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EGYPT OIL&GAS NEWSPAPER

EGYPT'S LEADING OIL AND GAS MONTHLY PUBLICATION - MARCH 2014 - 32 PAGES - ISSUE 87

Interveiw P. 16

Negotiating Terms and Recovering Costs:

Egypt's Tedious Production Sharing Agreements

P.22

The Future of Egypt's Brownfield Development Convention

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Convention Topics Include:

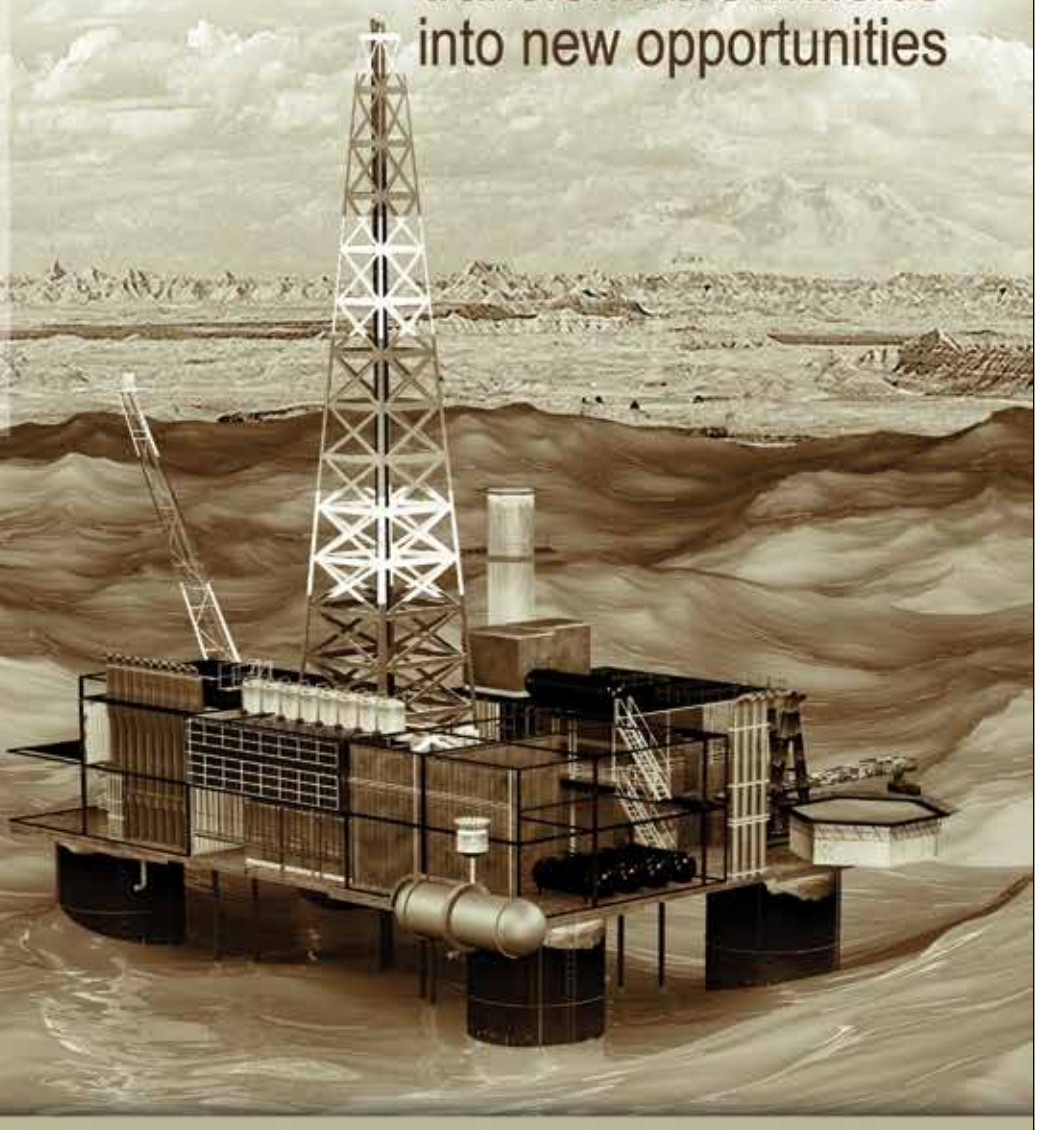
New Technologies for Optimizing Production in Brownfields:

- Drilling and well technologies.
- Application of 2D and 3D.
- Production and reservoir engineering.
- Completion and artificial lifting.

Brownfields: Benefits and Challenges

- New Technologies: Obstacles and Recommendations
- Breaking the Economic Barriers of Brownfields.
- Planning the Greenfield-to-Brownfield Production Transition.
- Integrated Reservoir and Asset Management in Brownfields.
- Improving Recovery from Mature assets.
- Integrated Planning: Managing Mature Assets.

An endeavor to transform brownfields into new opportunities



Event Chairman:
Eng. Abdullah Ghorab, Former Minister of Petroleum

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Energy Efficiency for Economic Development and Poverty Reduction

Egypt's Energy Efficiency

MASTER PLAN Roundtable

26TH OF MARCH - 2014 FOUR SEASONS NILE PLAZA

Roundtable Discussion to Cover

- Overview of energy situation in Egypt including energy supply and demand.
- Current Energy Efficiency Constraints.
  - Institutional and legal constraints.
  - Data and information availability.
  - Capacity constraints.
  - Financial constraints.
- Enabling Conditions for Energy Efficiency Policy implementation.
- Setting up the national awareness for energy efficiency improvements.
- Recommendations for further development of energy efficiency legislation and regulation.

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Editor's **Note**

In Egypt, you know, when it comes to finding out what's happening now a days, there's nothing quite like learning it from the officials in the political kitchen while shooting the breeze with them in Cairo! This month Egypt Oil and Gas Newspaper managed to interview former minister of Petroleum & Mineral resources Osama Kamal to learn about what was going on behind the scenes in the oil and gas Egyptian industry, the artery for Egyptian day-to-day life.

Meanwhile, as usual we come up with new, daring, and innovative topics to talk about. This month we talked about an analysis of cost recovery issues, and the overall obstacles international oil corporations face while venturing in Egypt. Egypt Oil & Gas also talked about Oil Shale and how much Egypt has of it. Egypt Oil & Gas strives monthly to bring its readers the latest energy news that is of value to the petroleum industry readers. As usual, in addition to our features, we bring you an exclusive look at the most current drilling news, technological advancements, and developing projects in Egypt and abroad. I would also like to thank everyone who contributed to the magazine this month as we are always in the making of bringing in and researching interesting topics. We aspire to continue being the Egyptian energy sector magazine of choice.

