

EGYPT'S LEADING OIL AND GAS MONTHLY PUBLICATION - October 2015 - 28 PAGES - ISSUE 106







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GUPCO CELEBRATES 50 YEARS OF CHALLENGES & ACHIEVEMENTS

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SPE NORTH AFRICA TECHNICAL CONFERENCE A RESOUNDING SUCCESS

The energy sector, indeed the entire country, tracts, production, and distribution completed has observed major changes this last month. in Egypt. Other articles featured this month Of course the biggest news items are the appointments of Sherif Ismail to the post of ments, outline events like GUPCO's 50th an-Prime Minister, and Tarek El-Molla to that of niversary and the SPE North Africa Technical Petroleum Minister. The two are known for Conference, and lay out a case for why the petheir teamwork and professionalism, and that is obviously one of the major points we are featuring in this month's issue of Egypt Oil & Gas. The other news item that keeps maintaining international interest is the huge gas find in the deep-water Mediterranean. We explore this issue in depth this month, with a focus on what will happen to the Israeli giant gas fields Leviathan and Tamar now that the Eni discovery has been made in Egypt.

Another important topic covered this month is that of the planned gas regulatory agency stemming from EGAS. The article features news available. an exclusive interview with Amira El-Mazni, agency will have a direct effect on all gas con- continuing support,

have analysis to map the cost of LNG shiptroleum sector needs a media strategy to engage consumers.

Aside from our feature articles, this month we are placing an additional emphasis on hard news pieces, particularly for Egyptian items. Our focus is shifting from being a feature-filled business journal to becoming more of a timely newspaper. We have recently hired several new reporters to help us accomplish this, and we're proud of our progress so far. If you haven't yet, please visit our website (egyptoil-gas.com) for the most timely and comprehensive industry

the future head of the regulatory agency. This As always, thank you for your readership and

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Tarek El-Molla Appointed Egypt's New Petroleum Minister

Tarek El-Molla was appointed earlier this month as the new Minister of Petroleum of Egypt, Egypt Oil & Gas (EOG) learned. El-Molla replaced Sherif Ismail, the former minister, after Ismail was appointed Prime Minister on August 12th. El-Molla served as Chairman of the Egyptian General Petroleum Corporation (EGPC), from early August of 2013, and was seen by many in the industry as the choice of Sherif Ismail. He is known to maintain good relationships with foreign oil companies, and is well-regarded in the sector. The appointment comes in the wake of scandal, as the former prime minister and cabinet resigned after it

was revealed that the Minister of Agriculture, Salah El Din Mahmoud Helal, had accepted bribes in exchange for land licenses. Helal was later arrested by authorities.



Egypt's Petroleum Minister Becomes New Prime Minister

The Prime Minister of Egypt, Ibrahim Mahlab, and the entire cabinet announced their resignation early in September, Reuters reported. The Petroleum Minister, Sherif Ismail, was appointed the new Prime Minister directly after, Egypt Oil & Gas (EOG) learned. Official state media outlet Ahram Online noted that the cabinet had met early in September and decided to tender its resignation. Presi-

dent Abdel Fattah El-Sisi accepted the resignation shortly after. The current administration was rocked by scandal last month when the agriculture minister was sacked after allegations of graft and corruption. Some Arabic language sources have said that the resignation was related to the prime minister being named in corruption proceedings during the Mubarak era regime.

Eni's Gas Discovery May Be Double Initial Estimates

Sources at EGAS told Egypt Oil & Gas (EOG) that according to the seismic data of Eni's massive Zohr discovery, the potential reservoir is estimated at 60 tcf, rather than the 30 tcf officially announced. Accurate estimates of the full reservoir value will be available after the completion of three more appraisal wells. According to

the then-Petroleum Minister Sherif Ismail's interview with Reuters, the price per btu has yet to be agreed upon, "We have not yet agreed with Eni over the price of the gas, but the important thing is that it's a number appropriate for both parties. It's not a condition that it be the same number agreed upon in other deals," said Ismail.

Cyprus May Claim Part of Egypt's Massive Zohr Field

Cyprus Energy Minister Giorgos Lakkotrypis said that in the next few days Cyprus will have an idea of whether the large natural gas reserve recently discovered [Zohr] off the coast of Egypt extends inside the island's Exclusive Economic Zone (EEZ), reported the Cyprus Mail. "Two things must extend to our EEZ, the geological structure of the seabed and the gas field as such," says Lakkotrypis adding, "We are already working on the geological evidence and we will have a certain picture in the coming days," pointed out that Zhor borders Cyprus' block 11. According to Eni, the prospect covers an area of about 100 square kilometers and has a hydrocarbon column of 630 meters. Sigmaville explained that if the reservoir does overlap, the unitization agreement signed between

Cyprus and Egypt in December 2013 would presumably kick in. Hypothetically, should part of the Zohr prospect cross over into the Cypriot EEZ, this could represent a windfall for the state—the share of proceeds under the unitization agreement with Egypt—without Cyprus spending a cent on development.



Energy Subsidies to Decrease by 5% This Year

A source at the Petroleum Ministry told Egypt Oil & Gas (EOG) that the Egyptian government will reduce energy subsidies by 5% during the current budget of this fiscal year, without affecting fuel prices. The decline is largely attributed to the decrease in global crude prices. This move is expected to save EGP 4b as part of the 5-year subsidy reform plan, with a target of EGP 60b. He pointed out that an agreement was reached with the Min-

istry of Finance to allocate about EGP 1.2b of the energy subsidies bill for the current budget to support the delivery of natural gas to homes in poorer areas. The government has also decided to mainstream the use of coal in fertilizer and cement factories to save more than EGP 3b annually, the total value of natural gas supplied annually to factories that are heavy and medium-sized consumers of energy.

Fertilizer Factories Demand Gas From Ministry After Production Stoppages

Muhammad Fayez, director of a fertilizer factory in Helwan, said that a comprehensive memorandum will be sent to the Ministry of Petroleum with all the gas needs of fertilizer factories for the current summer period. This comes after a number of small factories ceased production due to gas shortages that resulted from full gas production being diverted to power plants to prevent power cuts to citizens homes. In an exclusive statements made to Egypt Oil & Gas (EOG), Fayez explained that the memorandum will include a request to supply fertilizer factories with 50,000 cubic meters of gas per month-still only 75% of normal factory consumption rates-until the current summer finishes, with the remainder to be made up via joint import operations by EGAS. Fayez also made it clear that fertilizer factories will sell all their products in local markets, not abroad, and so they are entitled to obtain subsidized gas considering how high gas prices are in global markets. For its part, a source at the Petroleum Ministry said that the ministry would review these demands and gas would be supplied in accordance with the electricity distribution schedule. This is because the ministry has top directives that electricity production be prioritized, with only the remainder of gas going to the industrial sector.

<u>Petroleum Minister: New Discovery Will Not Affect Potential Israeli Gas Imports</u>

Reuters quoted Sherif Ismail, then-Egyptian Petroleum Minister, saying that the discovery of the Zohr natural gas field off Egypt will not undermine private-sector negotiations about buying gas from Israel. The statement was intended to downplay fears that potential deals could be under threat. "Any negotiations be-

tween private companies in Egypt and in the eastern Mediterranean—and by this I mean Israel and Cyprus—will not stop," adding, "These negotiations and initial agreements are ongoing." Private companies will require government approval to import gas from Israel, the minister said.

Tarek El Molla in Arbitration Talks with BG, Fenosa

Daily News Egypt has learned that talks between Petroleum Minister Tarek El-Molla, Spanish firm Gas Natural Fenosa, and Britain's British Gas (BG) Group are still ongoing. El-Molla stated that both companies are going to be part of the solution to the energy shortage crisis in Egypt in the next period. Both Fenosa and BG have resorted to international arbitration against Egypt, due to the country's suspension of the gas supply that was supposed to be exported according to their contract with the government. The two companies demanded the Egyptian government allow them to import Israeli gas, the results of which have not yet been decided. In statements

to Daily News Egypt, El-Molla refused to discuss whether the two companies would be allowed to import Israeli gas, or whether they would have a share of the recently discovered Shorouk gas field. "Both companies that you are talking about will be part of the solution of the energy shortage crisis; all the scenarios are on the table," El-Molla said.

BG GROUP



Petroceltic to Drill Near Eni's Zohr Field

Ireland's Petroceltic will begin drilling 5 km west of Eni's Zohr mega discovery next year, reported the Irish Examiner. Petroceltic holds two licenses offshore Egypt, one awarded in 2013 and the other late last year. The decision came in large part due to Eni's major find, raising the potential of the area.

IEOC to Connect Mega Egyptian Gas Discovery to Port Said

IEOC, a subsidiary of Eni, will extend a 195km pipeline from Zohr field Block 9 to the city of Port Said, reported Egypt Oil & Gas (EOG). Work on the pipeline will begin with development operations early next year. According to the sources at IEOC, starting development during the current low prices of oil will inherently cheapen the overall cost of development, due to the decline in the cost of service companies. The Shorouk Block was signed by IEOC in January 2014 with the Egyptian Ministry of Petroleum and the Egyptian Natural Gas Holding Company (EGAS) following a competitive international bid round.

Finance Minister: Massive Gas Find Will Not Affect Subsidy Reform



Al Arabiya quoted Hany Kadry Dimian, the Egyptian Minister of Finance, saying that the discovery of a massive new offshore natural gas field will not slow down his country's efforts to slash energy subsidies. The statement was made during the 20th Euromoney Conference, held in Cairo.







Emirati Inmaa Al-Ain and Egypt's Ganope to Launch New Projects

Emirati Inmaa Al-Ain for Development and Investment signed a memorandum of understanding with Ganoub El-Wadi Petroleum Holding Company (Ganope) for the establishment of new projects in the new Gulf of Suez annex worth \$3.5b, learned Egypt Oil & Gas (EOG). The projects will include a

power plant fueled by renewable energy. The company is currently conducting economic studies to determine whether the power plant should be fueled by wind, solar, or coal. Other projects include an industrial complex and a desalination facility.

Eni to Increase Production from Noras Field by 300 mcf/d

add about 300 mcf/d to the Noras Egypt. According to sources at EGAS, the increase is attributed to

Italian energy giant Eni intends to the three wells in the Noras field that will start production this year; field in the Western Desert, by the one of which will begin production end of 2015, reported Daily News this September, while the second will be activated next December.

EGAS to Gain 60% Share of Eni's New Gas Find in Egypt

EGAS Chairman Khaled Abdel Badie told Daily News Egypt that the agreement with Italy's Eni will see Egypt's share of gas production from the Shorouk franchise increase to over 60%. This will occur after the foreign partner recovers their financial expenses, with the agreement stating that the foreign partner will receive 40% of production throughout the recovery period. The cost of the project is

approximately \$7b, to be paid over the span of three years, covering several stages of development. Abdel Badie added that the price of the gas produced from Shorouk will be decided after the completion of preparations for the development plan and the stages of production. It was also noted that Eni is free to sell any amount of its natural gas stake production.

El-Molla: Foreign Partner's Monthly Oil, Gas Shares Declined by 26%

the value of foreign partners' share of oil and gas declined by 26% from \$880m in FY 2014/2015 to reach \$650m per month during current FY 2015/2016, reported Daily News Egypt. The \$230m decline is attrib-

Minister of Petroleum and Mineral uted to the continued decline of Resources, Tarek El-Molla said that global Brent crude prices. El-Molla emphasized that the value of the partners' share of gas and oil is regularly repaid on a monthly basis to avoid the increase of debts owed them by the Petroleum Ministry.

EGPC's Plans for Electricity Shortages During Eid El-Adha

Egypt Oil & Gas (EOG) learned that EGPC is currently working on ensuring that no power outages occur during the coming Islamic holiday of Eid El-Adha. The EGPC has a plan to pump 270,000 tons of diesel, 34,000 tons of fuel oil, 124 mcm/d

to power plants in the coming days. Additionally, the EGPC and the Ministry of Electricity are working on importing additional quantities of petroleum products to cover the next two months.

Petroleum Ministry to Compensate Factories for Gas Shortages

has decided to supply fuel oil and diesel to cement and fertilizer factories as a means to compensate for their temporary lack of gas, Egypt Oil & Gas (EOG) learned. Factories have planned to receive 34,000 tons of fuel oil and 10,000 tons of diesel a day. Once Egypt receives scheduled LNG shipments in November, the steady natural gas supply to factories will resume. Sources at EGPC also confirmed that the government will continue supplying the local market with 38,000 tons per day of diesel and 18,000 tons per day of gasoline,

Due to requests made by factory alongside supplies of 1.2m butane owners, the Ministry of Petroleum cylinders, which is the normal rate for all provinces. Additionally EGPC is planning to provide 120,000 tons per month of fuel oil and diesel for the new Suez Canal development



Tuk Tuks and Motorcycles to Be Included in **Smart Card System**

In statements made to Egypt Oil & Gas (EOG), Khaled Abdul Ghani, Director of the Smart Card system, said that statistics are being compiled for those eligible to receive subsidies within the smart cards system, before launching the second phase of the project. This is in preparation for when the system is officially implemented after the parliamentary elections. Abdul Ghani explained that tuk-tuks and motorcycles will be included into the smart card system for gasoline and diesel fuel before the end of this year. This was after an inventory of the numbers of tuk tuks found there were more than 2.3m of them around the country. He added that after the official launch of the system no citizen will be able to get fuel subsidies without being issued a smart card first. It is expected that the smart card system will completely reduce fuel smuggling in the black market.

Sherif Ismail Meets His Spanish Counterpart

Egypt Oil and Gas (EOG) learned that the then-Minister of Petroleum and Mineral Resources, Sherif Ismail, went to Spain to meet his counterpart, the Spanish Energy Minister, in order to discuss means of cooperation between the two countries, as well as to invite Spain to participate in a number of projects put forward by the ministry over the last period.

Ganope's Seismic Surveys Moves Ahead for 2014-2015

Egypt Oil & Gas (EOG) learned that Ganoub El-Wadi Petroleum Company (Ganope) completed a number of seismic, gravitational and magnetic surveys during the 2014-2015 fiscal year, with others still underway. A 310 square km area was surveyed completely, with another 30 square km region surveyed in 2D for GDF Suez in the Wadi Al-Dub and East Wadi Al-Dub locations in the Gulf of Suez region. In the Ghazaliat region in the Western Desert, RAK Gas conducted a 2D survey covering an area of 611 square km. In the Wadi Mzhareeth and South Wadi Mahareeth area, which belongs to Naftogaz, 1705 square km out of 3,100 square km was surveyed. Dana Petroleum, in its the concession area West of Dakhla 1 and 2, carried out an Air Gravity survey over 13,000 km and air magnetic survey totaling 33,900 square km out of a of 46,000 square km (74% of the total area). Ganope also drilled four exploratory wells, two of which were successful-driving the success rate to 50%, above the world average. Aerial surveys of gravitational and magnetic and seismic data in the open areas (not concession areas) within the scope of Ganope were compiled and the necessary approvals were obtained in preparation for launching a tender in the near future.

CHOICE Words



"This historic discovery will be able to transform the energy scenario of Egypt. This exploration success acquires an even greater value as it was made in Egypt, a country strategic for Eni, where important synergies with the existing infrastructures can be exploited allowing us a fast production startup."

Claudio Descalzi



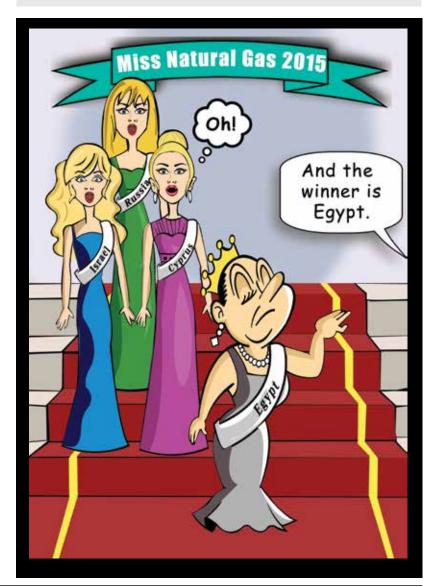
"The decision to appoint Sherif Ismail to the premiership is right on point, as it comes at a time when Egypt needs to focus on economic reform, in which reforming the energy sector is a vital parameter."

