow – Ras Tanura Gas Plant (Overview)	Saudi Arabia	Ras Tanura	Gas Field	4,000,000,000	EPC ITB	Q4 2019
Saudi Aramco – Duba-1 Gas field	Saudi Arabia	Red Sea	Gas Field	25,000,000,000	Feasibility Study	Q3 2016
Saudi Aramco – Fadhili Gas Plant (Overview)	Saudi Arabia	Eastern Region	Gas Treatment Plant	13,300,000,000	Construction	Q1 2021

Project	Country	City/ Region	Facility	Budget	Status	Completion Date
Saudi Aramco – Fadhili Gas Plant – Downstream Packages	Saudi Arabia	Eastern Region	Gas Processing	1,000,000,000	Engineering & Procurement	NA
Saudi Aramco – Fadhili Gas Plant – Industrial Support Facilities (FISF)	Saudi Arabia	Eastern Region	Gas Treatment Plant	100,000,000	Construction	Q4 2017
Saudi Aramco – Fadhili Gas Plant – Main Processing Facilities (Package 1)	Saudi Arabia	Eastern Region	Gas Treatment Plant	2,500,000,000	Construction	Q1 2021
Saudi Aramco – Fadhili Gas Plant – Offsites & Utilities (Package 3)	Saudi Arabia	Eastern Region	Gas Field	2,000,000,000	Construction	Q1 2021
Saudi Aramco – Fadhili Gas Plant – Sulphur Recovery Unit SRU (Package 2)	Saudi Arabia	Eastern Region	Gas Treatment Plant	2,500,000,000	Construction	Q2 2021
Saudi Aramco – Hasbah Field Increment II	Saudi Arabia	Hasbah	Gas Field	1,600,000,000	Construction	Q2 2019
Saudi Aramco – Liquefied Gas Station For Shadqam & Al Uthmaniah Gas Plants	Saudi Arabia	Abqaiq	Natural Gas Liquefaction (NGL)	74,000,000	Construction	Q3 2018
Saudi Aramco – Liquefied Natural Gas (LNG) Receiving Terminal	Saudi Arabia	Jeddah	Liquefied Natural Gas (LNG)	1,000,000,000	Feasibility Study	Q3 2017
Saudi Aramco – Master Gas System Expansion (MGSE) (Overview)	Saudi Arabia	Various	Natural Gas Liquefaction (NGL)	4,050,000,000	Construction	Q1 2020
Saudi Aramco – Master Gas System Expansion (MGSE) – Phase I	Saudi Arabia	Various	Gas Pipeline	1,650,000,000	Construction	Q2 2017
Saudi Aramco – Midyan Gas Processing Plant	Saudi Arabia	Tabuk	Gas Processing	800,000,000	Construction	Q4 2016
Saudi Aramco – Unconventional Gas Program – Tight Gas Production Systems A	Saudi Arabia	Turaif	Gas Field Development	200,000,000	Construction	Q4 2020
Saudi Aramco – Unconventional Gas Program – Tight Gas Production Systems A and B (Overview)	Saudi Arabia	Turaif	Gas Field Development	3,500,000,000	Construction	Q4 2020
Saudi Aramco – Unconventional Gas Program – Tight Gas Production Systems B	Saudi Arabia	Turaif	Gas Field Development	800,000,000	Construction	Q4 2020
Saudi Aramco – Uthmaniya Gas Treatment Units	Saudi Arabia	Uthmaniyah	Gas Network	900,000,000	EPC ITB	Q2 2019
Shell – Pearl GTL Scheme – Onshore & Offshore Facilities	Qatar	Qatar	Natural Gas Liquefaction (NGL)	20,000,000,000	Construction	Q3 2019
Takreer– Hamriya Jetty and Pipeline Network Project – Marine Works 2	UAE	Sharjah	Oil Storage Tanks	250,000,000	Construction	Q4 2014
Tatweer Petroleum – Central Gas Dehydration Facilities	Bahrain	Awali	Gas Processing	100,000,000	Construction	Q3 2018
VOPAK HORIZON – Fujairah Oil Terminal Expansion (Phase 7)	UAE	Fujairah	Gas Storage Tanks	200,000,000	Engineering & Procurement	Q2 2015
ZADCO – Upper Zakum Full Field Development – 750 Project – Surface Facilities – EPC 1	UAE	Abu Dhabi	Oil Field Development	1,300,000,000	Construction	Q4 2017
ZADCO – Upper Zakum Full Field Development – 750 Project – Surface Facilities – EPC 2	UAE	Abu Dhabi	Oil Production	4,200,000,000	Construction	Q4 2017
ZADCO– 750 West Region– Capacity Expansion & Sulphate Reduction Plant– EPC 3	UAE	Abu Dhabi	Oil & Gas Field	300,000,000	EPC ITB	Q1 2019