Editor in Chief **Sherif Elhelwa**

Prices

Bullion Market		Oil Prices	
GOLD	SILVER	BRENT	NYMEX Crude
1244.09 USD/BBL	19.87 USD/BBL	106.94 USD/BBL	94.86 USD/BBL
1.48%	1.15%	-3.29%	-3.08%

EGYPT OIL&GAS NEWSPAPER

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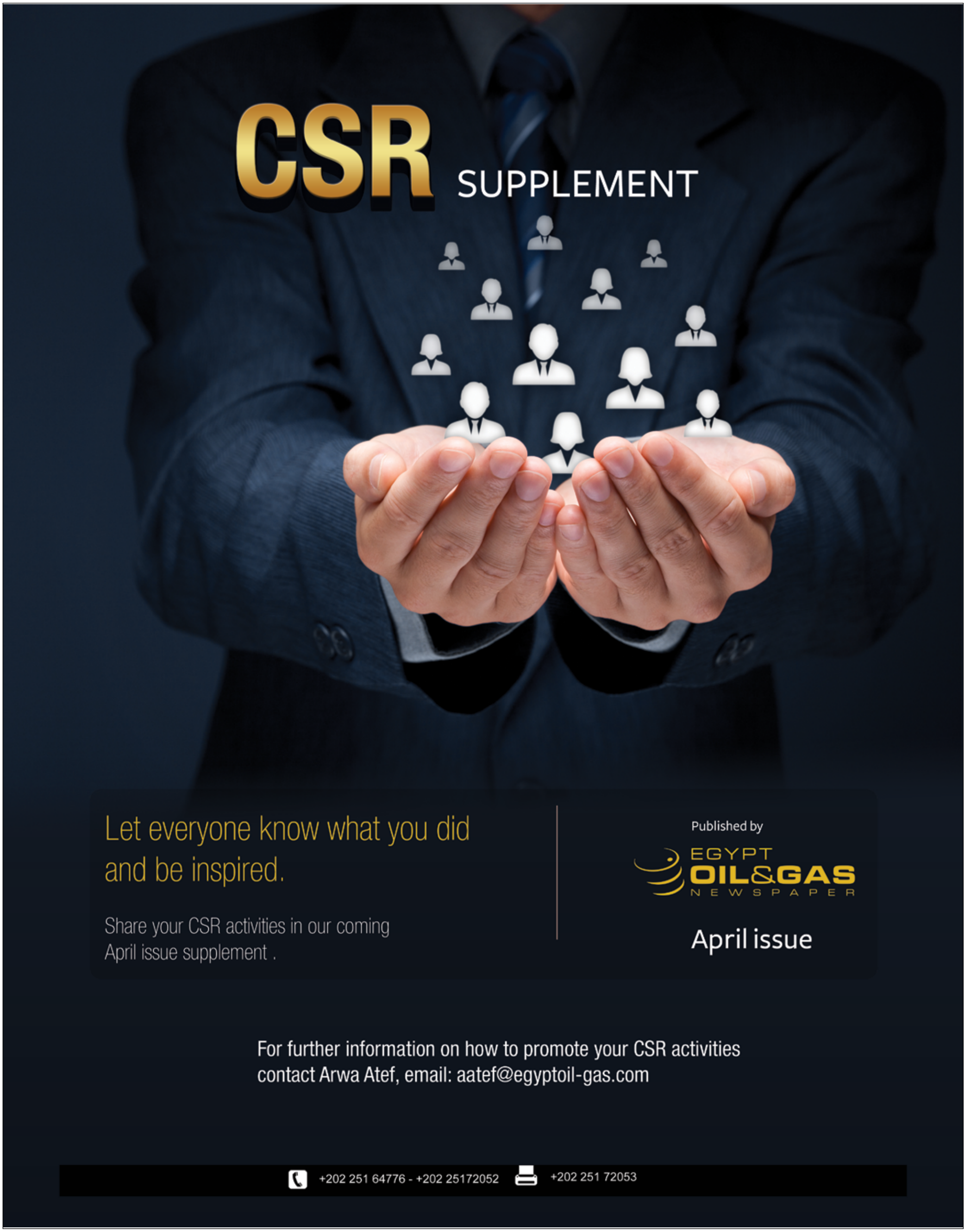
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For further information on how to promote your CSR activities contact Arwa Atef, email: aatef@egyptoil-gas.com
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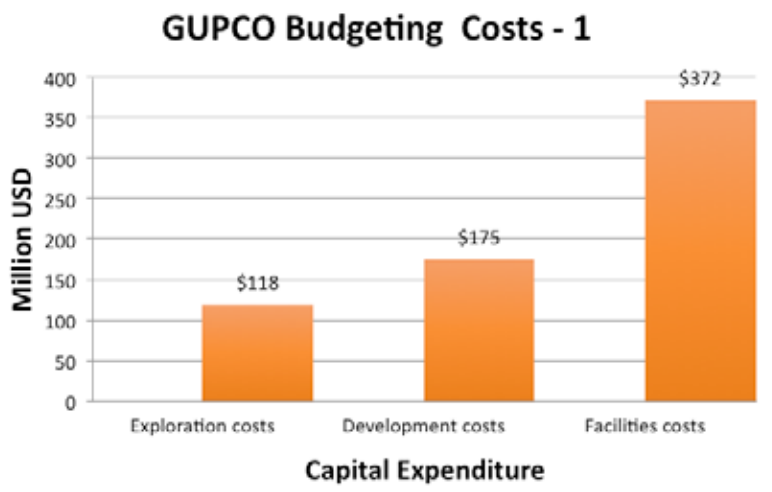
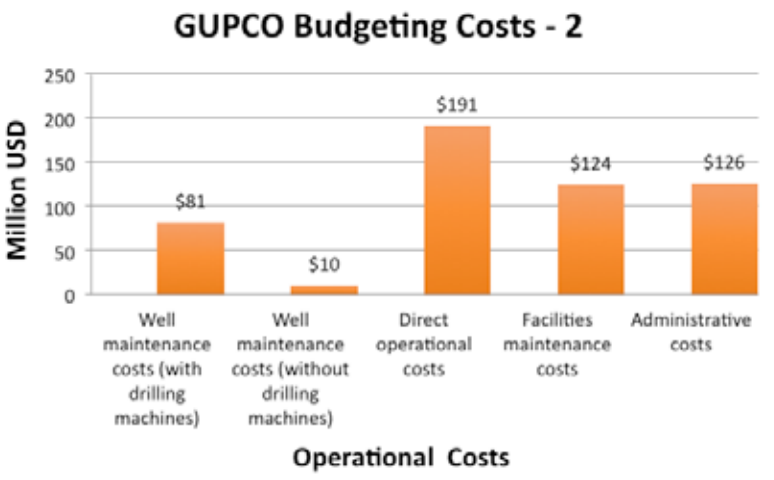
GUPCO Announces Their Budget Plan for 2014/2015