Osama Kamal former Minister of Petroleum of Egypt.



"The discovery of the massive gas field in Egypt is a painful reminder that while Israel sleepwalks and dallies with the final approval for the gas road map, and delays further prospecting, the world is changing in front of us, including ramifications for [Israeli] export options."

Yuval Steinitz, Energy Minister of Israel



Tarek El-Molla: The Future Lies in Fuel Producing

Tarek El-Molla, the new Minister of Petroleum and Mineral Resources, said that encouraging the establishment of small and medium-sized petrochemical companies will provide two advantages. Firstly; enough products for local markets, allowing the reduction of imports. And secondly; it will reduce the unemployment rate, reported Egypt Oil & Gas. El-Molla additionally stressed that the coming period would witness the launching of mineral wealth projects, a key factor that would help both the investors and the country.



Sherif Ismail: Exploration Activity Important to Egyptian Economy

Prime Minister Sherif Ismail said that optimizing the usage of natural resources, boosting exploration activities, as well as increasing local production and reserves will ensure the maximum value added to the national economy, reported Egypt Oil & gas (EOG). Ismail made these statements while presiding over the General Assembly of Ganoub El-Wadi Petroleum Company (Ganope) and the Egyptian Petrochemicals Holding Company (ECHEM) to review the outcome of the fiscal year 2014/2015. Ismail further clarified-in an official press releasethat the petrochemical industry is an important component of the results achieved within the sector and has significant benefits to the national economy. He added that there are many promising opportunities for serious investment in Egypt, especially the petroleum sector. He explained that the goal of the current government is to raise the standard of living in the Upper Egypt provinces, especially after the increase rates of natural gas supplied to homes and the establishment of new fuel stations for cars.

EGAS Invites 10 LNG International Firms for Workshop

Ten liquefied natural gas (LNG) trading firms have been invited by EGAS to join a technical workshop. The said workshop is believed to be a form of shortlisting of potential winners for a major LNG tender, reported Ahram Online. Originally 12 companies bid on

a tender to supply Egypt with 45 LNG cargoes for the 2015/2016 fiscal year; however only 10 of the bidders were asked to attend the workshop. Invited companies included Noble Group, PetroChina, Shell, Gunvor, Vitol, Trafigura, Gas Natural, BP, and Engie.

Nasr Petroleum Exports \$296m Worth of Petroleum Products

Mohamed Orabi, Chairman of the Nasr Petroleum Company (NPC), confirmed that his company had refined about 2.5m tons of crude, and produced 34,000 tons of butane, 623,000 tons of naphta, and 149,000 tons of jet fuel during the 2014/2015 fiscal year, reported Youm7. Orabi added that NPC's refining capacity for diesel is 546,000 tons and 896m tons of fuel oil, in addition to 277,000 tons of asphalt, while

the company exported petroleum products worth \$296m. These remarks were made during the company's general assembly meeting, announcing its results for the fiscal year 2014/2015. The assembly was conducted under the patronage of Petroleum Minister Sherif Ismail and the presence of the Governor of Suez El-Arabi El-Sarwi, with other concerned authorities and leaders of the sector in attendance.

AMOC to Begin Construction of Naphtha and Diesel Units in 2016

Italian company Technip won a public tender put forward by Alexandria Mineral Oils Company (AMOC) for the preparation of an economic and technical feasibility study for the establishment of two new units for the production of diesel and naphtha and fuel oil at its complex in Alexandria, reported Al-Mal. The Italian company will receive \$635,000 in expenses for the study stages to cover diverse aspects such as economic and technical feasibility and marketability. Following the completion of the study, construction is likely to start during the last quarter of 2016. It is likely that the investment cost of the expansions could reach \$250m, said El-Sardi.

Egypt to Double Natural Gas Production by 2018

A study by the Egyptian Center for Economic Studies (ECES) forecasts that due to the recent gas discovery, Egypt will be able to double its natural gas production by 2018. According to the study Egypt is expected to add an average 2.8 bcf/d of natural gas to its production levels. Such a boom will make Egypt "able to reduce significantly the expected daily deficit of 3 bcf of natural gas in 2018," stated the

report, adding that it will also help address the current energy bill deficit of EGP 1.7b and ensure growth rates of 6% by fiscal year 2018\2019. In addition, the report explained that Egypt has the option to export up to 29% of the extracted gas while reserving the rest for domestic demand, allowing Egypt to once again be "a net gas exporter," and "strengthen the Egyptian pound."

Egypt to Issue Tender for 300,000 Tons of Fuel

Sources at EGPC told Egypt Oil & Gas (EOG) that a tender for importing 300,000 tons of fuel and diesel will be issued by the beginning of the fourth guarter of 2015. The decision comes as

part of the government's plan to have a 15-day stock of all petroleum derivatives on hand in order to deal with any sudden hike in demand.

Egypt Reduces Its Debt to IOCs By \$600m

In an interview with Daily News Egypt, Tarek El-Molla, then-Chairman of EGPC, confirmed the reduction of Egypt's debt to foreign oil companies to the current \$2.9b."The foreign partners' dues declined at the end of August 2015 to approximately \$2.9bn, compared to \$3.5bn," said El-Molla. 'The part that has been paid was distributed by ratio to all foreign companies working in the petroleum sector. Another part of the foreign companies' dues is intended to be paid by the end of this year, and we are currently working on determining the means for providing the amount that we have not specified yet," he added.

Egypt to Begin Gas Imports from Cyprus by 2018

In an interview with Daily News Egypt, Sherif ismail announced that economic studies to import gas from the Aphrodite gas field in Cyprus are underway. This comes after ENPPI completed all technical studies. "It is planned that we start importing after 2017." Ismail explained.



MIDB to Contribute Part of Assiut Oil Refinery's \$150m Loan

Misr Iran Development Bank is planning to contribute \$10m to an Assiut Oil Refining loan worth \$150m, sources told Al Mal newspaper. Misr Iran has received a formal invitation from Abu Dhabi Islamic Bank (ADIB) to participate in the loan. The loan that ADIB is working on securing will be directed towards development of one of ASO-RC's refineries, increasing its capacity to 2.4m tons of diesel a year.

Egypt Launches New 200MW Solar Tender

The Egyptian Electricity Transmission Company (EETC) has launched a 200MW solar PV tender for projects located in the West Nile region, reported Clean Technica. One of the main requirements in the tender is proven experience in developing a minimum of three solar plants of 50MW capacity each. Applications must also be submitted with a bid bond of \$4.5m.

Oil Prices Ease Inflation Levels in Egypt

Egypt's annual inflation decreased to hit 7.9% in August, down from 8.3% in July, according to the Central Agency for Public Mobilization and Statistics (CAPMAS). The National explained that the current level of inflation is the lowest since 2013, remarking that

the main cause for this is declining oil prices. The drop in oil prices substantially contributed to the reduction of petroleum subsidies in the fiscal year 2014/2015 budget, bringing it down to EGP 100b, compared to EGP 134b in FY 2013/2014, added Daily News Egypt.

ADIB to Loan EGPC \$100m

The Egyptian General Petroleum Corporation (EGPC) has requested a loan from Abu Dhabi Islamic Bank (ADIB) worth \$100m to finance imported petroleum shipments, reported Daily News Egypt. According to an anonymous source at the ADIB, the major

shareholder of the company will be among the major participants that will arrange the loan, especially as the company and the bank have arranged loans specifically for oil companies

Electricity Minister: National Grid to Receive **14.400MW Boost**

In an interview with Ministry of Elec- capital. The projects represent aptricity and Renewable Energy Mohamed Shaker, Daily News Egypt learned that 14,400MW of capacity will be added to the national grid within two years, in collaboration with the German engineering conglomerate, Siemens. The planned boost will come from the three new power plants implemented by Siemens in Beni Suef, Burullus, and the new administrative

proximately 40% of the total capacity of the national electricity grid, said Shaker. The first phase of the project will begin in November 2016, to add a capacity of 800MW. It will increase to 5,600MW in May 2017. The grid will then add 7,600MW in November of the same year. The final stage, scheduled for April 2018, will bring the total added capacity amount to 14,400MW.

NOSPCO to Issue New Tender for Rig

Egypt Oil & Gas learned that North Sinai Petroleum Company (NOSP-CO) issued a tender to lease a new rig to execute the company's plan in the Western Desert. The company will drill a number of new natural gas exploratory wells with

investments of \$3.8m. Drilling is scheduled to begin early in the next year, with an expected return of 500 mcf.

Agiba Issues Tenders for New Rig

Egypt Oil & Gas (EOG) learned that Agiba Petroleum Company-a joint venture between the EGPC and Eniwill issue a tender to lease a new rig to execute its plan for the current fiscal year in the Eastern Desert. The company will drill a number of crude oil development wells with investments worth \$1.3m, drilled at depths approaching 4,000ft. The start is scheduled for November and is expected to extract 6.200 b/d of crude.

Khalda Issues Tender for New Rig

Egypt Oil & Gas learned that Khalda issued a new tender to lease a rig for the company's operations in the Western Desert. The rig will drill three gas exploratory and development wells with an investment of \$1.7m, with an expected production of 1 mcf.

MIDOR Chairman: Processing 50,000 b/d of Crude to Boost Local Supply

In statements made to Egypt Oil & Gas (EOG), Middle East Oil Refinery (MIDOR) Chairman, Dr. Mohamed Abdul Aziz, stated that his company was processing 50,000 b/d of crude to supply local markets with petroleum products. The decision came in part due to the effort to resolve the fuel crisis and satisfy the needs of citizens. "We are committed to providing all the fuel quantities agreed upon with the Ministry of Petroleum," said Abdul Aziz, adding that the same quantities are being prepared for next month.

Egypt to Connect 1.2m Households to National Gas Grid

Tarek el Molla, Egypt's Petroleum Minister said in a statement published by the petroleum ministry "The oil sector is to adopt a new strategy to increase natural gas delivery rates to 1.2 million homes across Egypt this fiscal year (2015/2016)." The decision comes part of the country's Household National Natural Gas Connection Project, and in effort to improve the citizen's standard of living.

ACWA Power to Implement 2,000 MW Renewable Projects in Egypt

Saudi ACWA Power and Emirati Masdar are working on an official offer to the Ministry of Electricity to establish renewable energy projects with a capacity of 2,000 MW, reported Daily News Egypt. The projects includes 1,500 MW in solar energy, and 500 MW through wind energy. These projects are part of the agreements and memoranda of understanding (MoUs) signed during the Economic Summit held in Sharm El-Sheikh in March 2015. Hassan Amin, Regional Manager of ACWA Power, said that a meeting was held with Minister of Electricity Mohamed Shaker and the Head of the Renewable Energy Authority Mohamed Salah Al-Sobki in order to agree on the next steps for the projects. Their financial closing is expected to be completed six months after signing the agreement to buy energy.

Egypt Oil and Gas

PEOPLE DEVELOPMENT

ROUNDTABLE





Attraction



Training and Development



The Role of IOCs and JVs in People Development



Promotions and Career Tracks

ORGANIZED BY

OCTOBER 2015



DRILLING

AGIBA

AGIBA, a joint venture company between EGPC and IEOC, has completed drilling new oil-development wells in its concession area in the Western Desert. The production rate of AGIBA was 2,1483,10 barrels of oil as of August 2015.

MEL-90

The new well was drilled at a depth of

TRANSGLOBE

TRANSGLOBE has completed drilling a new oil-exploration well in its concession area in the Eastern Desert during the 2014/2015 fiscal year. It is worth noting that the well has now been placed on production.

KHALDA

KHALDA, a joint venture company between EGPC and Apache, has completed drilling new oil-development wells in its concession area in the Western Desert. The production rate of KHALDA was 4,841,162 barrels of oil as of August

W.KAN E-3

The development well was drilled at a depth of 12,364ft. utilizing the EDC-57 rig. Investments surrounding the project are estimated to be \$3.730 million. TAYIM W-6

The development well was drilled at a depth of 14,850ft. utilizing the EDC-59 rig. Investments surrounding the project are estimated to be \$1 million.

KHALDA-93

The development well was drilled at a depth of 6,800ft. utilizing the EDC-61 6,302ft. utilizing the PDI-147 rig. Investments surrounding the project are estimated to be \$800,000.

RAML-32

The new well was drilled at a depth of 4,700ft. utilizing the WF-161 rig. Investments surrounding the project are estimated to be \$500,000.

NWG-5BX

The new well was drilled at a depth of 4,100ft. utilizing the EDC-67 rig. Investments surrounding the project are estimated to be \$1 million.

rig. Investments surrounding the project are estimated to be \$800,000.



QARUN

QARUN, a joint venture company between EGPC and Apache, has completed drilling a new oil-development well in its concession area in the Western Desert. The production rate of QARUN was 1,288,113 of oil as of August 2015.

N.QARUN-12

The new well was drilled at a depth of

NORPETCO

NORPETCO, a joint venture between EGPC and Sahari oil company, has completed drilling a new oil-development well in its concession area in the Western Desert. The production rate of NOR-PETCO was 333,830 barrels of oil as of August 2015.

PETROBEL

PETROBEL, a joint venture between EGPC and ENI, has recently completed drilling a new gas-exploration well in their concession area in Sinai. The production rate of PETROBEL was 486,8062 barrels of oil as of August 2015. It is worth noting that the well has still not been placed on production.

PETROSILAH

PETROSILAH, a joint venture between EGPC and MER-LON, has recently completed drilling a new oil-exploration well in their concession area in the Western Desert. The production rate of Petrosilah was 256,495 barrels of oil as of August 2015. It is worth noting that the well

has still not been placed on production.

SILAH-13

The well was drilled at the depth of 7,865ft. utilizing the TANMIA-1 rig. Investments surrounding the project are estimated at \$1.220 million.

9,600 ft. utilizing the EDC-17 rig. Investments surrounding the project are estimated to be \$2.673 million.

WON C-26

RAWDA-2

SIDRI-18

mated at \$1686 million

The new well was drilled at a depth of 7,075ft. utilizing the EDC-63 rig. Investments surrounding the project are estimated to be \$1.150 million.

The well was drilled at the depth of

1,1145ft. utilizing the EMSCO 602 rig. In-

vestments surrounding the project are

estimated at \$3.907 million.

The new well was drilled at the depth of 10,600ft. utilizing the ECDC-2 rig. Investments surrounding the project are esti-





AFRICA

Algeria to Raise Gas Output by 13% by 2019

Algeria plans to increase natural gas output by 13% by 2019 to reverse a decline in energy production in recent years that has hit its export earnings and spending policy, the energy ministry said in a statement to Reuters. The required investment was estimated at \$40b, it said in the latest edition of its in-house magazine Algeria Energy. The article gave few details on how or where it would increase output. An OPEC member and a major gas supplier to Europe, Algeria relies heavily on energy revenues, which make up 60% of its budget and account for 95% of its exports. Earnings from oil and gas exports are expected to fall 50%, to \$34b this year. The government earli-

er this month said oil and gas export volumes dropped 8.9% in the first quarter of 2015. Prime Minister Abdelmalek Sellal said days before that the government will cut spending by 9% in 2016 due to a decline in earnings after the drop in global crude oil prices. Algeria's Al-Khabar newspaper published recently that the US secretary of energy warned gas prices are not expected to rise this year and Algeria is expected to suffer even more after the United States announcement that it will resume exporting liquefied natural gas to compete with Qatar, Russia and Algeria, Middle East Monitor reported.