GCC OIL – AUGUST 2016

Project	Country	City/ Region	Facility	Budget	Status	Completion Date
ADCO – Bab Far North CO2 Injection Pilot Project	UAE	Abu Dhabi	Oil Field Development	305,000,000	Construction	Q4 2016
ADCO – Mender Field Development	UAE	Abu Dhabi	Oil Field Development	350,000,000	Construction	Q3 2018
ADCO – North East Bab (NEB) – (Al Dabbiya) ASR	UAE	Abu Dhabi	Oil Production	2,500,000,000	EPC ITB	Q1 2020
ADCO – North East Bab (NEB) – Phase 3 (Al Dabbiya)	UAE	Abu Dhabi	Oil Production	2,500,000,000	Construction	Q4 2017
ADCO – North East Bab (NEB) – Phase 3 (Rumaitha-Shanayel)	UAE	Abu Dhabi	Oil Production	2,500,000,000	Construction	Q4 2017
ADCO – Rumaitha North CO2 Injection Project	UAE	Abu Dhabi	Oil Field Development	200,000,000	Construction	Q4 2016
ADCO – South East Asset– Sahil Field Development – Phase 2	UAE	Abu Dhabi	Oil Field Development	175,000,000	Construction	Q3 2016
ADCO– Bab Integrated Facilities Project– Expansion	UAE	Abu Dhabi	Oil Field Development	3,000,000,000	Feasibility Study	Q1 2020
ADCO– Bab TH-F Peripheral Development	UAE	Abu Dhabi	Nitrogen	400,000,000	FEED ITB	Q4 2017
ADCO– Buhasa– Wellhead Automation	UAE	Abu Dhabi	Oil Field Development	100,000,000	FEED	Q3 2019
ADCO– Fujairah MOT – Hydraulic Pressure Recovery System Turbine	UAE	Fujairah	Oil Field Development	800,000,000	FEED	Q1 2017
ADCO– South East Asset– Tie-in Project	UAE	Abu Dhabi	Oil Field Development	650,000,000	Construction	Q1 2018
ADMA OPCO – Nasr Full Field Development – Phase 2 (Package 2 – Platforms)	UAE	Abu Dhabi	Oil Field Development	200,000,000	Engineering & Procurement	Q4 2018
ADMA OPCO – Nasr Full Field Development – Phase 2 (Package 3)	UAE	Abu Dhabi	Oil Field Development	200,000,000	Construction	Q4 2018