The General Assembly of GUPCO has recently approved the company's budget for 2014/2015. The budget is estimated at USD 1.211 billion, and ranks first in the company's budgeting history since establishment in 1963. Budgeting details are as follows:





Banque Misr Approves Loan for Petroleum Sector Companies

Egypt's state owned bank Banque Misr recently announced it has received consent from 12 banks to grant a loan for Petroleum Cooperative Society Company (PCOO) and Misr Petroleum. Banque Misr officials stated that they approved the request submitted by both companies to increase the loan value to EGP 3 billion from EGP 2 billion. Banque Misr is to undertake the helm of managing and marketing of the loan, reported al-Shorouk al-Jadeed on February 9, 2014. PCOO and Misr Petroleum are looking forward to the loan in order to purchase required amounts of crude oil from EGPC. The loan is the second of its kind since 2011 when Banque Misr, with two other banks, granted an EGP 1 billion loan.

New Fuel Composition Experiment Attains Success, Says the Egyptian Petroleum Research Institute

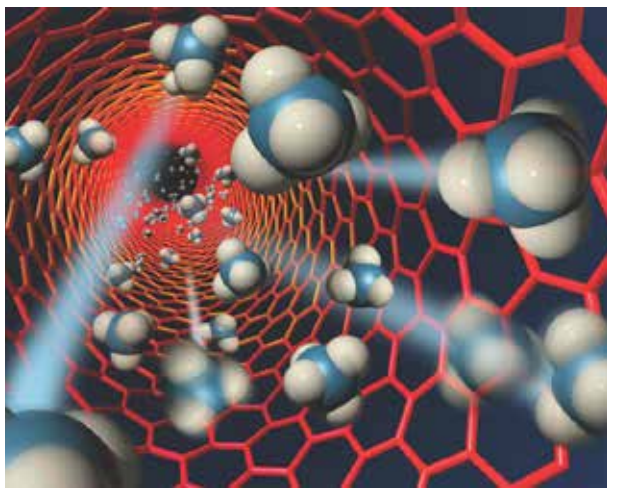
The Egyptian Petroleum Research Institute (EPRI) announced the success of its experimental tests, which were conducted to prove the feasibility of using a gasoline/methanol mixture in cars. The mixture was tested on a car belonging to EPRI, reported MENA on February 9, 2014. Experimental research led by the Ministry of Petroleum aims to modify components of fuel used in Egypt. The director of EPRI Dr. Ahmed El-Sabagh said that the mixture was tested twice, and that a work group from ECHEM attended one of those tests.

Three New Exploration Agreements With Dana Gas, Petroceltic, and Edison

The Petroleum Ministry has recently signed three new exploration agreements on behalf of EGAS. The regions include the two offshore spots, North Theka and North Arish in the Mediterranean, in addition to South Edko in Delta, reported ElWafd Newspaper on February 14, 2014. Partners are Dana Gas, Irish Oil, Petroceltic, and Italian natural gas company Edison. Investments are estimated at a minimum of USD 265 million for drilling 8 wells, plus grant signature equivalent to a minimum of USD 32.2 million. The first agreement was signed in partnership with Edison and Petroceltic for exploration activities in North Theka to drill two wells, and involves investments at a minimum of USD 170 million and USD 71 million equivalent of grant signature. The second agreement, which involves the same partners, carries investments estimated at a minimum of USD 23.5 million and grant signature equivalent to USD 5.1 million, to drill three wells in South Ediko in Delta region. Dana Gas signed the third agreement with investments estimated at a minimum of USD 71.5 million, and the grant signature for the agreement is worth USD 20 million to drill three wells in North Arish offshore area. The agreements mark a total of 26 agreements attained by the petroleum sector with total investments estimated at a minimum of USD 1.1 billion, and grant signature equivalent to USD 160.7 million.

Nanotechnology Unit Now Complete, Says Egyptian Petroleum Research Institute Director

Director of the Egyptian Petroleum Research Institute Ahmed el-Sabagh stated that the nanotechnology center, which was opened three years ago, is now fully established with investments exceeded EGP 20 million, reported Middle East News Agency (MENA) on February 9, 2014. El-Sabagh said that the center is capable of performing all types of analysis related to the nanotechnology field, in addition to advanced research and manufacturing multi and single-walled carbon nanotubes. Exportation of such high technology to the Middle East is banned. El-Sabbagh also announced the completion of a new production unit with capacity of 10 tonnes per hour to cope with diversified demands of oil companies. Another operating unit has a capacity of 15 tonnes per hour. Development of research labs in the institute is underway to eventually yield an internationally standardized technology institute. He also referred to the four strategic approaches followed by the institute in its scientific methodology researches namely, the research approach, application approach, production approach, and economic approach. "Our main focus is to promote and qualify new generation of researchers capable of putting theory into practice," el-Sabbagh said.



Story Board

Major Changes and Promotions for Petroleum Sector's Top Management


Eng. Khaled Abd el-Badia


Eng. Taher Abd El-Rehim


Eng. Mohamed Mones


Eng. Osama el-Bakly

Petroleum Minister Eng. Sherif Ismail issued a decree on February 12, 2014 to apply major modifications in top managerial positions of petroleum companies. Eng. Khaled Abd el-Badia, former Vice Chairman of EGAS Operations Department, was promoted to Chairman of EGAS. Eng. Taher Abd El-Rehim, former Chairman of EGAS, is now the Chairman of Khalda Petroleum. Eng. Mohamed Mones, former Chairman of Qarun Petroleum, is now Vice Executive Chief of EGPC for Production Department. Eng. Osama el-Bakly, former Chairman of Khalda, is now to serve as Vice Chairman of EGAS for Production and Well Development Department. Eng. Atef Mohamed Hassan, the former Vice Chairman of EGAS for Production and Well Development Department is now to hold the position of Chairman of Petrobel. Eng. Ayman Abd el-Monsef, who had been Vice Executive Chief of EGPC for Production Department, is now Vice Chairman Ganoub El Wadi Petroleum Holding. Eng. Samir Abadi, former Assistant Chairman of Khalda for Operations Department, serves now as Chairman of Qarun Petroleum. Eng. Ezz el-Din Abd el-'al, who used to serve as Chairman Gabal el-Zeit Petroleum (PetroZeit), is now Chairman East Zeit Petroleum Company (ZEITCO). Eng. Mostafa Fergany, the former Chairman of East Zeit Petroleum Company (ZEITCO), is now Chairman of Gabal el-Zeit Petroleum (PetroZeit). Geo. Ashraf el-Orabi, former Assistant Chairman Fanar Petroleum for Exploration Department, is to serve now as Chairman of Fanar Petroleum. Eng. Ahmed el-Hawary, former Chairman of Petrobel, is to serve as Chairman of PetroShahd, officially on the 21st of March, 2014, when Eng. Abd el-Wahab Nour el-Din, current Chairman of PetroShahd, goes on pension. Meanwhile, Eng. el-Hawary now undertakes PetroShahd Chairman's tasks as Eng. Nour el-Din is currently performing Umrah in Saudi Arabia.