India's ONGC Pursuing Gas and LNG Deal Worth <u>\$24b in Mozambique</u>

India's state-run exploration company ONGC is investing in a massive offshore Mozambique gas field with estimated reserves of more than 75 tcf, reported the India Economic Times. The Area 1 Rovuma offshore field will require roughly \$24b in investment, and ONGC currently holds a 16% stake. Other investors include BPCL and Oil India Limited. US-based Anadarko stakes in the project are worth more than 25%, noted Bloomberg. Headquartered in Houston Texas, Anadarko is one of the largest independent E&P companies in the world. The company has made major efforts to obtain heads of agreement for supplying LNG from the Mozambique project, and currently has about 90% of the required contracts in place. Roughly 8m tons of LNG per year have been agreed to, and Anadarko is nearly to the point where it can feasibly construct onshore LNG conversion facilities.



North Sudan Announces Oil Partnership with Chinese Firms

China recently announced the signing of new oil contracts with North Sudan to expand the areas of the country under exploration, reported the Sudan Tribune. The new regions to be explored include Red Sea, Sinnar, and West Kordofan. Sudanese oil and gas minister Mohamed Zayed Awad confirmed that China has agreed to embark on new oil explorations and to expand its oil operations in Sudan. "China will start gas production in Zone 15 in the Red Sea, in Zone 4, known as Baleela field, and Zone 6 north

of Heglig in West Kordofan State, as well as Zone 8 in Souki in the east of Sinnar State," Awad stated. China Daily noted that the Sinnar region is already being exploited for natural gas. Current production rates are around 3.7 mcf/d. Reserves of the region are pegged at 25 bcf. Few energy firms have freedom to operate in Sudan, as the country is currently under US and international sanctions due to human rights abuses and alleged war crimes. China is the largest foreign investor in the troubled country.

Nigeria Lifts Bans, Renews Swaps While Combating Oil Corruption

Bloomberg learned that Nigeria has canceled a two-month old ban on 113 foreign-flagged vessels. The ban prevented them from loading crude or gas from the country. This was according to a letter from the state oil company obtained by Bloomberg. From now on, incoming vessels into Nigerian waters must get a letter of confirmation from export terminal operators and buyers of Nigerian crude as a "guarantee that nominated vessels are free and will not be utilized for any illegal activity," said Mele Kyari, the NNPC's general manager of crude oil marketing. The tankers were banned on July 15, just prior to President Muhammadu Buhari's meeting with President Barack Obama in Washington DC. Buhari requested American support in tracking down \$150b worth of crude that has gone missing.

At least 250,000 barrels of oil are stolen daily in Nigeria, according to the Nigerian President, who accused unidentified former ministers of having a hand in this. In other news, Reuters reported that the NNPC has set up four new crude swap contracts to replace the ones it cancelled last month. NNPC's complaint at the time was that swap deals were "skewed in favor" of Sahara Group, Aiteo Group, and NNPC's trading arm Duke Oil. About half of the country's domestic gasoline demand is provided for by these swap deals, which come in the form of offshore processing agreements (OPAs)—a trader takes Nigerian crude to a foreign refinery and returns with the resulting products—or a direct crude-for-product swap.

Kenya Grants Offshore Production Sharing Extension

Erin Energy Corporation obtained an 18-month extension of its Initial Exploration Period (IEP) of its offshore blocks in Kenya, L27 and L28, reported Rigzone. The IEP will now expire in February of 2017. "We are delighted to receive this 18-month extension," said Segun Omidele, Senior Vice President for Exploration and Production. "This additional time to evaluate these blocks will allow us to acquire 3D seismic data and to look for suitable partners on the blocks." The IEP is a production sharing contract and the extension will become effective as of August 9. According to Standard Digital News, the extension will allow Erin Energy to acquire, process, and interpret more 3D seismic data for the aforementioned blocks. Erin is a small, independent firm headquartered in Houston, Texas that specializes in sub-Saharan Africa. It has offshore operations in Nigeria, Ghana, and the Gambia. The company also has operations onshore and offshore Kenya.

Iraqi Debts Prompt Request for Oil Compa- | Iran Begins Building Middle East's First Ge- | Bahrain to Host nies to Reduce Spending

Iraq has formally asked oil companies investing in the country to reduce their 2016 spending plans by September 30, citing lower oil prices and government revenue, said Bloomberg. Abdul Mahdy Al-Ameedi, director of licensing at Iraq's oil ministry, told Bloomberg that the reduced budgets shouldn't affect 2015 production as the country was already producing more than 3m b/d. "We've asked them in a letter we sent to take into consideration the drop in oil prices and that the low revenues of the government that may not cover their investments," Al-Ameedi said. "There was a stipulation that this investment reduction must not affect oil output from the fields that was in the 2015 schedule. "Reuters was able to obtain a copy of the aforementioned letter, dated September 6, containing an admission from the oil ministry that "because of the drop in our oil sales revenues, the Iraqi government

has sharply reduced the funds available to the Ministry of Oil. "The letter revealed further that this "will result in corresponding reductions of spending within the Ministry of Oil but will also reduce the funds available for the reimbursement of petroleum costs to our contractors." Baghdad was already in dire straits even before oil prices sank to \$46 a barrel since foreign companies in Iraq's southern oilfields operate under service contracts, where the government is paid a fixed dollar fee for production. Reuters learned previously that BP had already agreed to reduce its 2015 spending on Rumaila, the country's largest oilfield, from \$3.5 to \$2.5b.Concerning the other companies-Royal Dutch Shell, ExxonMobil, Eni, and Lukoil-one oil executive said "Nobody can invest if they are not paying. At the moment the way things are looking, production in the second half of 2016 is going to start falling."

Last Syrian Oilfield Falls to ISIS

Reuters reported that Islamic State tematically bled by IS to fund the war (IS) fighters have captured the Jazal field in Syria from government forces, said the Britain-based Syrian Observatory for Human Rights. While Jazal is a medium-sized field that had been shut due to long, protracted fighting in the central Syrian Homs area, this was the last major oilfield under Syrian government control. According to CNBC officials estimated IS was earning up to \$3m a day on the black market from its illicit oil sales. Jazal is northwest of Palmyra, which recently fell to IS, and is close to Syria's natural gas fields and energy facilities near the border with Iraq. Syria's resources are being sys-

effort in Iraa.



Jordan Still Considering Gas and Nuclear **Options**

The final cost of Jordan's first nuclear power plant (NPP) will become clear in spring 2017 after the preparation of construction documents, said Sergey Kirienko, the Head of Russian State Atomic Energy Corporation "Rosatom," he said according to the Saudi Gazette. "We have two years. We started in March 2015, and accordingly by the spring 2017 the feasibility study and a project implementation plan will be fully finished, after that the government of Jordan will make an appropriate decision-and in accordance with this decision—the cost, the final terms, and conditions of the investors' attraction will be fixed," Kirienko told reporters. The assumption is, he explained, that by then spe-

cific investors will have been identified for the project. "Today the Jordanian government admits the possibility of attracting investors, both private and foreign. But again, it is the decision of the government of Jordan," he added. In a similar vein, Israel's national planning and construction committee approved the route of a gas pipeline to export natural gas to Jordan, reported Reuters. The plan, however, still requires formal approval by the cabinet and no date has been specified for a vote. Jordan, so far, has agreed to take gas for 15 years from Israel's Leviathan offshore natural gas field—a deal that could be worth \$15b—that has yet to come online.

Huawei to Digitally Upgrade Saudi Arabia in Oil and <u>Gas Trainin</u>s

Huawei-a global information and communications technology (ICT) solutions provider-has launched a new Joint Innovation Center (JIC) in Saudi Arabia together with Saudi Aramco and King Fahad University of Petroleum and Minerals (KFUPM), reported Zawya. The center is committed to enabling ICT technologies for the oil and gas industry and it will be located in Dhahran Techno Valley Innovation Center. The inauguration ceremony was at the Oil and Gas Joint Innovation Center. The JIC will focus on Digital and Intelligent Oil Fields, Digital Pipelines, Intelligent Refineries, High Perfor-

mance Computing, Big Data, Mobility, Safety and Security, Cloud Computing, and Energy Management. Trade Arabia quoted Yan Lida, President of Huawei's Enterprise Business Group, saying that the "Middle East is a strategic region for Huawei's global footprint. We have 15 years of local experience and have become the leading ICT infrastructure provider." Huawei has supported such knowledge-sharing initiatives before, such as its Annual Seeds for the Future education program, which selects students every year to develop practical skills that will prepare them for a career in the ICT industry.

othermal Power Plant

Trade Arabia reported that Iran is building the Middle East's first geothermal power plant. The pilot station will be in northwestern Meshgin Shahr, Ardabil province, at the foot of a dormant volcano. The 50MW project is expected to come on-stream two years from now. Energy Minister Hamid Chitchian added that 11 wells are being drilled for the geothermal power plant and that the energy harnessed will also be used for heating purposes during the winter. According to Press TV, Chitchian also said that Iran plans to invest \$50b in water and electricity projects to add 2,000MW to the country's 74,000MW capacity. Iran is currently suffering from a drought, which is straining the country's hydropower resources. Another 5,000MW

is meant to be generated by solar and wind energy by 2020.



International Customers Flock to Oman's Floating Storage Facility

Oman Tank Terminal Company (Ottco) has recently launched a new 2.1m barrel capacity floating storage facility at Mina Al-Fahal, announced Trade Arabia. The facility is contained on board a very large crude carrier (VLCC), to be provided and operated by Oman Shipping Company (OSC), selling Oman Blend to international customers. China Oil, Glencore, and Oman Trading International (OTI) all won bids for access to the facility. Ship-to-ship (STS) transfers will be carried out by Fendercare Marine, said Zawya, the floating facility was developed between Oman

and the Dubai Mercantile Exchange (DME), which means that DME is the first exchange in the world to incorporate floating storage at delivery point for customers. Salim Al-Aufi, Under-Secretary of the Oman Ministry of Oil and Gas, was quoted saying, "Linking floating storage to energy future contracts is what makes this project unique; with the commencement of this project we aim to support the positive growth trend demonstrated by DME by introducing a new tool as well as creating value for Oman crude

UAE Progressing Towards Nuclear Power with IAEA Help

The Emirates Nuclear Energy Corporation (Enec) announced the installation of its Unit 2 Steam Generators (SGs) at the Barakah Nuclear Power Plant (Barakah NPP), reported Trade Arabia. The SG units are made of stainless steel, each as long a tennis court, and took four years to fabricate by Doosan Heavy Industries—an Enec contractor-in South Korea. They were set in place inside the Unit 2 reactor containment building. Each steam generator contains tubes made of a nickel, chromium, and iron alloy that carry heated, processed water at high pressure. This is a safety feature as it keeps the water used in the reactor and the water used in the turbine segregated. When completed, the Barakah NPP will consist of four nuclear power generating units in two plants, with a combined capacity of approximately 5,600MW. "This is an important milestone in the

progress and delivery of Enec's second unit, which is scheduled to come online approximately one year after the first unit, which will be in 2017," The National guoted, Enec CEO Mohamed Al Hammadi, as saying. "As with all of our work at Barakah, I am proud to see the team continue to deliver these significant achievements with safety, quality and performance as top priorities at all times," he added. The UAE was able to showcase this latest achievement at the recent International Atomic Energy Agency conference in Vienna where the UAE Permanent Representative to the IAEA Hamad Al Kaabi said that the UAE was continuing to make "progress in the development of its civil nuclear power program and its associated infrastructure," while the UAE also continued to place great importance on nuclear safety—with the support of the IAEA.

Oilfield Expansion Projects Delayed in Saudi Arabia

The planned expansion of the Khurais oilfield in Saudi Arabia has reportedly been delayed beyond the original 2017 schedule, said Gulf Digital News. "The project is important because of the associated gas that comes with the expansion of the oilfield, but Aramco has stretched the timeframe of the field development. The picture will be much clearer in November or December," said a source who insisted on remaining anonymous. Contractors who have been awarded jobs on the field have also been asked to wait for their contracts to be finalized, revealed another source. The authorities, however, have not revealed the reason for this delay

to these sources. Saudi Aramco so far has not responded, according to Trade Arabia. The expansion project is meant to increase output from 300,000 b/d to 1.5m b/d, along with 143 mcf/d of associated gas and 34,000 b/d of natural gas liquids. There also plans to expand the Shaybah oilfield-commissioning will be ready by the end of April 2016but it has emerged that a major natural gas liquids project at Shaybah was likewise delayed thanks to construction costs overrun. Declining oil prices had also prompted a slowdown in a number of existing projects, while others were cancelled and yet other projects called for discounts on contracts.

Heavy Oil Technology Conference

Officials, experts, and key stakeholders from the Gulf and global heavy oil producing countries will gather in Manama, Bahrain for the Middle East Heavy Oil Congress (MEHOC), announced Trade Arabia. The latest business issues and technologies of the heavy oil industry will be discussed at this key forum. According to Zawya, the event will take place at the end of November and be held at The Congress and Exhibition at The Gulf Hotel. under the patronage of His Excellency Dr Abdul Hussain bin Ali Mirza, Bahrain's Minister of Energy and Chairman of the National Oil and Gas Authority (NOGA). "As the energy sector is increasingly turning to the exploitation and conversion of their conventional heavy oil resources, the Middle East Heavy Oil Congress provides the perfect regional gathering for the industry to discuss what innovative trends and transformations will define the future of this upcoming sector. On behalf of NOGA, we look forward to welcoming you all to the Kingdom of Bahrain this November," said Dr. Ahmed Al-Sharyan, General Secretary of NOGA. One of the topics of discussion is how to extend a reservoir's lifecycle, as well as emerging technologies to maximize performance with minimal environmental impact. Technical heavy oil case studies from across the globe will also be presented in the hope of integrating these different issues into a single, cohesive oil production strat-

Solar Power Takes Maritime Turn With Dubai Company's **Green Projects**

Dubai-based DP World, a leading global marine terminal operator, plans to launch a major renewable energy project, reported Trade Arabia. The announcement marks the start of the global "Go Green" campaign, a maritime industry initiative involving five of the world's largest port operators— DP World, Hutchison Port Holdings Limited (HPH), APM Terminals, PSA International, and Shanghai International Port Group (SIPG). The project involves rooftop solar panel mountings on DP world's Jebel Ali free zone buildings and parking sheds, and several of its cruise terminal buildings in Port Rashid. According to The National, between 30MW and 40MW will be generated, which is about one third of the power used by the ports facility. This meets international standards of success, given that this quantity is about 10% of the electricity generated by the largest solar plant in the world, the Ivanpah Solar Power Facility in California's Mohave Desert. "It is a milestone in promoting the rational use of natural resources and creating innovative solutions that replace traditional energy sources," said DP World chairman, Sultan bin Sulayem. "We are delighted to contribute to the efforts that support the emirate's economic growth and the drive to build a green economy," he added.

DOWNSTREM

Total Selling Midstream Assets in the North Sea

French oil and gas major Total is selling its midstream assets in the North Sea, reported Offshore Post. The company is selling its assets, currently two subsea pipelines and an onshore processing plant, for \$905m. The buying group is reported to be North Sea Midstream Partners. Total has maintained a presence in the UK offshore sector since the early '60's, but has lately grown disenchanted with poor North Sea profit margins during a time of depressed oil prices. Total's CFO Patrick de La Chevardière, said, "The sale of these midstream transportation assets is another example of Total's strategy of active portfolio management and the strong potential to unlock value from a range of infrastructure assets. Transferring ownership to an entity specializing in midstream UK assets creates value for us and ensures a long and bright future for the facilities." News of the sale did not surprise the

industry, as reports of the sell-off have been widely circulated for months. In June Reuters stated that the Total was in talks with US group ArcLight to buy the assets. The same report noted that the potential sale could be completed through its subsidiary, North Sea Midstream Partners.