Project	Country	City / Region	Facility	Budget	Status	Completion Date
ADMA OPCO – Umm Shaif Super Complex- Additional Gas Supply & Flexibility Assurance	UAE	Abu Dhabi	Gas Production	494,000,000	Construction	Q2 2016
ADMA OPCO- Nasr Full Field Development – Phase 2 (Package 1 – Wellheads and Pipeline)	UAE	Abu Dhabi	Oil Field Development	900,000,000	Construction	Q4 2018
ADMA-OPCO – 100 MBD DAS Facilities Upgrade Project	UAE	Abu Dhabi	Oil Field Development	48,000,000	Construction	Q1 2017
ADMA-OPCO – Nasr Full Field Development – (Overview)	UAE	Abu Dhabi	Oil Field Development	1,700,000,000	Construction	Q4 2018
ADMA-OPCO – SARB Offshore Oil Field Development – Package 2	UAE	Abu Dhabi	Oil & Gas Field	500,000,000	Construction	Q4 2016
ADMA-OPCO – SARB Offshore Oil Field Development – Package 3	UAE	Abu Dhabi	Gas Pipeline	600,000,000	Construction	Q1 2016
ADMA-OPCO – SARB Offshore Oil Field Development – Package 4	UAE	Abu Dhabi	Gas Processing	500,000,000	Construction	Q3 2017
ADMA-OPCO – Umm Al Lulu Field Development – (Overview)	UAE	Abu Dhabi	Oil Field Development	2,500,000,000	Construction	Q1 2018
ADMA-OPCO – Umm Al Lulu Field Development – Package 1	UAE	Abu Dhabi	Oil Field Development	800,000,000	Construction	Q1 2018
ADMA-OPCO – Umm Al Lulu Field Development – Package 2	UAE	Abu Dhabi	Oil Field Development	200,000,000	Construction	Q4 2016
ADMA-OPCO – Umm Shaif Infield Pipelines Replacement	UAE	Abu Dhabi	Oil Field Development	500,000,000	EPC ITB	Q4 2015
ADMA-OPCO- Bu Haseer Field	UAE	Abu Dhabi	Pipeline	200,000,000	Engineering & Procurement	Q3 2018
ADMA-OPCO- Lower Zakum – Oil Lines Replacement (Phase 1)	UAE	Abu Dhabi	Pipeline	950,000,000	Construction	Q4 2016
ADNOC & EMARAT – Fujairah Terminal Expansion Phase 3	UAE	Fujairah	Oil Storage Tanks	40,000,000	Feasibility Study	Q4 2018
ADNOC- Ghasha Field	UAE	Abu Dhabi	Oil & Gas Field	1,000,000,000	FEED ITB	Q1 2025
ADOC – Hail Offshore Oilfield	UAE	Abu Dhabi	Oil Field Development	500,000,000	Engineering & Procurement	Q3 2018
ADOC – Mubaraz Field Expansion	UAE	Abu Dhabi	Oil Field Development	500,000,000	FEED ITB	Q4 2017
Al Hosn Gas – Dalma Field	UAE	Abu Dhabi	Oil Field Development	800,000,000	FEED ITB	Q4 2020
BAC – Bahrain International Airport Modernization Program – New Aviation Fuel Farm & Fuel Hydrant	Bahrain	Muharraq	Oil Storage Tanks	200,000,000	EPC ITB	Q4 2017