New Projects in Upper Egypt to Deliver Natural Gas to Factories and Houses

Chairman of Ganoub El Wadi Petroleum Holding Company Eng. Mostafa Safwat announced a new plan to supply natural gas to aluminum, sugar, and manure factories in Upper Egypt, and houses as well. Such projects succeeded to deliver natural gas supply to 550 thousand residents, including 140 thousand houses newly connected to the grid, in Fayoum, Beni-Suef, Minya, Qena, Luxor, and Aswan, reported Al-Ahram on February 10, 2014. Safwat added that the project includes a plan to refine around 4 million tonnes of crude oil in the Assiut refining lab, which is expected to cover 80% of oil-product demands in Upper Egypt, in addition to the establishment of four new gas stations.

Gas Pipeline Attacked in Egypt's Sinai

Al-Ahram Online reported February 11, 2014 that militants blew up natural gas pipeline supplying Egypt's industrial zone in Sinai Peninsula. It was the fourth natural gas pipeline attack this year. The state-run news agency reported that the explosion took place south of the coastal city of al-Arish on a pipeline supplying an industrial zone in central Sinai. "No casualties reported and security forces were scanning the area right after the explosion to identify causes of explosion," a security source told Platts. This is the 20th pipeline attack since the uprising in January 25, 2011, the previous one occurring January 27th this year when a number of militants attacked a control unit belonging to a GASCO pipeline, reported Al-Ahram Newspaper on January 28, 2014. Egypt stopped exporting natural gas to Israel and Jordan due to continuous blasts, which caused Egypt to break to its contractual agreements with the two countries. Israel stopped importing natural gas from Egypt in April 2012, and the case was taken to international courts to solve the contractual disputes.

Italian Edison to Invest USD 120 Million in Construction of Natural Gas Marine Terminal

Chairman of Abu Qir oil company Adel al-Hegazy said that Italian oil company Edison will invest in increasing natural gas production, and in construction of a marine terminal to service the North Abu Qir oil fields. "The Italian company will inject investments of USD 120 million for the development of natural gas production in the fields of Abu Qir," Al Youm Al Sabe' reported in its February 9th issue. Al-Hegazy pointed out that these allocated investments will be directed to the construction of a marine terminal at the north Abu Qir fields in the Mediterranean Sea which will receive the new natural gas produced from those fields. This terminal will be put online for use by mid-2016. "The company will raise daily production of natural gas at a rate of 80 million cubic feet of gas and 1,500 barrels of crude oil and 2,000 barrels condensate," Hegazy added. The production of Abu Qir oil company is 270 million cubic feet of natural gas per day and 5,150 barrels of condensate.

CHOICE Words

I know you [Egypt's Defence Minister Abdel Fattah el-Sisi] have decided to run for president. This is a very responsible decision, to take upon yourself responsibility for the fate of the Egyptian people.

Vladimir Putin
Russia's President

We have elected to issue Force Majeure notices in Egypt reflecting the ongoing diversions of gas volumes to the domestic market.

Chris Finlayson
BG Group's Chief Executive

I've been in the cabinet for about six months, I haven't felt any time that I am run by the military people. ...I think Egypt after January 2011 is immune to military dictatorship and military rule.

Hazem el-Beblawi
Egypt's former interim Prime Minister

This issue [of reconciliation with the Muslim Brotherhood] is no longer on the table. It is no longer acceptable at the public level after they committed murder and sabotage crimes.

Adly Mansour
Egypt's Interim President

CARTOON

Egypt News

BG Cutting Back Egypt Production

British oil and gas firm BG Group announced a downgrading of their oil production in Egypt as a result of the ongoing turmoil in the country, according to a report from The New York Times on January 27, 2014. BG was expected to produce around 660,000 barrels of oil equivalent per day. However, production is estimated to drop to between 590,000 and 630,000 boed. Production has been reduced as a result of the current political situation, which led the Egyptian government to redirect gas production to serve national concerns, reported Daily News Egypt. BG added that its oil and gas production from Egypt in 2013 went down 15% below its production in 2012, which resulted in termination of deals and contracts with importers. "Despite the good progress we have made in 2013 we face short-term issues which are reflected in our revised 2014 guidance. This is very disappointing," BG's Chief Executive Chris Finlayson said.

PGNiG Withdrawal from Egypt Investment "Not Because of Political Risks"

PGNiG recently decided to withdraw from its oil and gas exploration project in Egypt amid geopolitical risks, reported Reuters. "PGNiG's decision to back out of the Bahariya concession (in Egypt) was made because of the future works' high exploration risk and low chances of finding a substantial accumulation of hydrocarbons," stated PGNiG's press office, according to Daily News Egypt on January 29, 2014 . PGNiG has taken a USD 136 million write-down—which is equivalent to its entire investment in a gas and oil exploration project in Libya—as a result of delays and military conflict in Egypt. However, Adel Said, Executive Vice President of Petroleum Administration for Agreements of EGPC, denied claims that PGNiG's withdrawal from the Bahareya concession was because of political or exploration risks, and assured that the Polish company has already completed the first phase of exploration based on an agreement that was signed in 2009, reported Al-Ahram on February 3, 2014. Said added that during the first phase, the company drilled two wells and both proved to be unproductive, which led the company to terminate exploration in November 2013.

New Production Units to Increase Oil and Potential Products Productivity

In his visit to a number of oil refining labs, Eng. Sherif Ismail, Petroleum Minister, assured that studies are underway to establish new production units in the Egyptian refining labs for pushing up the production of gas, diesel, butane gas, and naphtha (benzene prior to processing). Ismail added that this development targets local, Arab, and foreign investments to attain potential revenues, according to the Ministry of Petroleum. "Those projects are strategic and can contribute to securing fuel supplies to all Egypt's governorates with the aim of activating economic, service and development activities," Ismail said. He added that the sector's target is now to increase production capacity to limit imports, reported Al-Ahram on February 2, 2014.