Nigerian Pipeline Thefts and Leaks Dent Shell's Global LNG Aspirations

Royal Dutch Shell announced that gas supplies to Nigeria's LNG export terminal on Bonny Island had suffered a reduction thanks to the shutdown of a major oil pipeline in the country, reported Reuters. The shutdown was caused by both leaks and outright thefts, according to the company. Shell's Nigerian unit, Shell Petroleum Development Company (SPDC), controls crude oil exports through two major pipelines, including the Trans-Nigeria Pipeline (TNP). "SPDC JV gas supplies to (Nigeria LNG) are reduced as a result of the TNP shutdown," Shell said in an emailed statement. SPDC is a joint venture with state oil company NNPC. Another

Reuters article argued that LNG is fast becoming a rival commodity to crude, citing Swiss commodity trading house Trafigure as an example. "They're taking the classic trading model from other energy markets and applying it to LNG, using infrastructure and shipping to take advantage of opportunities, it's the typical bag of tricks used by traders," said Jason Feer, head of business intelligence at Poten & Partners. Shell, moreover, is fronting for Trafigura's LNG supply in Latin America and Egypt, signaling another energy development as traders are partnering suppliers as a way of minimizing risk exposure from new buyers.

<u>Iran Considers Expanding its 'Peace Pipeline' to</u> **Bangladesh**

Tehran's Ambassador to Bangladesh, Abbas Vaezi, announced that Iran is ready to talk about extending its Iran-Pakistan-India "peace pipeline" to include Bangladesh, reported Press TV. The original \$7b, 1,800 km-long gas pipeline project, which began in 2010, was scuttled by Pakistan after Iran completed its portion in 2013, due to international sanctions over Iran's nuclear program. The project was revived by China when the country agreed to help Pakistan build its portion of the line. The move was followed up by India. The ambassador also said that Iran

expressed its willingness to sell oil to Bangladesh as well. One payment option is the barter system used between Iran and India, he elaborated. According to Zawya, Vaezi said that Iran and Bangladesh have already held talks for the pipeline extension, but the project needed feasibility studies before it could go ahead. He added that his country has extended an invitation to the Bangladeshi Minister of Power, Energy, and Mineral Resources Nasrul Hamid to visit Tehran for discussing gas exports to Bangladesh, and cooperate on other energy fields.

BP's First Ever PTA Technology License in Middle East goes to Oman

BP signed a licensing agreement—the first of its kind for the company in the Middle East—with Oman International Petrochemical Industries Company (Ompet), said Trade Arabia. This is for BP's latest generation purified terephthalic acid (PTA) technology in a new 1.1m tonnes per year Ompet plant to be built in Sohar. PTA is the primary feedstock for polyesters used in the textile and packaging industry. Daniel Leonardi, Vice President for Technology and Licensing at BP Petrochemicals, said that his company will provide a wide range of technical and knowledge transfer services, adding that the front-end engineering design package for the license has already been completed and delivered to Ompet, on time. According to Hydrocarbon Processing, Ompet is a joint venture between Oman Oil Co. (50%), LG International (30%), and Takamul Investment (20%). Takamul itself is 93.7% owned by the Oman Oil Co. Other advantages to the BP

technology include "lower capital and operating costs when compared with conventional PTA plants and the technology is more energy efficient, uses less water, and produces less solid waste," said Leonardi.



Indonesian Power Plant and FSRU Projects Receive Qatari Help



Qatar's Nebras Power has signed an agreement with Indonesian utility PT PLN (Persero) to study the feasibility of building a power plant, reported Arabian Business. The announcement was made in a company press release while Indonesian President Joko Widodo was touring the Gulf region to visit Saudi Arabia, the UAE, and Qatar. The natural gas-fired plant is to produce 500MW and should be ready by 2019, providing for a substantial chunk of North Sumatra electricity needs. Construction Week Online added that, as part of the agreement, the companies will also study the feasibility of constructing a floating storage and regasification unit (FSRU). This is for liquefying natural gas to supply to the plant. Nebras Power is an infrastructure investment firm owned collectively by Qatar Electricity and Water Company, Qatar Petroleum, and Qatar Holding.

UNCONVENTIONAL

China Switching to Shale Amid Economic Slowdown

Sinopec Corp and PetroChina have restricted production at two major conventional natural gas fields—Puguang and Anyue—in the Sichuan gas basin, reported Reuters. Previously Sinopec had closed 12 wells at Puguang, which resulted in a production loss equivalent to roughly 3% of national output, a shift in policy caused by a contracting economy. The Fuling shale gas project, China's first and largest commercial shale discovery, however, has continued unabated. The two companies added that they remain on track to meet government shale gas targets for this year as Beijing attempts to emulate the US shale boom. Hundreds of

shale gas wells are planned in the Sichuan basin alone for the remainder of this year, and are meant to push up annual production capacity close to 7.6 bcm by year-end. That is 6% of China's estimated gas output. According to the Financial Times, China is one of the few countries where non-US shale is making progress in the current low oil price environment. Sinopec has already speedily increased production at the Fuling field to 460 mcf/d last June. Shale production is subsidized in China at both the national and provincial

Argentina Drawing on Russian Help with Shale and Tight Gas

Argentina's state-controlled oil company YPF signed an agreement with Russia's own state-run Gazprom to develop tight and shale gas, announced the Buenos Aires Herald. This agreement will provide "a significant push for the development of the republic's oil and gas industry," said Gazprom CEO Alexey Miller said in the statement. "It's a highly important deal to strengthen the strategic partnership between the countries." For his part, YPF CEO Miguel Galuccio said, "We clearly said in our business plan that we needed large partners to develop our resources as it wasn't going to be possible to do it by ourselves," adding, "We hope Gazprom becomes a good partner for YPF like Chevron, Dow, and Petronas are now." The signing took place in Vladivostok on the margin of Russia's first Eastern Economic Forum (EEF) in the southeastern Russian city. The final accord itself will be signed before March 2016. The two companies had originally signed a memorandum of understanding in April to explore and produce hydrocarbons jointly. YPF was the only major Latin American firm to seal a deal with Gazprom. Argentine President Cristina Fernández de Kirchner and Russian President Vladimir Putin took part in the

signing ceremony. Previously YPF had normalized production of shale oil and gas in the Neuquen province following a major stalling of production thanks to indigenous Paynemil community protesting land rights, reported Reuters. 400 oil and 300 gas wells had been shut down in the Loma La Lata, Loma Campana, and Rincon del Mangrullo fields, resulting in a production loss of 16 mcm of gas and 32,000 barrels of crude, YPF said. Argentine is estimated to have the second largest shale reserves in the world.



Shale, Oil Sands Resilient to Oil Prices

In an exclusive interview with CNN, Iran's Oil Minister Bijan Zanganeh argued that the Saudi strategy to flood the world market with oil was not working. "After one year the reaction of the market and shale oil producers shows us it has no important effect. And I think we are going to the point to decide how to manage the market", he said, hinting that Iran was pressing for a reassessment of global oil prices. He added that OPEC should be targeting a price of \$70 to \$80 a barrel, not the current price of \$40 at which US crude futures are trading. According to Bloomberg, the general rule of thumb among shale and other unconventional producers in the US and Canada is that new plants require a West Texas Intermediate price of \$80 a barrel to break even. Nonetheless, in Canada oil sands opare still forging ahead with many of their investments while facing prices of only \$30 a barrel. These projects will add at least another 500,000 b/d, a 25% increase from Alberta. While the risk associated with continued operations is high, the "implications of slowing down a project are worse," says Rafi Tahmazian, Senior Portfolio Manager at Canoe Financial LP. Cenovus Energy has postponed two new projects but is also moving ahead with expansions that will add 100,000 barrels of capacity by next year. "We do not want short-term pricing to dictate our investment in long-life, high-return oil sands projects," Cenovus Chief Executive Officer Brian Ferguson had previously stated, adding that his company had "stress tested" its expansion down to a price of \$50 a barrel.

OPEC Winning Back Crude Demand from US Shale, Says IEA Report

The IEA, based in Paris, announced in its monthly report that non-OPEC production would fall by 500,000 b/d to 57.7m b/d in 2016, said Bloomberg. Saudi Arabia's strategy to defend OPEC market share through a price war "appears to be having the intended effect," said the IEA report. The reason for this was that the "lower price environment is forcing the market to behave as it should by shutting in output and coaxing demand", adding that US shale output will shrink by almost 400,000 b/d next year. Consequently the amount of crude needed from OPEC next year will increase by 1.6m

b/d to 31.3m b/d, the report explained. In related news Reuters learned that Saudi Arabia sees no need to hold a summit for oil producing countries' over oil prices if such discussions would fail to produce any concrete resolution of the outlying issue. The comments emerged following a Gulf Arab oil ministers meeting in Qatar where a Venezuelan proposal for an OPEC and non-OPEC summit was discussed. Riyadh believes it is best not to interfere in the market at present, a source said, on condition of anonymity, adding, "If we are meeting for the sake of meeting, it would backfire."

EUROPE

Gazprom Reports High Sales in Europe

The Russian gas giant Gazprom posted higher-than-normal sales for the first half of the year, said UPI. Profits for the firm for the first six months are up 50% over a year ago, listed at roughly \$10b. Revenue also rose 1.4%. Gazprom listed high demand from European customers—traditionally a very strong base for the company. "The increase in sales is mainly driven by an increase in gas sales to Europe and other countries," noted Gazprom in a statement. The Sydney Morning Herald also noted

that the weaker Ruble exchange rate also aids Gazprom's current financial statement. "Gazprom full-year profit could be flat or slightly higher thanks to the ruble depreciation even as its export gas prices continue to drop," said Maxim Moshkov, an energy analyst at UBS in Moscow. Fitch Ratings last week issued a BBB- grade to the company, saying that while Europe will remain an important customer of Gazprom, uncertainty over geopolitical issues involving Ukraine, continue to dog the rating.

Austria Brings IOR/EOR Technologies to Iran

Austrian President Heinz Fischer arrived in Tehran in early September at the head of leading business delegates to review potential trade relations with the Islamic republic, reported UPI. This included Austrian oil and gas giant OMV, which had already been in talks with Iran over returning to the country with the removal of sanctions. High on the agenda was oil recovery, revealed Press TV. Iran's deputy petroleum minister for international and trade affairs, Amir Hossein Zamaniniya, said that OMV has announced readiness to provide Iran with Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) technologies, for both oil and gas fields. "OMV has voiced readiness to double the recovery rate at Iran's oil and gas fields by using modern technologies," Zamaniniya said. It later emerged that Iran and Austria have signed an agreement to increase recovery from Iran's core crude oilfields. The agreement was signed between Iran's Petroleum University of Technology and Austria's Montanuniversitat Leoban during President Heinz Fischer's visit. Press TV quoted Mohammad Keramati, the head of the country's Research Institute of Petroleum Industry. as saying that more than 490b barrels of Iran's oil reserves are not recoverable without the

right technologies. The government, he said, has submitted all issues related to improving recovery from some of the major oil fields such as Ahvaz to Iranian universities. "Every 1% increase in recovery rate equals 6.5b barrels of recoverable crude oil worth billions of dollars," Keramati explained, adding that the "average recovery rate of the world's oil wells is 35%. However, some countries such as Saudi Arabia, Norway and Kazakhstan seek to raise this rate to 70%." Low oil prices were not an



Two Eni Workers Killed in Italy's Largest Chemical Facility

Italian energy group Eni announced that two people had been killed in an accident at a Sicilian plant operated by its Versalis chemical unit, reported Reuters. The two workers, employed by a third-party contractor, had been carrying out inspection work there. "Unfortunately, in

Italy contractors are considered second-class workers with few rights and safeguards," said Enrico Miceli, general secretary of trade union Filctem-Cgil, with calls for a strike by Italy's three largest trades unions shortly after the incident. It later emerged that the two workers—Salvatore

Pizzolo and Michele Assente—died after falling into an industrial sewage vat at the Priolo Gargallo petrochemical complex, according to Hydrocarbon Processing. Versalis is Italy's largest chemical company by sales, production volume, and employees.

Technip Wins New Czech Polyethylene Contract

Technip was awarded an engineering, procurement and construction (EPC) contract by Unipetrol for its new Polyethylene Plant (PE3) located in Litvinov, Czech Republic, said Reuters. The new unit will have a capacity of 270.000 t/y high density polyeth-

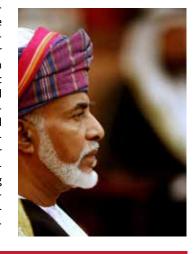
ylene, while the contract will be executed by Technip's operating centers in Rome, Italy; and Lyon, France by mid-2018. "This award confirms Technip as one of the world leaders in the petrochemical field," Marco Villa, a regional president at Technip, was quoted

as saying by Hydrocarbon Processing. "At the same time, it further strengthens our presence as key EPC contractor in the Eastern European market," he clarified. "In addition, this reflects another successful step in our cooperation with Ineos."

Swiss Investigators Help with Oil Corruption Probes from Brazil to Oman

The Swiss attorney general's office has confirmed that it is helping Oman investigate alleged corruption in the country's national oil company and oil ministry, announced Swiss Info. In an email message to the news agency, the Office of the Attorney General wrote, "In connection with these corruption investigations the Office of the Attorney General of Switzerland is granting judicial mutual assistance to the authorities of the Oman. The cooperation is working very well." Previously an Omani state oil company's CEO was sentenced to

23 years in jail for taking bribes, abuse of office, and money laundering. Omani authorities have been cracking down on corruption and graft in the oil sector since the Arab Spring began in 2011 and this is just the latest example. Transactions related to the probe involved Swiss financial institutions, sources told Reuters, just as Swiss authorities had been working with their counterparts in Brazil investigating the Petrobras scandal, along with Odebrecht S.A, Latin America's largest engineering and construction company, and its subsidiaries.



INTERNATIONAL

Obstacles Persist to Arctic Drilling

There are serious obstacles still confronting Arctic drilling, stated The New York Times in a recent expose. The article mentioned multiple issues, not the least of which are persistently low oil prices. While the Arctic is believed to possess some of the largest untouched oil and natural gas reserves on earth, challenges to development are only mounting. Many of the problems are political. After Russia was placed under sanctions last year for interfering in Ukraine, many companies were forced to abandon partnerships, including an ExxonMobil deal with Rosneft. Other problems are related to the harsh environment, with deals cancelled in Alaska and Canada by Chevron and BP. Shell has invested heavily in the Chuchki Sea in northern Alaska, but has lost hundreds of millions of dollars after its massive Kulluk drilling rig grounded due to harsh seas in 2012. Compounding difficulties, environmental groups have mounted legal challenges to the work at every step.

Activists have repeatedly tried to block in exploration ships off the Oregon coast over the past year. Sometimes encounters even turn extra-legal, Greenpeace is currently being sued by the country of Greenland for allowing activists to board drilling rigs and disrupt exploration work off its coasts, Reuters reported. Even though few fields off the coast have been found to possess commercially exploitable quantities of oil or gas, Cairn Energy has maintained an exploration presence for several years. With such high costs, it's unlikely there will be substantial development of the Arctic anytime soon, particularly with low oil prices seen today. "The entire cost structure up there is three to five times more expensive than onshore lower 48," said Scott D. Sheffield, chief executive of Pioneer Natural Resources, a Texas-based oil company. These challenges have yet to stop Shell. The company currently has a fleet of at least 24 ships in the Chuchki Sea.

Indonesia to Rejoin OPEC

Indonesia said it's preparing to rejoin OPEC, Reuters reported. The country left the cartel seven years ago after the country ceased to be a net exporter of oil and gas. The official membership requirements outlined by OPEC say that any country must be a "substantial net export of crude petroleum" to be considered. While not a net exporter, Indonesia has increased its production in recent years. "Indonesia has contributed much to OPEC's history. We welcome its return to the Organization," stated the group in a press release. Official reports say that the Asian country's full membership will be concluded at its regularly-scheduled December meeting.