Bahri – Very Large Crude Carriers (VLCCs) Construction	Saudi Arabia	Various	Very Large Crude Carriers (VLCCs)	1,000,000,000	Construction	Q4 2017
Bapco – Offshore Blocks	Bahrain	Various	Exploration	80,000,000	EPC ITB	Q2 2020
BPGIC – Fujairah Oil Terminal (Phase 1 & 2)	UAE	Fujairah	Oil Storage Tanks	200,000,000	Construction	Q1 2017
Duqm Petroleum Terminal Company – Duqm Liquid Jetty	Oman	Duqm	Oil Storage Terminal	1,000,000,000	EPC ITB	Q4 2018
Duqm Petroleum Terminal Company – Duqm Liquid Jetty – Topside Facilities	Oman	Duqm	Oil Storage Terminal	250,000,000	EPC ITB	Q4 2018
Fujairah Port – Port Facilities Expansion	UAE	Fujairah	Oil Storage Tanks	100,000,000	Construction	Q4 2015
GASCO – Integrated Gas Development (IGD) – Expansion (Onshore Pipeline)	UAE	Abu Dhabi	Gas Production	12,000,000,000	Construction	Q4 2016
GASCO – Yas – Mina Zayed Gas Pipeline	UAE	Abu Dhabi	Gas Processing	45,000,000	Construction	Q1 2015
GASCO- Integrated Gas Development – Expansion (42 Inch Pipeline)	UAE	Abu Dhabi	Oil Field Development	450,000,000	Construction	Q4 2018
Gulf Petrochem – Oil Storage Terminal Facility at Fujairah – Phase 2	UAE	Fujairah	Oil Storage Tanks	300,000,000	EPC ITB	Q4 2016
Hydrocarbon Finder – Block 7 Onshore Exploration and Production	Oman	Al Wusta	Exploration	50,000,000	Engineering & Procurement	Q1 2019
IPIC & Mubadala- Fujairah Refinery (EPC 1 & 2)	UAE	Fujairah	Refinery	3,500,000,000	EPC ITB	Q4 2018
KNPC – Matlaa New Depot	Kuwait	Northern Kuwait	Oil Storage Tanks	500,000,000	EPC ITB	Q4 2019
KOC – Exxon Mobil Corporation – Ratqa Lower Fars Heavy Oil Handling Facilities – Drilling Package	Kuwait	Jahra	Oil Field Development	500,000,000	Construction	Q2 2018
KOC – Kuwait Environmental Remediation Program (KERP) – North Package	Kuwait	Northern Kuwait	Oil & Gas Field	100,000,000	Construction	Q4 2021
KOC – Kuwait Environmental Remediation Program (KERP) – Overview	Kuwait	Kuwait	Oil & Gas Field	3,000,000,000	Construction	Q4 2021
KOC – North Kuwait Jurassic Early Production Facility (EPF) – Phase 2	Kuwait	Northern Kuwait	Oil Production	100,000,000	Engineering & Procurement	Q3 2017
KOC – North Kuwait Jurassic Oil and Gas Field Development	Kuwait	Northern Kuwait	Oil & Gas Field	1,300,000,000	Engineering & Procurement	Q2 2018
KOC – Ratqa Lower Fars Heavy Oil Development – Phase 1	Kuwait	Northern Kuwait	Steam Injection	4,500,000,000	Construction	Q2 2019
KOC – Soil Remediation Services – Lot A	Kuwait	Kuwait	Oil & Gas Field	100,000,000	Construction	Q3 2017