Insurance Policy Value for Jordan Pipeline Estimated at USD 85 Million

Analysis are ongoing to estimate the extent of the damage to the natural gas pipeline supplying Jordan as a result of the latest explosion attack, reported Al-Ahram on January 31, 2014. Alaa el-Zohairy, Managing Director of Arab Misr Insurance Group (AMIG), said that the insurance policy of the pipeline covers the pipeline's safety against political risks, outlining that the policy coverage is estimated at USD 85 million. Adel Hegazy, AMIG Petroleum Department Manager, said that the pipeline belonging to East Gas company was bombed twice since January 2011.

BG to Import Gas to Egypt from Israeli Leviathan Field

Leviathan field partnership companies started negotiations with BG Group regarding supplying of Leviathan gas to Egypt, according to Calcalist. Participants involved in the deal held a number of meetings in Cyprus. Officials attended from BG, Noble Energy and Delek Group. BG is willing to buy between 5 and 8 billion cubic liters annually, reported Al-Masry Al-Youm on February 3, 2014. The deal, which is estimated at USD 25 billion and is set to last for 20 years, states that gas is to be pumped from Leviathan field to northern Egypt. BG, which holds 35% in liquefied natural gas laboratories in northern Egypt, has been seeking to buy gas for three years after turmoil amid January 2011, in order to get their halted petroleum facilities back in operation.

New Investments to Enhance Manufacturing Project of Drilling Facilities

International Drilling Material Manufacturing Company (IDM) is preparing to establish the second phase of building factories with investments estimated at USD 32 million. The phase involves manufacturing pipes that are used for padding wells, as well as pipes used in the oil production process, which are to be the first product of its kind in Africa, and the second in the Middle East, reported Al-Masry Al-Youm on December 20, 2013. Eng. Sherif Ismail, Petroleum Minister, had a meeting with representatives from the Chinese and Japanese participating companies. The Chairman of IDM, Eng. Mohamed El-Gohary, said that the company's contracts reached USD 112 million since 2011, which encouraged Chinese and Japanese partners to invest in the second phase of the project. El-Gohary also outlined that such project is going to play a key role in limiting monopoly acts led by international companies.

Driling News

Khalda Drills Four New Wells

Khalda recently drilled two new oil-producing wells in its concession area in the Western Desert. Production rate of the company reached 4,515,741 oil barrels in January 2014. Khalda is a joint venture between EGPC and Apache.

UMB-228
The oil-producing developmental well was drilled to a depth of 12,800 ft utilizing the EDC-18 rig. Investments surrounding the project are estimated at USD 1.076 million.

KAH C-167
The oil-producing developmental well was drilled to a depth of 8,200 ft utilizing the EDC-61 rig. Investments surrounding the project are estimated at USD 405,000, and production from the well is in phase now.

WRZK-124
The oil-producing developmental well was drilled to a depth of 6,805 ft utilizing the EDC-65 rig. Investments surrounding the project are estimated at USD 581,000, and production from the well is in phase now.

HYDRA-8
The oil-producing developmental well was drilled to a depth of 13,770 ft utilizing the EDC-40 rig. Investments surrounding the project are estimated at USD 1.932 million, and production from the well is in phase now.

Agiba Drills Three New Wells

Agiba Petroleum, a joint venture between EGPC and IEOC, has recently completed drilling two new developmental oil-producing wells in its concession area in the Western Desert. The production rate of Agiba of crude oil reached 1,759,377 barrels in January 2014.

FARAS-50
The new developmental oil-producing well was drilled to a depth of 1,522 ft, utilizing the WF-147 rig. Investments surrounding the project are estimated at USD 1.360 million.

RAML-29
The new developmental oil-producing well was drilled to a depth of 4,700 ft, utilizing the WF-147 rig. Investments surrounding the project are estimated at USD 803,000.

E.AGHAR-25
The oil-producing developmental well was drilled to a depth of 6,500 ft utilizing the WF-161 rig. Investments surrounding the project are estimated at USD 795,000.

Qarun Drills Two New Wells

Qarun Petroleum, a joint venture between EGPC and Apache, has recently completed drilling two new developmental oil-producing wells in its concession area in the Western Desert. Production rate of Qarun of crude oil reached 1,325,573 barrels in January 2014.

ED-62
The oil-producing developmental well was drilled to a depth of 6,370 ft utilizing the EDC-64 rig. Investments surrounding the project are estimated at USD 490,000. Production from the well is in phase now.

E.BAH C-45
The oil-producing developmental well was drilled to a depth of 5,590 ft utilizing the EDC-63 rig. Investments surrounding the project are estimated at USD 1.018 million. Production from the well is in phase now.

TransGlobe Drills New Well

TransGlobe has recently completed drilling a new exploratory oil-producing well, TAEF-1X, in its concession area in the Western Desert during the fiscal year 2013/2014. The well was drilled to a depth of 7,435 ft utilizing the EDC-67 rig. Investments surrounding the project are estimated at USD 3.320 million. The well showed very low productivity of crude oil.

BAPETCO Drills Two New Wells

BAPETCO, a joint venture between EGPC and Shell, has recently completed drilling two new developmental oil-producing wells in its concession area in the Western Desert. The production rate of BAPETCO of crude oil reached 1,174,652 barrels in January 2014.

OBA J8-A
The new exploratory oil-producing well was drilled to a depth of 13,385 ft, utilizing the EDC-42 rig. Investments surrounding the project are estimated at USD 4.794 million. Production from the well is already in phase now.

WS C86-B
The new developmental oil-producing well was drilled to a depth of 10,564 ft, utilizing the WF-797 rig. Investments surrounding the project are estimated at USD 2.977 million. The well showed very low productivity and is considered economically unfeasible.

Libya: New Oil and Gas Discovery in Ghadamis Basin

Libyan National Oil Corporation (NOC) announced a hydrocarbon discovery on February 19, 2014, for Arabian Gulf Oil Company (AGOCO), a subsidiary by NOC. AGOCO reported that it has drilled the G1-NC4 New Field Wildcat well to a total depth of 10,600 feet.

The well in Ghadames Basin is located approximately 250 km south of Tripoli. The crude oil discovered is 41 API and 58 API quality respectively. Payzone thickness for the lower Akakus is 23 feet with 41 API crude oil. Payzone for Mamouniyat is also 23 feet containing 58 API crude.

Initial oil production rates at lower Akakus formation was 1,266 barrels per day while Mamouniyat formation was producing 3 million cubic feet of gas, and 129 bbls per day of condensate.