Schlumberger Buys Cameron, Becomes Industry's First Integrated Drilling and Production Company

Schlumberger has announced that it will buy oil services rival Cameron International for nearly \$13b in cash and stocks, reported The Wall Street Journal. The new company will combine the expertise of Schlumberger—focusing on well reservoir mapping and underground optimization, with that of Cameron—which focuses on production at the wellhead and above ground. The resulting partnership will be the oil and gas industry's first integrated service

provider, noted Forbes. "The real excitement here is around what we can create by combining our technology offerings," Schlumberger CEO Paal Kibsgaard said. "We will basically generate better performance for our customers." The service company giant has a history of buying its partners, acquiring Smith, WesternGeco, Eurasia Drilling, and Dowell after first forming partnerships with those companies. While Schlumberger's stock prices faltered on

news of the deal, analysts say that Merger & Acquisition (M&A) activity has been partly driven by the depressed prices for crude oil worldwide. During such periods of low profits, shareholder-demanded growth is often driven by M&A. Schlumberger is expecting to synergize costs almost immediately, with \$300m in savings this year, and another \$600m the year after.

Mexico's Pemex Unlikely to Meet Production Targets

Petróleos Mexicanos, commonly known as Pemex, is unlikely to meet production goals for this year, The Wall Street Journal reported. The company has faced major obstacles over the past year as the Mexican government opened up the oil and gas market to competition with the company, which had previously been essentially a monopoly. One of

a massive fire earlier this year, which also hit production and earnings very hard. Bloomberg has reported that the Pemex is trying to pare down its costs in response to low oil prices. The company has also moved to lower rig costs in an effort to encourage more investment. In a specific example, the report noted

Pemex's rigs also experienced

that four jack up rigs operated by Integradora de Servicios Petroleros Oro Negro had their daily lease rates reduced, going from \$160,000 to \$130,000. Pemex is the ninth largest crude producer in the world, but it is struggling to adapt to persistently-low oil prices. The firm has reported losses for 11 quarters in a row.

OVL Buys Stake in Massive Russian Field

Indian firm OVL is buying a 15% stake in the massive Siberian oil field in Russia's far East, Dispatch Times reported. The deal was finalized over the Vankor field, the second largest in Russia. Up to this point the field had been developed exclusively by Rosneft. OVL is the overseas investment

ONGC. The deal signed for reportedly \$1.2b, said The Times of India. The deal shows a strengthening of ties between India and Russia. Political approval for the purchase was reportedly given at the recent summit for BRICS and SCO held in the Russian city

arm of major state-owned group

of Ufa recently. The agreement seems to be another step toward diversifying energy sources for India. The rapidly expanding country has struggled to provide energy for its population. OVL already owns a 20% stake in the Sakhalin-I project, also in Siberia.

RENEWABLE ENERGY

Saudi Solar Plans Run Into Bureaucratic Resistance

Sources told Reuters that Saudi Arabia's plan to issue bids for its first solar power project, announced in 2013, has been postponed. "It hasn't been approved yet, we are in a waiting mode," said a Saudi government source who declined to be identified. There disagreements over their scale, ownership, and technology. "There is a divergence of views. Everybody agrees on the goals, but they have different ideas on how to implement them", he added. The body was set up to manage the transformation towards new and renewable energy sources, the King Abdullah City for Atomic and Renewable Energy (KACARE), has made little progress due to competition with the ministries of electricity and oil. "The key issue is KACARE does not belong to any particular ministry leading the initiative and does not have the balance sheet to conclude power purchase agreements directly," said Imtiaz Mahtab,

president of the Middle East Solar Industry Association. "We need to develop a better understanding of solar power and its associated technologies, but it would be unrealistic to think that it is an alternative to large-scale power generation technologies at this time," said Sadad Al-Husseini, a former senior Aramco executive and now an energy consultant. According to the Financial Times, KACARE had already announced in January that the completion of its \$109b solar project, which would create 41GW of energy capacity by 2032, would be delayed another eight years. Investors and developers are losing patience, consultants have warned. "They are burning the oil because they have it," said Holger Rubel, who leads Boston Consulting Group's green energy and sustainability practices. "They have to find a business case for turning to solar."

<u>Dubai Solar Palms Project Opens up Charging and Wifi Around City</u>

Dubai-based D Idea announced that their photovoltaic Smart Palms can generate around 7.2kw/d, reported Reuters. The six-meter-tall tree with its leaf-shaped solar modules can operate without ever drawing off the grid and is designed to carry a Wifi hotspot, eight charging stations for phones and tablets, and a touchscreen for public information. "Subsequent Smart



Palms will have ATM machines and utility bill payment services," said CEO Viktor Nelepa. "Our team has also started to find new ways in which the Smart Palm can support other forms of sustainable generation, specifically through air and water purification modules." There are currently only two prototype palms, but over the next 12 months 103 additional units will be installed in Dubai. According to Arabian Business this renewable energy invention was sponsored by the UAE's Cabinet Year of Innovation project with several participants, including the Dubai Municipality, Sun Tab Solar Energy, and Promo Tech Gulf Industry. "Through Smart Palm, the public will be able to benefit from free direct access to the internet while providing valuable public information covering a range of topics including weather forecasts and orientation guides," said Hussain Lootah, the director general of Dubai Municipality, adding that "Most importantly, these structures are entirely self-sufficient thanks to their mono crystal solar panels, which provide up to 21% efficiency."

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Israeli Gas Quashes Hopes for Renewables Energy **Transformation**

According to Haaretz, Israel's Environmental Protection Ministry has completed its recommendation to the government for the reduction of greenhouse gas emissions, which will later be presented at the UN Climate Change Conference in Paris, slotted for November. The recommendation calls for an 18% reduction in electricity consumption by the UN mandated target year of 2030 through energy-saving technologies, with the target for electricity for renewables set at 22%. The problem is that since 2011 no new licenses have been issued in Israel for solar power installations that connect to the national grid, revealed Bloomberg. The IEA says Israel gets less than 2% of its electricity from renewable sources-while the EU is at 22%, China at

8%, and the US at 7%-, even though the country enjoys gets 300-days of sunshine a year. There were 130 solar energy companies in 2010, shrinking to only just 60 today, said the Green Energy Association of Israel. "You go to the energy ministry these days and try to speak to them about solar and they'll say, 'Don't talk to me about renewables, we've got gas,"' said Eitan Parnass, head of the green energy trade group. Gas was discovered in Israel in 2009 and has dominated the energy agenda ever since, argue the experts. "Israel has the technology and plenty of sunshine, but the government is completely ignoring the renewables industry," said Yosef Abramowitz, a solar energy advocate.



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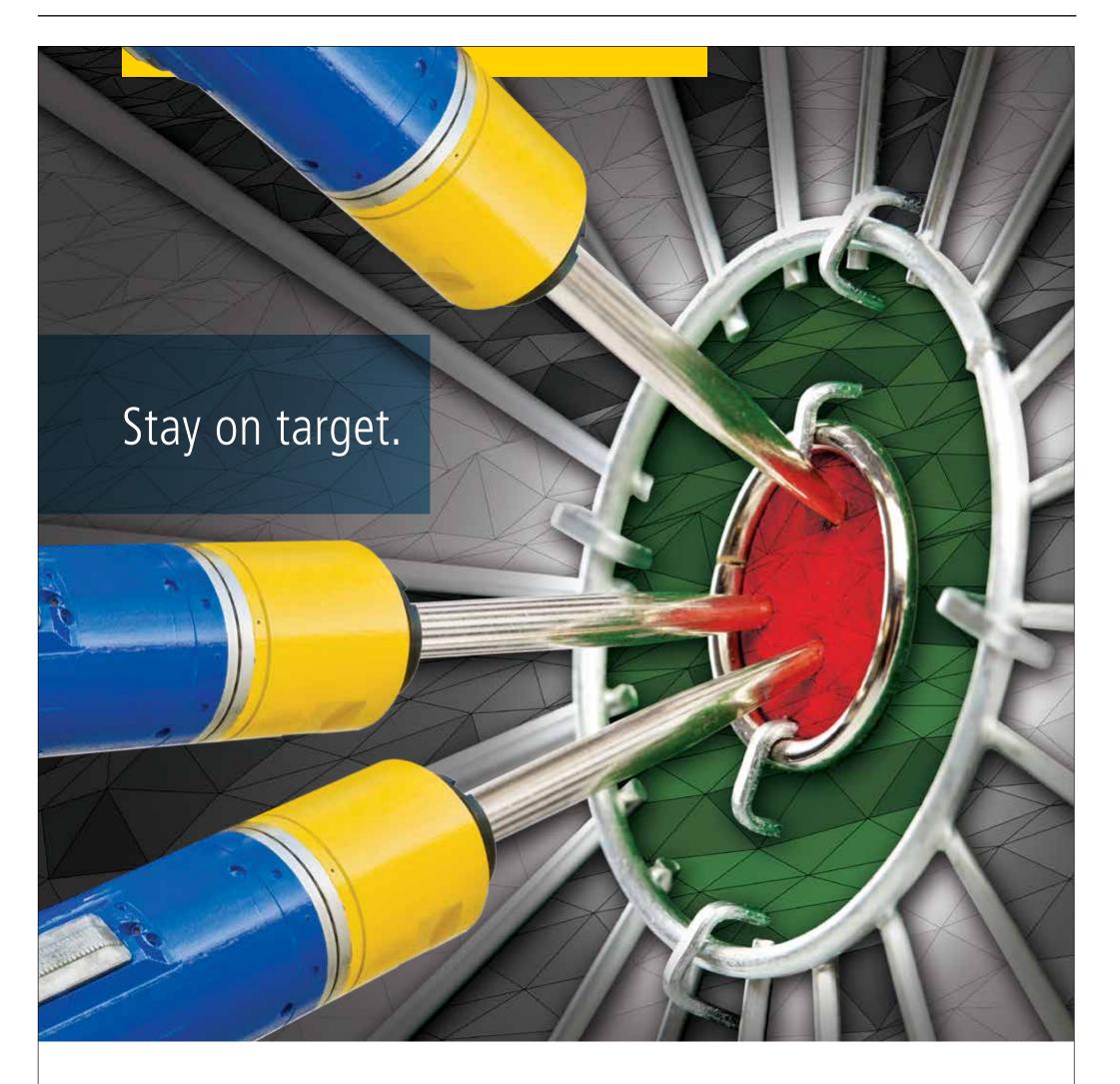


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PUBLIC INFORMATION:

THE CASE FOR A MEDIA STRATEGY IN EGYPT'S PETROLEUM SECTOR



When asked about the issue of "petroleum awareness," a friendly shopkeeper laughed out loud. "Where is this petroleum for there to even be an awareness of it?" he asked? He went on to advise against discussing these matters in public, fearing that both the interviewer and interviewee would end up in the police station. Finally, he explained that people's awareness of fuel related affairs consisted of the knee jerk reaction of hoarding fuel whenever a shortage occurred, only making the whole fuel situation worse.

A friendly hotel clerk from Southern Egypt explained further that normal people-the illiterate-know nothing about oil and gas in Egypt, even the mega-gas find recently discovered in the Mediterranean. The educated have heard about it, even in the countryside, but they have inflated expectations, thinking that the gas would be piped directly to their village homes within a short time. A bookseller—with a degree in physics—was more skeptical, insisting that he would only believe the estimates of the gas find if and when the Italian tax authorities began getting payments from Eni. A university graduate, while interested and concerned about Egypt's nuclear plans and renewables potential, confessed that she found it difficult to follow the graphs and complicated equations and the technical issues concerning pollution caused by oil extraction at sea. She also admitted that she had no idea who the official spokesman for the petroleum ministry was, adding that with all the cabinet changes and the removal of fuel subsidies the man was certainly not going to be as popular as the spokesman of the military.

"Petroleum awareness," of course, was one of the key issues inadvertently raised at Egypt Oil & Gas' Optimization Convention by roundtable delegate Helmy Sayyouh, a distinguished professor at Cairo University. He has been calling for enhanced oil recovery (EOR) as a national priority for fifteen years to no avail, even after dozens of meetings and articles penned in English and Arabic. Egyptian oil companies have no idea his university has field-tested EOR studies ready for application. PICO International Petroleum's General Manager Shawky Abdeen has complained in our pages before that the oil ministry has stopped organizing industry forums that allow energy experts, business figures and officials to raise new issues, drum up support for policy changes and make sure those changes are adhered to.

Egypt's petroleum sector is one of the most underrepresented industries in the news in general. People simply are not aware that oil and gas brings in the bulk of Egypt's FDI and is a guarantor of the country's economic independence. Having a strategy to address this shortcoming is essential.

There are other hidden benefits to a media strategy, explains Ahmed Farid Mooaz, Country Manager and Director for Sea Dragon Energy. Not only will it advertise Egypt's oil and gas potential abroad and help bring in investors, it will also help take pressure off of the petroleum ministry and entities like the EGPC during negotiations or when awarding concessions. This is because the general public thinks of investors as coming to Egypt to steal the country's natural resources, a perception that has built up over decades. Educating the public on the nature of upstream oil and gas E&P would help correct this, he said.

A former Ministry of Information official, who prefers to go unnamed, revealed that his ministry has studies on media coverage of the different sectors of the economy—oil and gas included—

but that the reports are only acquiring dust on a shelf somewhere. The studies were the product of individual initiatives and were of no interest to the ministry itself, embroiled as it was with its own budgetary troubles. Egyptian journalists likewise admit that they do not understand the technical terminology and the legal details of concession agreements and so do not pursue oil news in any depth. Egypt, then clearly has no petroleum media strategy. Devising one, however, demands more than regular press conferences on oil and gas finds because the media landscape has changed dramatically over the years. Everybody in the industry is catching up, not just Egypt.

Risks and Adventures

In the run up to the Nigerian Civil War in 1967, for instance, the secessionist leader Emeka Ojukwu actually hired public relations teams in the US and UK; not just to promote the cause of his oil-rich province but to make sure he was not portrayed as a "stooge for Western corporate interests," said Kairn A. Klieman in her study in the Journal of American History. He did this by making sure not to mention oil in public.

This was in keeping with the tactics deployed by international oil companies (IOCs) themselves. Ojukwu had this experience because he was the son of a Nigerian millionaire who was formerly a Royal Dutch Shell executive.

The PR departments of most IOCs are there specifically to keep their companies out of the press and with good reason, revealed an anonymous source and former IOC employee. The wrong news item on a spill or a safety issue—or even kidnapping of oil officials in war zones—could scare off stockholders or drag the corporation into a lawsuit. PR departments work to centralize the flow of information and monitor everything, even emails. This individual has also seen financial documents with publicity stunts, even charity work, listed as "investments"—alongside drilling— demonstrating it was something oil companies expected a return from.

An Egyptian energy consultant who has worked on three continents noted repeatedly how oilmen like to keep a low profile to avoid undue attention over their projects attracting environmental protestors. But that was in the not too distant past. The new web revolution is changing everything; say Paula Rusnak, Teresa Dobson, and Natasha Boskic of the University of British Columbia, who—among other researchers—have studied the curious case of an online game that went viral on the Internet in 2007—"World Without Oil (WWO)." This self-professed 'educational' game was meant literally to train people to live without overpriced Arab oil in the event of another embargo like the 1973-74 October War oil shock.

People actually posted news items, videos and emails with advice on how to reduce their dependency on petroleum products. The game was a key topic at the 2nd European Conference on Games Based Learning in 2008 and even made its way into the Encyclopedia of Social Media and Politics in 2014. According to consultants David Blackmon and Steve Everley, one of the major mistakes the US shale industry made was relying too much on lobbying and traditional public relations, since they have a "national" focus.

Social media, by contrast, has "geo-targeting tools that allow companies to tailor their messages to designated regions and to put updates in front of users in those specific areas." Tools used all too effectively by local constituencies to block fracking legislation. Social media, it emerges,

played a central role in drumming up support for the anti-fracking protests in Algeria. Now Facebook and Twitter are being used effectively by the Winnou El Petrol (where's the oil) advocacy group in Tunisia, among other anti-corruption NGOs, with protest marches and petitions to release documents concerning the country's overstated oil and gas reserves. The inspiration for this came from the activities of an international NGO, the Natural Resource Governance Institute.

Gulf Arab oil producers, who have a long and successful history with international PR firms, have learned themselves that money can't shelter them from a hostile international news cycle; everything from oil prices to global warming. The Gulf Cooperation Council (GCC) now has its own "Committee of Petroleum Media Specialists" that coordinates media efforts and trades information with intergovernmental organizations like OPEC and OAPEC (Organization of Arab Petroleum Exporting Countries).