Project	Country	City / Region	Facility	Budget	Status	Completion Date
KOC – Southern Kuwait Maintenance of Oil Production Facilities	Kuwait	Kuwait South	Oil Production	150,000,000	Construction	Q3 2020
KPC – Northern Oil Field Development	Kuwait	Northern Kuwait	Oil Field Development	900,000,000	EPC ITB	Q1 2017
Masirah Oil Ltd – Block 50 (Masirah Bay Offshore) – Exploration	Oman	Masirah Basin	Exploration	25,000,000	Construction	Q1 2020
Medco Arabia – Block 56 Onshore Exploration and Production	Oman	Adam Ad Dakhliya	Exploration	20,000,000	Engineering & Procurement	Q4 2020
MOG – Block 54 Onshore Exploration and Production	Oman	Al Wusta	Exploration	50,000,000	Engineering & Procurement	Q3 2020
MOG – Block 55 Onshore Exploration and Production	Oman	Al Wusta	Exploration	45,000,000	Engineering & Procurement	Q1 2019
OOCEP – Block 60 Concession – Onshore	Oman	Oman	Oil & Gas Field	1,100,000,000	Engineering & Procurement	Q4 2020
OTTCO – Ras Markaz Crude Oil Park	Oman	Duqm	Oil Storage Terminal	400,000,000	EPC ITB	Q4 2019
PDO – Amal Steam Phase 1C Surface Facilities	Oman	Amal Oilfield	Enhanced Oil Recovery (EOR)	80,000,000	Construction	Q1 2018
PDO – Amal Steam Phase 1C-2	Oman	Amal Oilfield	Oil Field Development	300,000,000	EPC ITB	Q1 2019
PDO – Yibal Khuff Sudair Field Development	Oman	Northern Oman	Oil Field Development	3,000,000,000	Construction	Q1 2019
Primestar Energy – Prime Tank Terminal & Jetty Pipeline	UAE	Fujairah	Oil Storage Tanks	165,000,000	Construction	Q3 2014
Qatar Petroleum (QP) – Bul Hanine Redevelopment (Offshore)	Qatar	Bul Hanine	Oil Field Development	11,000,000,000	FEED	Q1 2028
Qatar Petroleum (QP) – Wellhead Scada & Cathodic Protection (Dukhan Field)	Qatar	Dukhan	Oil Production	200,000,000	Construction	Q4 2016
Qatar Petroleum – Al Shaheen Offshore Field Development Plan	Qatar	Qatar	Oil & Gas Field	500,000,000	Construction	Q4 2016
Sabic – Oil-To-Chemicals Plant	Saudi Arabia	Yanbu	Oil Production	30,000,000,000	Feasibility Study	Q4 2020
Sadara Chemical Company – Jubail Petrochemicals Complex – Refinery Tank Farm Package	Saudi Arabia	Jubail	Oil Storage Tanks	500,000,000	Construction	Q4 2016
Saudi Aramco – Al Muajjiz Crude Oil Terminal Rehabilitation (Tank Farm)	Saudi Arabia	Yanbu	Oil Storage Terminal	200,000,000	Construction	Q4 2016
Saudi Aramco – Annual Onshore Maintain Potential Program (MPP)	Saudi Arabia	Red Sea	Maintenance	5,000,000,000	Construction	Q2 2021
Saudi Aramco – Expansion of Khurais Oilfield	Saudi Arabia	Eastern Region	Oil & Gas Field	3,000,000,000	Construction	Q4 2018
Saudi Aramco – Safaniyah Oil Field (Phase 2)	Saudi Arabia	Safaniyah	Oil & Gas Field	500,000,000	Construction	Q3 2016
Saudi Aramco – Shaybah Arabian Light Crude Increment Program	Saudi Arabia	Shaybah	Oil Field Development	50,000,000,000	Construction	Q3 2016
Saudi Aramco – Southern Area Oil Operations (SAOO)	Saudi Arabia	Southern Region	Oil Field Development	55,000,000	Engineering & Procurement	Q1 2017
Sharafco – Hamriyah Free Zone – Storage Terminal	UAE	Sharjah	Oil Storage Tanks	100,000,000	EPC ITB	Q1 2016
Takreer – Abu Dhabi International Airport Expansion – Aviation Fuel Depot	UAE	Abu Dhabi	Oil Storage Tanks	100,000,000	Construction	Q3 2016
Takreer- Hamriya Jetty and Pipeline Network Project – Marine Works 2	UAE	Sharjah	Oil Storage Tanks	250,000,000	Construction	Q4 2014
Takreer- Ruwais- LPG Recovery	UAE	Abu Dhabi	Refinery	40,000,000	FEED	Q3 2019
VOPAK HORIZON – Fujairah Oil Terminal Expansion (Phase 7)	UAE	Fujairah	Gas Storage Tanks	200,000,000	Engineering & Procurement	Q2 2015
VTTI – Fujairah Terminal	UAE	Fujairah	Oil Storage Tanks	120,000,000	Construction	Q2 2016
ZADCO – Umm Al Dalkh ESP Installation – Package 2 (Phases 3, 4 and 5)	UAE	Abu Dhabi	Sub Sea Cable	650,000,000	Construction	Q4 2016
ZADCO – Umm Al Dalkh Full Field Development (Overview)	UAE	Abu Dhabi	Oil Field Development	650,000,000	Construction	Q2 2017
ZADCO – Upper Zakum Full Field Development – 750 Project (Overview)	UAE	Abu Dhabi	Oil Field Development	15,600,000,000	Construction	Q4 2017
ZADCO – Upper Zakum Full Field Development – 750 Project – Surface Facilities – EPC 1	UAE	Abu Dhabi	Oil Field Development	1,300,000,000	Construction	Q4 2017
ZADCO – Upper Zakum Full Field Development – 750 Project – Surface Facilities – EPC 2	UAE	Abu Dhabi	Oil Production	4,200,000,000	Construction	Q4 2017
ZADCO – Zirku 7th Crude Oil Storage Tanks	UAE	Abu Dhabi	Oil Storage Tanks	300,000,000	Construction	Q1 2016
ZADCO – Zirku Facilities Capacity Enhancement	UAE	Abu Dhabi	Oil Field Development	400,000,000	EPC ITB	Q3 2017
ZADCO- 750 West Region- Capacity Expansion & Sulphate Reduction Plant- EPC 3	UAE	Abu Dhabi	Oil & Gas Field	300,000,000	EPC ITB	Q1 2019