Oil Production in Libya Declines as Protesting Increases

Libyan National Oil Corporation (NOC) announced that production went down to 230,000 bbls/day as of February 24, 2014. "Libyan national production went down to 230,000 bbls/day as of last night," Mohamed Alharari, NOC media spokesman, told Egypt Oil & Gas over the phone. The decline is close to 150,000 barrels compared last week's 380,000 barrels per day announcement, Mohamed Alharari added. Alharari declined to give details about the production rates in oil field due to the current security situation. "I can only provide you with the national production figures since those details about each specific field isn't needed now." Sharara oil field went on maximum production capacity of 340,000 barrels per day just a few weeks ago until protesters closed down two pipeline points/ pumps feeding Zawiya refinery last Wednesday. "Sharara field was producing 301,000 barrels per day last Wednesday," Alharari added.

Cyprus Clashes With Turkey Over Oil and Gas Exploration Rights

In the beginning of February, the Norwegian ship MV Princess explored for oil and gas on behalf of internationally-recognized Greek Cyprus, located in the southern part of the island, when it was abruptly encountered by a Turkish warship and was obliged to leave the area, reported Israeli Arutz Sheva on February 2, 2014. Turkey said that the MV Princess entered a Turkish naval zone, where it was warned by the Turkish warship TCG Giresun and then forced out of the area, according to the Turkish news source Today's Zaman. Turkey, who refuses to recognize Cyprus, consequently prohibited the search for oil and gas in waters that it claims belong to Turkish Cyprus. Cyprus decried the incident and declared their intention to complain to the UN. "This provocative behavior by Ankara in no way affects plans to exploit the hydrocarbons of our country," announced a Cypriot government spokesman.

Cyprus and Egypt to Pursue Offshore Cooperation

Egypt and Cyprus will form a joint technical committee to examine methods to facilitate cooperation between the two East Mediterranean countries in offshore exploration and development for their hydrocarbon reserves, Cypriot Energy Minister Yiorgos Lakkotrypis said on February 7 2014. The announcement was made following discussions that took place in his office with Sherif Ismail, Egyptian Petroleum and Mineral Resources Minister.

Lakkotrypis said the first meeting of the committee is expected to take place in Cairo before the end of February. He said his talks with Ismail covered the exploitation of Cypriot natural gas in cooperation with Egypt. He said Egypt may be a potential buyer of Cypriot natural gas and that the new committee would examine the technical and economic possibilities of this. The two countries signed a maritime delimitation agreement in February 2003, which has been ratified by both countries, and began negotiations on the unitization agreement in May 2006.

"At the same time, we are looking into other issues as well, for instance how we could exploit the natural gas of Cyprus in collaboration with Egypt," Lakkotrypis said. "This is another matter that will be examined by the technocrats. There are some questions both sides have which we want to be answered as soon as possible." The comments came a day before Greek and Turkish-Cypriot leaders meet to resume talks on the reunification of Cyprus, after a break since 2012 in UN-brokered negotiations. French company Total began a 2D seismic survey in Block 10, which is adjacent to Egypt's deepwater acreage. France-based CGG will acquire some 1,500 km of seismic data with work extending into Total's Block 11 and the unassigned Blocks 6 and 7.

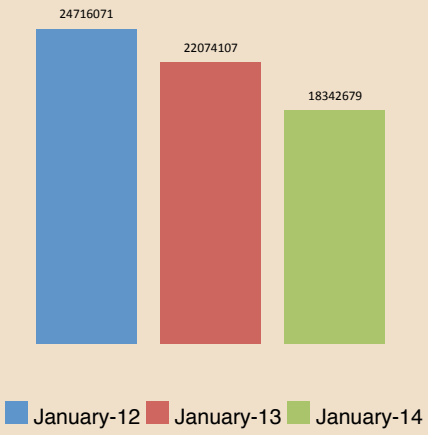
Offshore Site is The Best Solution for Israeli Gas Infrastructure, Says Governmental Panel

A committee belonging to the Israeli government says it recommends situating gas infrastructure on an artificial island in the Mediterranean, to better control the resources of the Leviathan field, reported PLATTS on February 10, 2014. The main advantage of the recommendation is to save lands in Israeli fatigued coastal plain. Such recommendations come alongside objections posed by environmental groups regarding land-based sites for two gas receiving terminals. The island is to be set 7.5 km off Israel's central Mediterranean coast. The committee initially wanted the Island to be used exclusively for gas infrastructure together, with a receiving terminal, but at a second stage the site could be used for power plants.

Mediterranean STATISTICS

Production/ Barrel

Oil		
January-12	January-13	January-14
N/A	N/A	N/A
Equivalent Gas		
January-12	January-13	January-14
24,716,071	22,074,107	18,342,679
Condensate		
January-12	January-13	January-14
1,398,330	1,214,914	1,019,915
Liquefied Gas		
January-12	January-13	January-14
522,218	411,918	372,013



Mediterranean Rig Count February 2014

Total	Percentage of Total Rigs
7	6 %

The Maltese Government Pushes MOG Towards Conducting Environmental Assessment

The Maltese government has requested Mediterranean Oil and Gas (MOG) to conduct and submit an environmental risk assessment, an oil spill contingency plan, and a report on major hazards, prior to drilling an exploratory well off the Maltese coast, reported Malta Today on January 28, 2014. Carlo Cassaniti, an Italian geologist, stressed the need to conduct studies assessing the volcanic and seismic instability of the seabed in the Sicilian Channel, and expects catastrophic dangers due to offshore drilling in the seabed around Malta. Cassaniti also insisted that a comprehensive risk map of the seabed be published before any oil exploration activities are conducted. A ministry spokesperson said that this environmental assessment will be carried out in accordance with the Offshore Protocol of the Barcelona Convention. "An environmental assessment is not mandatory for an exploratory well but the government asked the company to conduct this assessment prior to commencing drilling operations," the spokesperson added. The reports conducted by the company to be assessed by unnamed experts appointed by the government, however, they will not be made available to the public.

Drop in Sales May Curb Diesel Prices in India

The Indian Ministry of Oil has recently revealed its aim to pullback bulk diesel prices due to drops in sales, according to Reuters on January 9, 2014. Vivek Rae, Oil Secretary, stated that India asked bulk diesel buyers to pay market rates since last January, and is slowly trying to raise the price of subsidized diesel in a step to cut India's expanding fuel subsidies. Vivek added that as a result of dual pricing of bulk diesel, consumers preferred to shift to the retail sector, and now most state transport utilities are biased to retail outlets, leaving railways and defense as the only bulk consumers in the country. The Indian government thinks that this decision would bring customers back to their dedicated outlets, while some experts consider it "a retrograde."