Gulf producers even organized a forum on social media strategies in 2013 specifically to look into using social networks to promote everything from energy conservation to oil prices. According to Kathryn DeLia of the Oil and Gas Monitor, national oil companies in the developing world are also using social media to advertise their concession areas to attract new and higher-tech investments. It is still a bit too early to say if the GCC's multipronged approach will work, but it is a wise precautionary strategy given that the moto of the abovementioned WWO 'interactive' game was "Play it—before you live it." No wonder then that it won an Honorable Mention for the Prix Green award for Environmental Art in 2008.

Priorities and Platforms

Another anonymous source explained that the two pillars for any media strategy for a smaller petroleum producer like Egypt should be transparency and international prices.

The need for transparency should almost go without saying. During the whole period Sameh Fahmi was petroleum minister, Egypt's foreign oil debts were kept hidden from public view until they accumulated into something too big to hide, bringing about the current crisis.

The necessity of fair prices is also evident. For decades, entire swathes of Egypt's economy were receiving subsidized natural gas while these companies were selling off finished goods at international prices. People need that information to hold officials—and businessmen—to account. If the petroleum ministry does not take steps in this regard, social media activists will carry this out for the ministry, without any consideration for how foreign investors might react. Tunisia, again, is a concrete illustration of this, with advocacy groups focusing on gas pricing, royalty payments, auditing foreign companies, and even investigating contract terms.

Sadly the government-sanctioned shortcomings listed above hold true of much of the Egyptian private sector too. Its PR people are always on vacation or never seem to have regular hours; their phones often quite literally do not work. Many oil and gas companies don't even list their numbers to begin with, in directories or on the Internet.

Those few officials who were eager to speak complained that they were understaffed and suffer from budgetary constraints and so cannot afford to hire PR firms or organize events themselves, let alone send people to take specialized media courses. As for the internet, a solitary Facebook page with a few links was the most they could

muster. Extra constraints are placed on joint ventures in the form of ministerial approval before making public pronouncements, which is why they insisted on not being quoted by name. The oil price crunch is further limiting their options. Egyptian employees working with IOCs or Gulf Arab companies operating in Egypt also commented that official pronouncements had to be cleared by head companies in their countries of origin

The private sector, moreover, will not promote such daily energy-saving practices like car-pooling or public transportation or cutting down on carbon emissions, argues the former IOC employee cited above. Even a developed country like the US pursues "educational" goals through such bodies as the Energy Information Administration (EIA). It is not enough for the state to implement laws, he explained. People had to know that they could make a difference.

It's Possible in Egypt

Fortunately Egypt has more allies than generally thought of in the information game. A new media category that has gained traction amongst oil companies is "Science Communication," says Dr. Naila Hamdy, head of the Journalism & Mass Communication Department at the American University in Cairo. Here scientists and other technical experts—freelancers or with specialized agencies— are employed specifically to clarify technical terminology to the press and counter claims on the Internet. They even help clarify technical matters to their own shareholders, and play a role in upgrading a company's investment profile by finding scientifically like-minded partners.

Energy expert and petroleum engineering professor Dr. Magdi Nasrallah heartily endorses this concept. Another avenue worth pursuing is the educational function served by "industry associations," says Lauti Nia Sutedja, the current Head of Information and Socio-Cultural Affairs at the Indonesian Embassy. The Indonesian Geologist Association (AGI), she explained, played a key role countering media rumors that Papua Island was rich in uranium reserves.

Indonesia is a small success story, given that there's no point in attracting foreign investors if you cannot deliver on promises. The Egyptian Association of Petroleum Geologists (EAPG) or the Egyptian branch of the Society for Petroleum Engineers (SPE) has the technical expertise and reputation to play a similar role, argues Dr. Nasrallah. Some reorganizing needs to take place first however, in order to match the coordination by the AGI with the Indonesian authorities. A young petroleum engineer explains that he is listed with the Egyptian Engineers Syndicate, not a separate specialized outfit for petroleum engineers, while the syndicate itself has no regular channels of communication with the petroleum ministry. This is where social media can be a force-multiplier, to cite Kathryn DeLia again, as oil companies are increasingly using web forums like LinkedIn and Facebook to bridge the generation gap when it comes to job recruitment for company projects.

All these different players—not to forget universities and research centers—could work with the oil and gas sector to manage Egypt's energy mix for the coming years. But this process will only work if the country's citizens are informed about it beforehand, and a media mix is called for to kick start the process.

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CHECKMATE: ENI SHAKES UP THE MEDITERRANEAN STATUS QUO

By Amanda Figueras

Sometimes in life, as in chess, a single movement may determine the outcome of an entire game.

In this sense, Eni's discovery of massive gas deposits in Egypt could be the checkmate that Israeli gas exports have long anticipated -and dreaded-. With a Queen who can now move more freely than ever on the chessboard, the question is now focused on how Israel will react

While Egypt once used to export gas to Israel and elsewhere, in recent years booming consumption and depletion of its own natural gas reserves have led to it become a net importing nation.

Five years ago, however, Leviathan -until now the region's largest field, with 22 tcf of proven reserves- was discovered in Israel, and it was touted as a potential game-changer in the eastern Mediterranean.

Together with Israeli's other large gas field, Tamar—holding 10 tcf—, the country could have positioned itself better but ultimately however, developers have struggled for years to put the massive fields to use.

Problem Shifts from Supply to Demand

While previously just a red tape problem, the issue has now shifted to being one of supply and demand. Whereas previously regulations stymied the further development of the industry in Israel, the recent discovery of the Zohr prospect gas field off the coast of Egypt means that the country may have lost one of its main consumers.

Indeed, Eni affirms that the Zohr deposits are expected to satisfy Egypt's gas demand for decades.

The US-based Noble Energy and its local partner-Delek Group-have been producing gas from the Tamar field, located off the Israeli coast, since 2013. Consumption has generally been for the domestic market. Leviathan, meanwhile, has not yet been developed.

Critics point out that the proposed deal between Noble-Delek and the Israeli government would overly favor the companies involved. Progress on the deal was thrown into serious doubt last year after the anti-trust regulator paused development, branding the operation a monopoly.

Prime Minister Benjamin Netanyahu, however, has maintained that the deal is necessary to pump billions of shekels into the economy.

Israel's Regulatory Struggle

Last June Israel's security cabinet voted in favor of a plan to let the US-Israeli energy group keep control of most of the country's natural gas deposits, as long as they sell off other assets in the area.

This deal is up for a parliamentary vote, but it has been delayed as a result of antitrust commissioner David Gilo's resignation last May, which came into effect of the beginning of September. The monopoly czar left his post after calling for the local natural gas market to be opened to increased competition. Prime Minister Benjamin Netanyahu, meanwhile, has announced that said vote will only be temporarily delayed until a new antitrust commissioner can be appointed.

The latest deal gives Delek subsidiaries Avner Oil and Delek Drilling six years to sell their 15.625% stakes in another large field, Tamar, while Noble will have to lower its stake in that project to 25% from 36%, industry sources said.

Delek and Noble will also be forced to sell their stakes in two smaller fields, Tanin and Karish,which have a combined 3 tcf-in up to 18 months, according to Reuters.

ENI's discovery, however, threatens to undermine potential demand from Egypt and the region once Israel's field comes online—sometime after 2017—as an Israeli expert working in the sector recently told Egypt Oil & Gas.

"Israel passed an important benchmark when the anti-monopoly issues were resolved. Eni's discovery is a game changer which should teach Israel a lesson, as too much politics and infighting is very counterproductive for its energy development efforts," explained Ariel Cohen, Senior Fellow at the Atlantic Council's Global Energy Center.

Plans Before Zohr

Noble Energy and the Delek Group have long been negotiating long-term contracts to sell gas to customers in Egypt, but these deals have also been held up by regulatory uncertainty in Israel, Reuters reported.

Tamar's stakeholders signed a contract earlier this year with a private Egyptian company to sell as much as 5 bcm of gas to Egyptian companies over the next three years. This gas will flow through an old pipeline that once transported gas in the opposite direction, from Egypt to Israel.

In March, The Wall Street Journal reported that the Egyptian government might import natural gas from Israel if the price is low enough, and if one of the drilling companies dropped a legal suit against the Egyptian government.

Reuters likewise explained that the consortium operating Israel's Tamar gas field had reached an agreement with Egypt, subject to regulatory approvals in both countries, for the sale of at least 5 bcm of gas over three years via EMG's pipeline to Dolphinus Holdings—a firm representing non-governmental, industrial, and commercial consumers in Egypt. The cost of converting the pipeline to allow for flow in the reverse direction was estimated to cost between \$10 and \$20m.

Last September the Leviathan partners signed an agreement with the Jordanian Electric Power Company (JEPCO) to export \$15b worth of natural gas over 15 years, according to Al Bawaba.

From Exporting to Importing

Over the course of relatively few years, Israeli natural gas has become the primary, preferred fuel for industrial electrical generation. According to the Ministry of National Infrastructures, Energy and Water, vast gas reserves found off the coast of Israel are helping to encourage energy initiatives based on natural gas.

Yam Thetis supplied approximately 60% of consumption, with the remainder supplied by Egyptian gas company East Mediterranean Gas Company (EMG). In 2010, 40% of electricity in Israel was generated from natural gas and by 2015, the rate of natural gas consumption was expected to

Supply of natural gas from Egypt started in 2008, following an agreement for the supply of up to 7 bcm of natural gas per year over a 20-year period. The natural gas flowed through a submarine pipeline from El Arish to a reception facility adjacent Ashkelon. This pipeline connects the Arab Gas Pipeline with Israel.

However, regular attacks on the pipeline in Egypt's Sinai Peninsula, which began shortly after the 2011 revolution, halted operations for extended periods of time. In 2012, due to persistent natural gas shortages in Egypt and the political crisis, the gas supply to Israel was suspended indefinitely while the supply to Jordan was resumed, but at a rate substantially below the contracted amount, Al Ahram reported.

Meanwhile, in an interview with Daily News Egypt, the former Minister of Petroleum and Mineral Resources, Sherif Ismail, announced that economic studies to import gas from the Aphrodite gas field in Cyprus were underway. "We will likely beginning importing after 2017," Ismail

Although it has exported gas to Israel, Jordan and Syria since 2003, Egypt has increasingly dealt with growing local energy demands. That demand led the country to import Israeli gas early this year, but the measure has proved to be unpopular on account of the longstanding Arab-Israeli conflict, as well as the scandalous fact that Cairo is paying for the gas at global prices far above what it charged Israeli importers for years, Al Arabi reported.

Egypt has signed three letters of intent to import Israeli gas, two of them from the Union Fenosa and British Gas LNG terminals, which would then export the gas to customers in Europe and Asia. The third is with a company called Dolphinus Holdings, which intends to provide gas to industrial companies in Egypt. These letters of intent with Egypt were meant to allow for the development of the Leviathan field and the expansion of the Tamar field.

Eni's Finding: Checkmate?

Until now, this was the status quo. According to Eni, the Zohr field covers 100 square kilometers and contains at least 30 tcf of natural gas. The Leviathan reserves, meanwhile, are estimated at

"The discovery may change the energy picture in the Middle East," Sir Michael Leigh, Senior Advisor to the German Marshall Fund of the US told Globes. "It will perhaps be possible to implement the export deal with Dolphinus, but the LNG deals will be more difficult."

A study by the Egyptian Center for Economic Studies (ECES) forecasts that, due to the recent gas discovery, Egypt will be able to double its natural gas production by 2018. Egypt is expected to add an average 2.8 bcf/d of natural gas to its production levels. Such a boom will allow Egypt "to significantly reduce the expected daily deficit of 3 bcf of natural gas in 2018." The report also states that the discovery will also help address the current energy bill deficit of EGP 1.7b and ensure growth rates of 6% by the 2018-19 fiscal year.

In addition, the report explained that Egypt has the option to export up to 29% of the extracted gas while reserving the rest for domestic demand, allowing Egypt once again be "a net gas exporter," and "strengthen the Egyptian pound."

"I think the Zohr gas find greatly reduces Israel's ability to export gas to Egypt. It may possibly still send gas to Egypt to be liquefied and re-exported from the existing LNG terminals," the Dubai-based analyst Robin Mills, Head of Consulting Manner Energy Group, said by email to Egypt Oil and Gas.

"Jerusalem needs to wake up and smell the coffee-the sand in the clock has run out. The time to make decisions and structure deals is way overdue," Cohen added.

The Time Advantage

Time is definitely a key factor if Israel wishes to keep its foot in the door of the Pharaohs' land.

As the analyst explains, "Israel may have a shortterm opportunity to export gas to Egypt until the Zohr field comes online, at which point I will be surprised if Israel maintains even a small market share in Egypt."

Ahram Online quoted Sherif Ismail saying that the discovery of the Zohr natural gas field off Egypt will not undermine private-sector negotiations about buying gas from Israel.

Indeed, as the Brookings Doha Center sustains, the key issue is how fast can this field became online and at what cost.

Miki Korner, a private energy consultant and former chief economist for the Natural Gas Authority, told The Jerusalem Post that the Zohr reservoir, located 200 kilometers off the Egyptian

coast, contains clay rather than sand. Due to these conditions, according to a well-informed source in LNG, development will take at least two years, while Korner estimates the time to trend more towards six. "We are still ahead of them in time, because of all the checks that will take a year or two there. All of this has already been done in Israel. But we have to start immediately," he said. In this sense, Israel has not

Middle East South America 5% South Korea 22% 10% Asia & Oceania

Egypt's exports of Liquefied Natural Gas, 2013

entirely lost its chance to export gas to Egypt, especially in terms of the Union Fenosa LNG facility in Damietta. This facility could be used to export the gas all over the world, and the Tamar partners have already signed a letter of intent to move forward.

"That would help the Union Fenosa plant at Damietta, in which ENI has a stake, but after paying for the Israeli gas there would not be a large margin left over from LNG sales given the current, depressed prices," Mills explained.

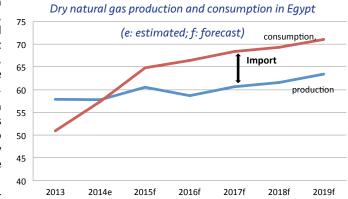
Magdy Nasrallah, founder of the Department of Petroleum and Energy Engineering at the American University in Cairo (AUC), said: "The opportunities are there for cooperation between Egypt and its neighboring countries to best utilize the gas resources recently discovered in the Eastern Mediterranean. Gas produced from the Tamar, Leviathan, and Aphrodite fields can be detoured to Egypt, through its available infrastructure, to be processed in Edko and Damietta."

"I believe that there is a memo of understanding signed between Egypt and Noble Energy-part owner of the gas fields—in neighboring countries who do not have the capabilities to process their gas, in addition, the gas produced is relatively expensive compared to international prices and liquefying it through Egypt will be the most profitable for both parties," added Nasrallah.

With regards to the other pieces on the chessboard, the expert said, "Cyprus might also benefit if it could be involved in a joint development with Zohr. The Mediterranean nation, along with other companies exploring the area around Zohr are also possibly benefitting, amongst them BP, Eni (again), PetroCeltic, Edison and—in Cyprus— Total." The Cyprus energy minister has stated publically that he believes parts of the Zohr gas may extend into his own country's exclusive economic zone. If true, the discovery and development will certainly benefit Cyprus.

'The European markets may benefit as well as they can use Eastern Mediterranean gas in order to diversify imports away from the Russian supplv." Cohen added.

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For a while, it seemed that LNG tanker charter rates could only go up. After a 2009-2010 over-supply glut, the time charter rates were propelled past the \$100,000 a day threshold due to the combined effect of the Fukushima incident and expectations of future flows coming out of the new US and Australian liquefaction plants. In response, order books for tankers grew, encouraging international energy groups to enter the market. This ended up locking many companies into high rates for the service for multiple. These arrangements may now require revisiting as rates are decreasing in response to over-supply (new vessels entering service) and lower demand caused by the decrease in LNG price differentials.