Note : The above information is the sole property of DMS Projects. Budget figures are shown as US $ values. Source: dmsprojects.net

ABOUT THE INTERVIEWEE:
Osama Oulabi is the regional director of SpeedCast, a network and satellite communication services provider.

Osama Oulabi, regional director of SpeedCast

FIVE MINUTES WITH...

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0.00

Tell us about SpeedCast's scope of work within the oil and gas sector.
SpeedCast provides fully managed telecoms services. One of the largest oilfield service companies recently selected SpeedCast's satellite network for the Sub-Saharan Africa portion of a global oil drilling project. Using the SpeedCast satellite network, which offers pan-African coverage, key technical data is backhauled to the client's datacentre, so experts can analyse the data and make decisions about the well, in real time. These decisions can save the oil company tens of millions of dollars, in some cases.

1.10

What are some of the latest innovations in satellite technology, and what impact have they had on the oil and gas sector?
Cost of connectivity via satellite is decreasing, thanks to the development of high-throughput satellites and the introduction of Ka band satellites. In addition, the introduction of Medium Earth Orbit (MEO) satellite constellation, namely O3b, means that enterprise customers can enjoy latency as low as 150 milliseconds, as well as increased Internet speeds and, as a result, improved application, voice and video quality.

> "RECENT ESTIMATES SUGGEST THAT $900BN IS EXPECTED TO BE INVESTED IN THE INDUSTRY OVER THE NEXT FIVE YEARS, SO THE [MIDDLE EAST] IS STILL ATTRACTIVE."

2.15

Why is this region important for SpeedCast?
The Middle East is of strategic importance to SpeedCast as we like to be present where our customers expect us, and most of our global clients have offices here. In spite of the sluggish economic climate, the region has some major investment plans in the sector. In fact, recent estimates are that $900bn is expected to be invested in the industry over the next five years, so the region is still attractive. With our wealth of experience, strong local presence and wide portfolio of solutions, SpeedCast is well positioned for further growth within the region.

3.05

What are the implications of your licence win in Iraq?
The licence not only allows us to operate and sell our services in Iraq, but it also allows us to apply for end-user licensing that our clients will need to operate wireless devices. SpeedCast became one of the first to obtain this licence. It reassures our clients that we have a formal relationship with the authorities, and that SpeedCast can look after their licensing requirements, which in a country like Iraq, can be difficult yet exceptionally important.

4.20

What are your mid-term growth plans in the Middle East?
SpeedCast has seen increased demand for O3b MEO technology in the region, particularly where there is need for high throughput and low latency, and traditional fibre is unreachable or unreliable. Last year, we helped connect some of our energy customers, GSM providers and NGOs with O3b, giving them services of 100Mbps per site. I anticipate the demand for O3b and high-throughput services to continue to grow over the coming months.


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