Arkansas Residents File Lawsuit against Oil and Gas Companies

A number of families in Arkansas decided to sue Oklahoma City-based Chesapeake Operating and BHP Billiton Petroleum of Australia. Families claim that disposal wells caused thousands of earthquakes in Arkansas in 2010 and 2011, reported Star-Telegram on February 17, 2014. Disposal wells are used to push drilling fluids and wastewater back into the earth at high pressure as a method to get rid of the liquids. "From about July 2010 through August 2011, well over [1,000] quakes of a minimum magnitude of 1.0 have occurred in the area. Two earthquakes registered a magnitude of 4.0 and 4.7. Over 30 earthquakes registered a magnitude of 3.0 or above," the lawsuit report mentioned. According to seismologists with the Oklahoma Geological Survey, only 64 earthquakes with a magnitude of 2.5 or higher were recorded in 2012 as opposed to the 222 recorded last year.

Iraq and Iran Seek to Challenge Saudi Dominance in OPEC

Iraq is currently seeking to boost its crude oil production, in an attempt to triple their production by 2020, by strategizing with Iran to challenge Saudi Arabia's dominant position in OPEC. Deputy Prime Minister for Energy in Iraq Hussain al-Shahristani said Iraq is working with Iran to attract investment, reported Ahlul Bayt News Agency on January 29, 2014. "Iran has been in touch with us. They want to share our contracts model and experience," said Al-Shahristani. Iran and Iraq together own greater reserves of oil than Saudi Arabia, which currently produces an estimate of 12.5 million bpd of crude oil. Oil prices could drop significantly if Iraq bypasses OPEC's predefined quotas and sells more of its crude oil at the open market. "It's very difficult to predict actual world [oil] demand by 2020 because the world economy is unpredictable," said al-Shahristani.

Total Reports Earnings Decline in the 4th Quarter

Total said that its earnings slid nearly 30% in the fourth quarter as oil prices remained below USD 110 per barrel and production declined. The company reported fourth quarter profit of USD 2.18 billion, 28% less than the USD 3.04 billion a year earlier, reported Bloomberg Business Week on February 12, 2014. The drop followed an earnings decline at BP and Royal Dutch Shell. Total said that production slipped to 2.284 million barrels a day in the quarter, down 0.5% from a year earlier. Total blamed normal decline and security issues in Nigeria and Libya for the drop. Total said it's on track to achieve a targeted increase in production to 2.6 million barrels a day by 2015, and possibly 3 million barrels a day by 2017. Production will benefit this year from new projects in Angola, the North Sea, and Nigeria, Total said.

Cote d'Ivoire Aims to Boost Oil and Gas Production

Cote d'Ivoire national oil company Petroci intends to boost its oil and gas production up to 200,000 barrels per day in a five-year plan, reported BusinessDay on February 15, 2014. "In terms of the upstream oil sector, our priorities are focused on increasing national production in the short term to reach at least 200,000 barrels of oil per day and 300 million cubic feet of natural gas per day," said the Managing Director of Petroci Daniel Gnangni. He assured that it's highly important to promote the unutilized sedimentary basin in the country to attract investments, but investors need to be assured that the country is safe and a favorable environment for upstream oil and gas activities. Cote d'Ivoire oil production lately has been downgraded to 30,000 barrel per day amid technical problems.

Train Derailment Spills Fuel Oil in Mississippi

According to Upstream Online on January 31, 2014, a Canadian railway train carrying fuel was derailed. The eighteen railcars of the derailed train were carrying fuel oil, methanol, and probably other hazardous materials. The incident occurred in southeast Mississippi in the city limits of New Augusta in Perry County. Local authorities were forced to consider evacuation of nearby residents. "It's not a huge city but there are a good number of folks in that area. So far they don't have a good number on how many to evacuate yet," a Spokesman from the Mississippi Emergency Management Agency (MEMA) said. Local officials said that Emergency services quickly responded to the accident. The derailment incident comes in a series of crude oil trains' derailments, when last December a derailed train crashed into another, and the horrible July incident when a crude oil train derailed and exploded in the center of the Quebec town of Lac-Megantic killing 47 people. Meanwhile, authorities are running studies to investigate and resolve the issue in an attempt to put an end to the string of derailment.

Azerbaijan Exports of Crude Oil Boasting

The Marketing and Economic Operations Department of State Oil Company of Azerbaijan (SOCAR) stated that exportations of crude oil through Novorossiysk port in Russia in January 2014 exceeded exportations from previous year by around 42 times, APA reported on February 4, 2014. Azerbaijan exported 84,739 tonnes of crude oil through Novorossiysk port in January 2014, as well as 322,996 tonnes through Supsa port (Georgia), which indicates a 33.2% increase over the past year's exportations of the same month. Moreover, 1,592,040 tonnes of crude oil were exported through Ceyhan (Mediterranean Sea, Turkey), up 11.4% in annual comparison.

Research Says Oil Pollution Levels in Canadian Sand Higher Than Previously Estimated

According to university researchers, the process of extracting oil from tar sands in western Canada is seen detrimental to the environment, yielding an amount of harmful emissions higher than that announced by cooperations, reported The Raw Story on February 3, 2014. Actual levels of polycyclic aromatic hydrocarbon (PAH) emissions into the air may be two to three times higher than estimates, said the findings in reports from the National Academy of Sciences. Frank Wania, a Professor in the Department of Physical and Environmental Sciences at Toronto University described previous statements of corporate interest as "inadequate and incomplete." "Only with a complete and accurate account of the emissions is it actually possible to make a meaningful assessment of the environmental impact and of the risk to human health," Frank added.

No Current Plans for Turkey to Draft New Oil Agreements With Iran

Taner Yildiz, Turkish Minister of Energy, announced that no new oil agreements have been signed with Iran, reported Balkans Business News on January 29, 2014. At the Industrial Cooperation and Energy Projects meeting in Istanbul on Jan 28, Yildiz stated that crude oil imports from Iraq exceeded all imports from Iran, outlining that there are no current plans for Turkey to increase trade. "In the upcoming period, of course, we will be able to sit and talk about the oil and gas amounts that Turkey buys from Iran," he said. Yildiz also added that Turkey is not rushing to develop business with Iran despite partial relief on international sanctions on Iran.

Iran: New Oil Contracts Aim to Attract Foreign Investment

A new model of oil contracts that are more attractive to international companies will facilitate foreign investment in Iran's oil projects and allow the country's oil industry to flourish, Iranian Oil Minister Bijan Namdar Zanganeh said Feb. 23, Tasnim news agency reported. Zanganeh added that the new contracts will not cut domestic companies out of the industry.