Background

Charter rates have seen increases in recent years, despite a drop related to the economic crisis of 2008 and a surplus of new-builds in 2009. The global economic crisis also led to the delay of a number of large liquefaction projects, and as a result, the placement of orders for new LNG carriers decreased sharply. This created a shortfall in capacity in 2011 and 2012 as players needed to secure shipping for new liquefaction projects coming online. This tightening of supply and increased demand in the Asia-Pacific region, particularly due to the Fukushima nuclear leak, helped push prices upwards during 2011-2012. However, we are currently observing a market correction for this industry.

Transfer Pricing Aspects

In group situations, LNG vessels are often held by specialized companies and used by other group companies, either indirectly through bareboat charters or directly as effectively time charters. Historically, the typical approach to setting up intercompany rates was reasonably straightforward, and included specialized entities providing transportation services that essentially combined crewing services (remunerated through a cost-plus arrangement), internal broking and vessel operation (receiving rates established with reference to the market). The most material of these rewards would typically go to the vessel owner, who assumed the risks associated with the vessel and the risk that they could not recover their significant historic investments.

In Detail

The last two years have seen decreases in gas and LNG pricing, so it is no surprise that the charter rates are starting to follow suit. New vessel deliveries, ordered in advance of the completion of new liquefaction projects, have resulted in a surge of vessel capacity. Furthermore, as it becomes less lucrative to divert cargoes to Asia, vessel journey times are decreasing, lowering overall utilization. This combination appears to be leading to a period of oversupply, with a consequential fall in charter rates. This trend is likely to be exacerbated by further deliveries of ships, due to the time lag between order and delivery.

The surplus is expected to continue until at least 2016, at which point new Australian liquefaction and US export projects are expected to come on-

In the meantime, tax authorities have expressed some interest in the shipping market—only in early 2014, the UK tax authorities started looking closely at the day rates in the petroleum sector, and enacted a specific cap on deductibility of intra-group charter rates for drilling vessels for taxation within the UK Continental Shelf.

Given these rapid changes in market conditions for LNG chartering it may be the right time to review intercompany charter rates.

Shift Toward Sustainability by 2020

The potential for a robust global climate deal at the Paris Climate Summit in December 2015 is driving an increased emphasis on renewables and clean tech in the next five years according to energy companies surveyed in PwC's new Global Power and Utilities Survey.

Evaluated from the classic energy trilemma between security, affordability, and sustainability; survey respondents appear to be anticipating a more robust climate deal than has been achieved before—with sustainability and cleaner energy moving up from 61% of their focus in the trilemma now to 81% in just five years.

Security of supply remains the foremost priority, with the shift in focus towards sustainability

largely at the expense of affordability. This emphasis change is most in South America, with a move from 54% to 83%, and least significant in Asia Pacific—55% to 66%.

The report also finds that power utility businesses around the world are reporting a difficult transition as energy transformation takes hold with increased concern about immediate risks to the power system as well as challenges adjusting to longer-term changes.

In the short-term period to 2020, concerns about nearly all of the major risks facing the power sector are rising. Alongside the leading risks of regulatory uncertainty and the difficulties of attracting investment, companies are moving to high alert on other key risks:

- Sophisticated cyberattack 75% concerned by 2020, up from the current 40%.
- Fuel availability/supply risk 77% expect this to be a moderate to a very high concern by 2020, up from the current 66%.
- Blackouts 74% concerned by 2020, up from 68% currently.
- Emissions/air pollution 75% concerned by 2020, up from 53% currently.

The survey reflects a sector that is mindful of the challenges facing it, but is uncertain about how successfully they can be addressed. For example, in the case of the key issue of technological change, more survey participants say their com-



pany is struggling to respond effectively than are dealing with it successfully—38% versus 25% with the remainder somewhere in between. The survey also shows a mixed outlook on how sustainable existing strategies will be:

- 43% of those in North America and 35% in Europe say that current power sector company business models are already broken and the need for change is already urgent.
- The urgency of business model change is perceived to be less elsewhere—71% globally accept that current business models won't be sustainable but think change can be grad-
- But 58% say there is a medium to high probability that the sector will face a "downward" or even "death spiral" from disintermediation, technology disruption, and customer behavior, with power utility companies and current energy systems undergoing a major decline.

Norbert Schwieters, Global Power and Utilities Leader, PwC, said:

"Looking ahead, we think predictions of a 'death spiral' for companies in the power and utilities sector are overdone. But, the dangers facing the sector are intensifying and companies will need to stay ahead of change. The challenge will be to make timely moves to gain the most of the

market opportunity of 'old energy' systems and business models while, at the same time, transitioning to the new business models required as energy transformation takes hold.

"Areas that are of limited or only emerging importance to the sector at the moment, such as smart city, smart home, and smart community infrastructure, local energy systems, electric vehicles, and off-grid solutions, will become increasingly important alongside an increased emphasis on capabilities such as product innovation, big data platforms, digitization, and online security."

The report also includes a new Power and Utilities Market Disruption Index, based on survey respondents' assessment of disruption in five key areas:

- At a global level, the index rises by 42% between 2015 and 2020.
- Europe remains the most disrupted region in 2020 but, because it is already experiencing a relatively high degree of disruption, the 2015–2020 rise of 33% is one of the smallest.
- Survey participants in North America anticipate the biggest disruption index increase, up 64% to take the region to disruption levels comparable with Europe by 2020.
- All regions record significant increases in the index. North America moves above the Asia

Pacific region to second place in the ranking by 2020.

Again, Norbert Schwieters of PwC stated:

"Market and new competitive disruption is picking up pace in power markets around the world and it's expected to intensify in the next five years. Less than one in three said their market is relatively undisrupted now, but hardly any expect that situation to continue to be the case by 2020. It's arising from a combination of policy, technological, and customer change and creating a transformation in how we think about, produce, and use electricity."

The Power and Utilities Market Disruption Index Graphics and details of the full Power & Utilities Disruption Index are on the PwC website and are obtainable from the PwC media team. The index is based on survey respondents' assessment of disruption in five key areas-policy and regulation, customer behavior, competition, the production service model (the infrastructure, products and services provided by the sector), and distribution channels (how the sector reaches and delivers to customers). For each one it is possible to identify developments that are happening now and which, if they accelerate or impact in combination, could intensify disruption. The Disruption Index is a composite measure of a basket of these five disruption factors.

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Eng. Amira El-Mazni has been named the new Vice Chairman for Gas Regulatory Affairs, but she has yet to be given her own office. In fact, her building doesn't actually currently exist. Her temporary office is still on the fifth floor inside the Egyptian Natural Gas Holding Company (EGAS) building, as no laws have been formally been issued for the new group's mandate. More troubling still, the laws are not expected to even be passed for at least six months, as the Ministry of Petroleum is still studying the draft law that would establish the Gas Regulatory Affairs (GRA) authority.

If passed, the new laws will be monumental in their responsibilities, as they will need to prepare criteria to identify consumers, investors, distribution, and shipments of gas supplies to customers. They will also be responsible for transfer licenses and will be structured similarly to other laws issued in the European Union. The new laws will be comprehensive, and are designed to organize, follow up with, and monitor the activities of shipping and transport, supply and distribution of natural gas in Egypt. The new regulatory office will also work to ensure competitiveness and transparency between the players involved in the natural gas market.

The GRA authorities will monitor tariff use, distribution, and storage of gas as well as transportation facilities, and oversee the adoption of other tariff calculation mechanisms after the network operator implements the first ones. The GRA will also issue licenses for those needing them for gas activities, as well as monitor compliance and serve as an arbitrator in disputes that may arise between parties involved in the natural gas markets, and between them and consumers. The GRA will observe multiple levels of control over the activities of those operating in the gas market as well as safeguard consumers.

Complete Independence

The Egyptian Natural Gas Holding Company EGAS plans to assure all involved in the sector that the new GRA office will be completely independent of all oversight from the agency. The GRA will thus be a neutral party fully capable of overseeing the private sector in its importation of gas for factories and industry. This is an important step for EGAS as it will separate the role of producer from regulator and will assist in liberalizing the market. Many other countries in the region have taken similar steps. Saudi Arabia's Electricity & Co-Generation Regulatory Authority (ECRA), is the perfect example. Established in 2002, the authority is a model example of allowing the sector to grow by dividing roles and responsibilities.

The GRA will issue licenses to transport system operators, operators of distribution systems, and gas chargers, as well as consumer gas suppliers. This will all be done to create a competitive environment and liberalize the natural gas market so that consumers will have the freedom to choose and incentivize their own suppliers.

The projects proposed are being funded by the European Union in collaboration with the Ministry of Petroleum and EGAS. All parties involved view the establishment of an independent body to regulate the gas market to be of utmost importance. The project is necessary to create conditions to ensure equal opportunities for all participants in the Egyptian natural gas market.

The draft law summary prioritizes the identification of qualified consumers in accordance with the principles and standards set by the Egyptian Ministry of Petroleum, and plans to update these periodically. Consumers will be able to choose their own licensed providers and negotiate gas prices based on overall quantities and other metrics.

New Rules for Imports

In accordance with the project, the Egyptian General Petroleum Corporation (EGPC) and EGAS will no longer be the only gas supply companies in Egypt, but will allow for the possibility new shipping and supply companies in the national market. These new companies will be able to sell and supply gas directly to consumers, regardless of whether the gas was produced locally or imported. The new groups will also be able to use national gas infrastructure to import and supply gas, provided they are licensed to do so by the GRA and have paid the agreed-upon tariffs and fees. The new tariff rates have yet to be decided, but they will fall under the purview of the new GRA authority.

The laws being drawn up to regulate the natural gas market are based on the experiences similar European countries have gone through when organizing and liberalizing their natural gas markets.

Comprehensive Definitions

The bill will define who may be participants in the gas market; whether they are operators of transmission and distribution systems, suppliers, or even consumers. The new authority will set all regulations and definitions for who is or is not eligible to participate. It will also define all the rights and obligations of each of player for licenses and contractual terms between each other.

The GRA will work on developing new ways to monitor and implement the regulation of activity licenses. These licenses are important as they cover the entire industry, including shipping, transport, and storage of natural gas.

Joint Working Group

A joint working group has been formed to study what the tariffs should be for transporting natural gas over the national grid. The group

is examining what impacts the new loads will have on existing infrastructure, and will take into account the initial investment costs of the network pipelines and compressors, as well as expected infrastructure depreciation values. The goal is clearly to have a reasonable return on investment.

An initial uniform tariff has been awarded for all users of the gas transmission network in every region. This tariff will be harmonized with realities over the first few years of liberalization of the gas market's transition period.

As other countries have gone through this transition before Egypt, the working group is attempting to learn from their experiences of organizing and liberalizing gas markets. Organized gas markets require the preparation of unified codes that can be adhered to by both users and distribution of gas transmission networks in general.

Specific regulations must also be included for technical and commercial controls for the use and distribution of gas transmission networks, and also specify the organization of their relationship between the network operator and users to ensure the efficient operation of these networks and facilities.

The joint working group—in cooperation with the European Union—will prepare a draft code to govern the use of transport networks, which will also be reviewed by operators, to be passed when the GRA is formally created.

The Ministry of Petroleum will ultimately retain responsibility for developing and updating standards to identify qualified consumers, in addition to providing timetables and assigning transport system operators.

There will be independence of the operator transport system to ensure transparency, impartiality, and non-discrimination between users of the gas transmission network. This is expected to occur when the draft is complete



and rules are finalized to regulate the market.

The new laws will make the operator's transport networks a separate legal entity from any other entities involved gas production, shipping, or importation.

Sherif Ismail, then-Minister of Petroleum, has said in previous statements that a number of private sector companies are receiving updates from EGAS on the progress to import LNG. These updates pertain to private companies' ability to import natural gas using the national grid.

Ismail expects that a wide range of private sector companies will soon be able to import gas to Egyptian factories after the technical and financial conditions necessary to do so are met.

The Ismail said that the private sector in Egypt is well aware of the current situation. The country has struggled to provide enough natural gas for consumer power consumption and domestic industry requirements. It's hoped that LNG will make up for the shortfall, but it is also set to allow private importation of the fuel for factories that require it.

EGAS Import Interest Forms

EGAS has published a form on its official website that allows private sector firms to import LNG. Those wishing to obtain information about importing and exporting firms can fill out the form on EGAS' website. The government company also holds technical information about the type of gas and specifications needed for each industry.

Those firms interested in importing gas for the local market are invited to complete the Gas Import Information Form in Arabic or English. The completed form with all requested documents must be submitted to the Contracts Department at EGAS.

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FROM PETROLEUM MINISTER TO PRIME MINISTER

On September 12th H.E Engineer Ibrahim Mahlab become the head of the Egyptian government. The timing couldn't be better as it directed the media away from protests about the new civil service law, protests that could have expanded further affecting the upcoming parliamentary elections.

Following the mega Eni gas discovery offshore Egypt, the appointment of Ismail is believed to be a message to foreign investors, mostly to international oil companies (IOCs), promoting trust in the ability of the Egyptian government to host a desirable investment environment. This is a notion that will encourage more agreements, and thus pump billions into the arteries of the Egyptian economy.

The second task of the new government is to supervise parliamentary elections, presenting it in a proper image to the rest of the world, especially after corruption charges tainted Mahlab's government.

Before making any projections, light must first be shed on Sherif Ismail himself, the head of the new government. Ismail is known for being an efficient man of few words, a petroleum man to the core.

Born in 1955, Ismail graduated with a Bachelor of Engineering in Mechanics from Ain Shams University in 1978, after which he began his career at Mobile Company (now part of ExxonMobil), moving in 1979 to join Enppi, where he reached the post of General Manager of Technical Affairs and became a member of the board of directors.

In 2000 Ismail took over the position of Undersecretary of the Ministry of Petroleum, by 2005 he was appointed Chairman of the Egyptian Natural Gas Holding company (EGAS), and then moved in 2007 to head the Ganoub El-Wadi Petroleum Holding Company (GANOPE)

On July 16th 2013, Hazem El-Beblawi became Egypt's Prime Minister and assigned Ismail the Ministry of Petroleum and Mineral Resources, a post he has successfully maintained past Beblawi's government, and throughout Ibrahim Mahlab's government, making him an obvious choice as head of the following government.

Ismail left his post as the petroleum minister on a high note after the discovery of a mega gas reservoir in the Mediterranean, one that may solve many of Egypt's problems. Another major achievement of his was the reduction of foreign dues to help boost foreign oil companies' (IOCs) confidence in the Egyptian government. This move will likely boost both production rates from existing fields and encourage new investment into untapped reservoirs. In fact, reducing the climbing debt owed to IOCs from \$6b to \$2.9b is believed to be one of the main factors that paved the way for Ismail to make it to the top of the government. Egypt needs to make sure that IOCs know that a decision to invest in Egypt is a sound one.

A major step forward by the ministry of petroleum was the diversification of Egypt's energy mix. The country is now moving towards its target of having renewable energy represent 20% of its energy mix by 2020. In addition, the ministry worked with cement companies to help shift about 90% of them to use coal for energy, a decision that helped ease the country's energy crisis.

Egypt began recently shifting towards liber-



alizing the gas market in Egypt, allowing factories to import their needs, via the national gas grid. This move will pave the way to significantly reduce future gas shortages.

Egypt is at the beginning of a critical phase. The wellbeing of Egypt's economy will in large depend on the next chapter. According to Moody's Investors Service, conditions for IOCs operating in Egypt will get worse before they begin to improve by the end of 2016, due

to the reduced expectations of crude prices. The Egyptian government will have to ensure that this is not the case, proving itself lucrative grounds to the recent wave of investors that began since last March's Economic Conference. Additionally, all recent investments, discoveries, payment of dues, efforts to boost production are expected to reflect positively on the development of the country's economy

TAREK EL-MOLLA: THE FUTURE OF THE PETROLEUM MINISTRY

Within moments of announcing Sherif Ismail, the previous minister of petroleum, as the head of the new government, all attention shifted towards the question of who would become the next oil minister in Egypt. Rumors and speculation echoed through the business scene, after all, the petroleum ministry is the center of Egypt's beehive, every decision made by the ministry, affects factories, electricity, energy subsidies, investment, foreign currency reserves—and by extension—the wellbeing of the entire Egyptian economy.

On the 19th of September, H.E Eng. Tarek El-Molla was sworn in as the new Minister of Petroleum and Mineral Resources. The father of three is known to be an industry favorite for his role in improving the investment climate for foreign oil companies; as well as easing the country's energy crisis and securing sufficient fuel supplies for the local market.

Born in 1962, El-Molla graduated with a Bachelor of Mechanical Engineering from Cairo University in 1986; a few months later, in January of 1987, he began a 24-year long career at Chevron, where his core functions revolved around operations, planning, and sales. El-Molla achieved the role of Sales Director and Board Member by 1998, advancing to become Director for Marketing in 2008, and by early 2010 he moved to South Africa to become Chevron's Regional Director for Central and South Africa.

On January of 2011, El-Molla was asked to join the Egyptian General Petroleum Corporation (EGPC) as the Vice-Chairman for Foreign Trade, and by August of the same year was appointed Vice-Chairman for Internal Trade, in addition to his original role as Vice-Chairman for Foreign Trade. By March of 2013 El-Molla as assigned the additional role of Vice-Chairman for Operations, a move that was considered a clear sign of his success in managing the EGPC affairs and a harbinger of his next role, announced in August of the same year, when El-Molla was chosen as the new head of EGPC.

El-Molla was assigned the role of Chairman of the EGPC in response to a significant 48-hour diesel crisis that took place in August 2013. While other lesser crises followed, the EGPC remained on top of them, importing sufficient petroleum derivatives from neighboring countries and pumping the much-needed supply to the local market.

A significant step forward the EGPC accomplished during the era of El-Molla was securing BP's \$12b deal, Egypt's largest foreign direct investment to date. Exploration activities offshore the Mediterranean are extremely costly, making a regular production sharing agreement (PSA) risky for international oil companies (IOCs). El-Molla amended the terms of the agreement to insure the reservoir is fully developed, securing Egypt a 25% boost in gas production.

El-Molla also played a significant role in reducing the debt owed to IOCs from \$6.3b to \$2.9b, and thus improving conditions for operating contractors. A journey he will now continue, fulfilling his predecessor's promise to fully repay all dues by the end of 2016.

El-Molla began his era in the petroleum ministry on a positive note, promising to connect



2.1m households to the national grid during the current fiscal year as part of the government's efforts to improve standards of living. He also stated in his first speech as petroleum minister that the main mission for the ministry in the coming period is to increase

reserves and production rates of crude oil and natural gas by continuing to intensify exploration activities through offering international bid rounds, fostering new agreements, and asking foreign partners to accelerate their ongoing exploration programs.

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GUPCO CELEBRATES 50 YEARS OF CHALLENGES & ACHIEVEMENTS



The Gulf Of Suez Petroleum Company (GUP-CO) is celebrating its 50th anniversary this year by commemorating its long journey of challenges and achievements.

Photovoltaic System Components:

months later in December.

Company History

Established in 1965, GUPCO was a joint venture company between EGPC and AMOCO Egypt Oil Company in an agreement referred to as, "the merged agreement" effective until June 2005. As BP acquired AMOCO's stake in the company, the agreement was amended to end in December 2024.

In 2014/2015 fiscal year alone, GUPCO succeeded in adding 10.6m barrels of oil to its reserves, in addition to the development of 3.8m barrels of oil. The company was able to produce in the last fiscal year about 26.1m barrels of oil, with an average production rate of 25,000 b/d.

Solar Panel Project

GUPCO is currently in the process of upgrading its administrative buildings to be powered by renewable energy. GUPCO is considered to be one of the first oil companies in Egypt to pursue the strategy. GUPCO is pioneering the approach in the industry both to generate electrical power as a cost saving measure, and also to decrease CO2 emissions resulting from generator usage.

Phase One of the project included:

Installation of the first photovoltaic power generation system by Gas Cool. The first system was installed on the roof of the GUP-CO administrative building. It now provides 107KW currently online, and was built at a total cost of \$233m.

396 PV Solar Modules (each module producing 270 Watts peak power).

Construction work started on Sep. 7th of

2014, with completed construction and

commissioning finished less than three

Entire system consists of six inverters (five inverters rated for 20KW and one inverter rated for 12KW).

Phase Two of the project included:

Extension of the Photovoltaic power generation system above the GUPCO administrative building's roof, as well as two executive buildings. The system also provides 107KW when online at a total cost of \$229m.

Construction work started on April 5th of this year, and was completed and commissioned 16 weeks later on August 18th.

Photovoltaic System Components

- 368 PV Solar Modules (each module producing 290 Watts peak power).
- Entire system consists of six inverters (five inverters rated for 20KW and one inverter rated for 10KW).

The project also extended to the EGPC building, as Gas Cool installed a photovoltaic power generation system on that agency's administration building roof. The new system provides 107KW at total cost of \$233m. Construction work started on October 7th of 2014 and was completed 12 weeks later on January 3rd, 2015.

Photovoltaic System Components

- 394 PV Solar Modules (each module producing 270 Watts peak power).
- 2. Entire system consists of six inverters (five inverters rated for 20KW and one inverter rated for 12KW).

At 321KW, the two complexes share the most powerful solar power generation facility on the roof of any administrative building in Egypt.

Energy Savings

GUPCO peak photovoltaic generation power is now 214KW, and the average daily production is approximately 1400KW. Annually it will produce approximately 511MW of electricity, which leads to a cost savings of roughly EGP 500,000. This will also assist the nation as Egypt is currently struggling to provide enough electricity for its consumers and industries.

The GUPCO and EGPC staff are also working to further reduce their electricity usage by installing high efficiency light fixtures, and

Oil and Gas Field Development

As it's working on further developing its fields, GUPCO is currently drilling three new wells; one exploration and two recompletion. These wells are expected to increase annual production by a further 900,000 barrels of oil, boosting the average with an additional 2,500 b/d.

The Geological Operations team, which supports the SGT, Petrophysics, and Stratigraphy teams, have assisted the Drilling team

in the planning and execution of several wells. Amongst them is Edfu A-7, which is a development well targeting the Nezzazate and Nubia formations with an initial production of 1,500 b/d, and estimated reserves about 2m barrels of oil.

Adding 3.2m barrel of oil resources is Hilal B-1, a development well targeting the Kareem and Nukhul formations; in addition to Pre-Miocen Nezzazat and Nubia formations. The initial production of this well was 1,000 b/d from the Nubia and Nezzazat formations.

The development well GS 327-A6st1-A, which targets the Assal reservoir, had an initial production rate of 1200 b/d.

Targeting the remaining hydrocarbon volume in the Belayim and Kareem reservoirs in North Morgan area is the development well M120-153, with an estimated risk weighted reserve at 1.35m barrels of oil. Another well targeting the structural attic of the Belayim and Kareem reservoirs is the Badri-B6Ast1, however this well missed its targets. Nevertheless GUPCO acquired geological data changing them out for LED bulb technology. while drilling and had already predicted the targets would be lower than the well esti-

> The development well Hilal B-2, targeting the Kareem, Rudies, and Matulla/Nubia formations adding 1.8m barrels of oil in resources. The initial production of this well was 700 b/d from the upper Rudies forma-

> Finally, the exploratory GS277-A5 well, targeting the Belayim and Kareem reservoir, has been completed with initial production 2,300 b/d and estimated reserves about 4m barrels of oil.

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EVENT



With over 600 participants, more than 200 papers (from nearly 100 countries), and 27 technical sessions spread out over its three day duration, the Society of Petroleum Engineers North Africa Technical Conference and Convention (SPE NATC) was an event set to go down in history as a resounding success for the region.

The organizers of the conference were upbeat about its potential and growth. "Since the first North Africa conference was held 7 years ago, this conference has garnered acclaim on the industry map," stated Waleed Refaay, Managing Director of SPE for the Middle East, North Africa, and India.

"The technical program has grown tremendously since the first edition and the strong industry support despite economic and political challenges in the North Africa region has allowed SPE to continue to fulfill its mission," Refaay continued.

While the former Petroleum Minister—Sherif Ismail—had been scheduled to make the inaugural speech at the conference, due to his recent appointment as Prime Minister, he was indisposed. Acting in his stead was Dr. Sherif Sousa, First Undersecretary for Gas Affairs at the Egypt Petroleum Ministry.

"The Ministry of Petroleum always encourages holding such meetings that help to exchange knowledge and expertise, and enhance technology transfer among industry experts. This will support our strategic objective of achieving the best utilization of our resources," Dr. Sousa said in his opening remarks.

This year's conference is the 7th edition of the

NATC, and one of the largest the group has ever held.

Because Sherif Ismail was then working in his new position as Prime Minister of Egypt, EGPC Chairman Tarek El-Molla was currently managing the affairs of the Petroleum Ministry and while he was also scheduled to make an appearance, he was unable to make it to the conference due to his current duties.

Society of Petroleum Engineers

The Society of Petroleum Engineers was founded in 1957 in the United States, and was designed to serve as a resource for professionals to further their expertise and knowledge in the petroleum sector. In 1985 the group expanded internationally, and it now serves as the premier global organization for petroleum professionals.

The group has over 140,000 members in 147 countries. The society is a non-profit, and is dedicated to providing purely technical knowledge in the industry. Egypt plays an outsized role in the organization as one of the most important members of the SPE, with the local petroleum industry very active in the organization. The Egyptian section has almost 2,000 members, placing it just behind the UAE and third in the middle east overall

The high degree of activity is especially true for the student category, with student chapters in Alexandria University, Cairo University, American University in Cairo, Al Azhar University, and Suez University. There are only three other non-Egyptian North African student chapters of SPE in the whole of North Africa.

"The conference came at a good time, right after the major [Eni's Shoruk block] discovery. It gives industry professionals the chance to discuss and exchange ideas regarding the next steps that should be taken," said Ahmed Shoukry, Country General Manager of Weatherford.

Scheduled Events

The NATC was a weeklong event, with events spread out over many days. The first day—Sunday the 13th—was dedicated to training events about hydraulic fracturing optimization and practical wireline formation testing.

The next day—Monday the 14th—was the beginning of the main event, with speakers inaugurating the conference and answering questions from interested parties. The large exhibition hall was also opened on Monday and proved to be a main attraction for the next several days.

Monday also saw conferences held on topics such as the practicality of small and medium enterprises (SMEs).

"It was interesting to hear a different side of the coin," said Jean-Pascal Clémençon, Managing Director of Total in Egypt. "They've been quite successful in Egypt so far. You need to have a landscape of very diverse companies, from bigger ones to smaller ones, that's what makes the landscape successful. If you want to develop smaller reserves you need to have smaller companies working on them."

The next day—Tuesday the 15th—included sessions on shale gas and EOR, as well as a conference about the promising future of North Africa.

Ahmed El Banbi addressed young professionals, speaking about the concern many of them have about the industry's viability. "All you see around you now is low oil prices, shrinking business, less recruitment opportunities, budget cuts, and layoffs."

"Among that, however, you hear the great news of finding new resources such as the new gas discovery in the deep water of Egypt...The downturn will not stay for a very long time, and we, as an industry, will emerge from it, a better and more efficient industry. We have done this before, and we will do it again. So, get ready for the industry when it bounces back," Banbi said.

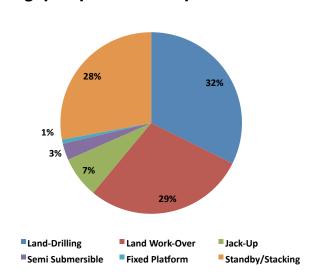
"The speakers this morning reminded us that the industry is here for a reason, it is a cyclical industry, it has its ups and downs, this has happened before and is going to happen again," said Chris Avant, Marketing Manager of East Africa and East Mediterranean for Schlumberger.

Wednesday focused on additional technical sessions while Thursday included daylong training course on EOR (enhanced oil recovery).

"There are fewer participants this year and the event size is a bit smaller than usual; however, given the significant budget cuts sweeping the industry, the event overall is pretty good and shows commitment," Shoukry noted.

"Given the circumstances the industry is passing, the event is exactly the kind of thing that is needed to give everybody the opportunity to focus on the important parts of the industry, not just the oil prices and budget cuts," finished Avant.

Rigs per Specification September 2015



Egypt Rig Count per Area - September 2015

Area	Total	· · · · · · · · · · · · · · · · · · ·
Gulf of Suez	10	10 %
Mediterranean Sea	4	4 %
Western Desert	63	65 %
Sinai	12	12 %
Eastern Desert	4	4 %
Delta	5	5 %
Ganoub El Wadi	0	0 %
Total	98	100%

Oil

Barrel

Med. Sea

GOS

Equivalent Gas

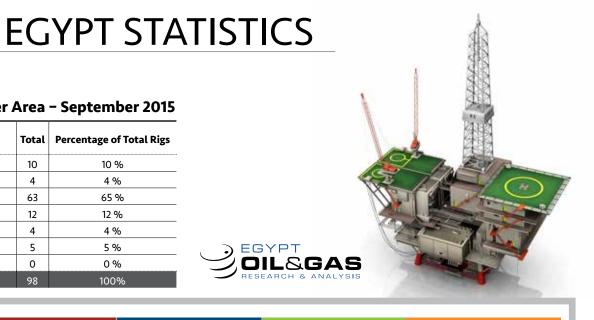
Barrel

August-14

30043929 25486965

August-15

August-13



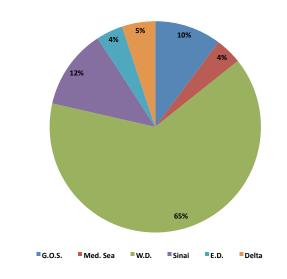
Barrel

August-14

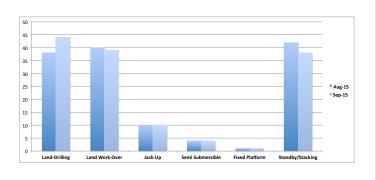
August-15

August-13

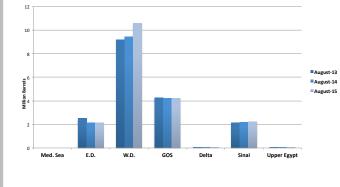
Rigs per Area September 2015 (Total of 98 Working Rigs)



Rigs per Specification August 2015 - September 2015



Oil Production July 2013 - 2015



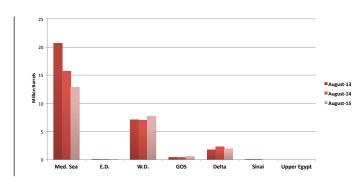
Equivalent Gas Production July 2013 - 2015

Barrel

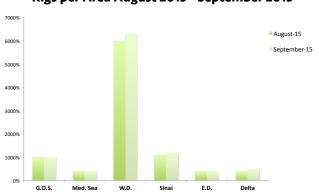
August-14

August-15

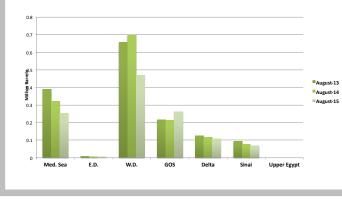
August-13



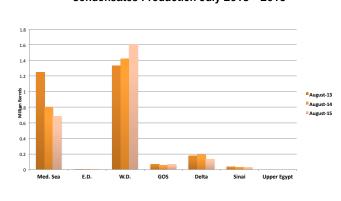




Liquefied Gas Production July 2013 - 2015

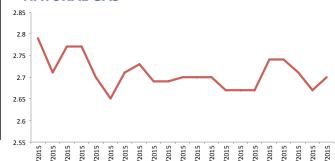


Condensates Production July 2013 - 2015





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