South Sudan: Rebels Claim Part of Oil Town

South Sudanese rebels said Feb. 18 that they had recaptured much of Malakal, a strategic, oil-rich town nearly 500 kilometers (310 miles) northeast of Juba, Reuters reported. The rebels said all of Malakal, the capital of Upper Nile state, would be under their control within hours. Ugandan warplanes launched attacks on the rebels from Juba, sources said. The fighting in Malakal has prompted fears of disruptions in the oil production in the northeastern part of Upper Nile state.

China: Former Energy Boss Under Investigation

Wu Zhouchun, the former boss of Guangdong Power Grid, is under investigation for suspected disciplinary violations, Xinhua reported Feb. 10. The company is a subsidiary of China Southern Power Grid Co., one of China's two main grid enterprises. Beijing's anti-corruption campaign has spread to major state-owned energy enterprises, as seen in actions taken against Zhou Yongkang, former energy tsar under the China National Petroleum Corp.

Israel: Tamar Group to Export Natural Gas to Jordan

The companies with stakes in Israel's Tamar natural gas field have signed an agreement to sell at least USD 500 million of natural gas over 15 years to two Jordanian companies, Reuters reported Feb. 19. According to the agreement, Tamar will supply 1.9 billion cubic meters of natural gas to Arab Potash and its subsidiary Jordan Bromine at their facilities close to the Dead Sea. Jordan has had difficulties in securing energy supplies, and Israel has decided to set aside some of its natural gas production for export to the kingdom.

Gulf News

Potential Land/Oil Deal Between Saudi Arabia and Pakistan

Saudi Arabia has sent an official offer to Pakistan to supply Pakistan with 250,000 barrel of oil per day, in exchange for Pakistan is to provide Saudi Arabia with 100,000 acres of its agricultural land, reported The News Tribe on January 29, 2014. The decision comes amid increasing water shortage in the country, and Saudi Arabia is seeking to close self-production of wheat and other food products by 2016 for that reason. A new food policy is expected to be notarized in conjunction with the deal.

Kuwait Gulf Oil Company to Launch the World's Fifth Largest Seismological Surveillance

Kuwait Gulf Oil Company (KGOC) had signed a contract to implement the largest three dimensional seismological surveillance in the country, and the fifth largest in the world. KGOC spokesman Ali Humoud al-Sabah said that the contract was signed with WesternGeco company, which is a business segment of Schlumberger. The preparation phase for the project will start early March, including logistic operations, surveillance, and mine detecting, reported The Peninsula on February 1, 2014.

UAE Considers Importing Gas from USA

UAE said it may begin importing natural gas from North America following the US shale boom. Increasing demand and slow production rate have made of the UAE a net importer of gas over the past few years, reported Gulf Business on January 28, 2014. The US has attracted foreign buyers as North American gas prices have dropped, and signed long-term deals with customers from China, Japan, Taiwan, Spain, France and Chile. "We may follow the same trend of considering investments in the United States and Canada to bring some of that gas back home," Suhail bin Mohammed al-Mazroui, UAE Oil Minister, said. Abu Dhabi National Energy Company has already invested in Canada's oil and gas sector. UAE has also been receiving gas from Qatar.

Yemeni Main Oil Pipeline Attacked Again

Less than one month after the attack of December 26, Yemen's main oil pipeline witnessed another bombing. The attack was executed in the Serwah district by a number of tribesmen, local officials told Reuters on February 1, 2014. The attack halted crude flow to Ras Isa, the main oil export terminal on the Red Sea. Around 110,000 barrels per day used to flow through the pipeline to Ras Isa before the string of attacks started in 2011. The attacks are seen as a method for tribesmen to pressure government to settle land disputes, provide jobs, or free relatives from prison. Because of Yemen's strategic position next to main shipping lanes, such attacks highly concern the United States and Gulf countries.

Kuwait's Crude Oil Exports to Japan Slips

The Japanese Natural Resources and Energy Agency report for January showed that Kuwaiti crude oil exports to all of Asia last month represented around 7.4% of Asian crude imports, reported Zawya on February 3, 2014. However, records show that Kuwait's oil exports to Japan, the world's third biggest energy consumer, declined 11.5% in December 2013 from a year earlier, down to 287,000 barrels per day. On yearly basis, exports in 2013 slipped 5.7% down to 253,000 bpd from the year before, whereas Saudi Arabia, Japan's number one crude oil exporter, holds in December a record of 1.26 million bpd with 9.1% increase from year earlier.

Iraqi Oil Exports Rise to 2.16 million bbls/d in March

"Iraq plans to export 2.165 million b/d of crude from its southern Gulf terminals in March, according to details of the nomination program obtained." Platts reported on Friday 21 February 2014. According to Platts, "the March rate is 38,000 bbls/d higher than the average 2.127 million bbls/d exported in 2013 and 129,000 bbls/d more than actual January 2014 exports averaging 2.036 million bbls/d." But the March nominated volume, which totals 67.13 million barrels, is 143,000 b/d below than last year monthly high of 2.308 million bbls/d, which was achieved in August. Iraq's southern export rate fell over the period between September and December 2013, mainly because of the shutting down of export jetties at al-Basrah Oil Terminal, or ALBOT, to install a major metering and manifold Platform adjacent to the terminal.

Unconventional News

Shale Gas Well Explosion in Pennsylvania

A shale gas well near Dunkard in Pennsylvania, United States, exploded last month leaving one injury and one "unaccounted for", reported WKSU on February 11, 2014. Witnesses said fire was huge and uncontrollable. The well, which is owned by Chevron, lies on a hill top in rural Green Township, half a mile of a coal mine and an industrial warehouse where witnesses in the area reported they felt an immense shake caused by the powerful blast. Three fire companies and an Emergency Medical Service unit from southwestern Pennsylvania communities promptly arrived at the spot to handle the incident, while the cause of the explosion and fire is still vague.

Developments in South African Shale Gas Exploration

The South African Department of Mineral Resources extended the ban on shale gas activities in Karoo region, which comprises what could be the fifth largest deposits basin in the world. However, exploration rights are now open to be assigned to Shell and numerous other oil majors, reported Proactive Investors Australia on February 11, 2014. "We will move ahead decisively, yet responsibly with the exploration of shale gas, to unleash its potential contribution to, amongst others, cost-competitive energy security, employment creation and a range of other latent benefits to the country," Mineral Resources Minister Susan Shabangu said. While the ban on exploration of shale has been lifted, the ban on fracking still applies. However, adoption of fracking expects approval after complete consultation of its technical regulations. The basin's capacity is estimated at about 485 trillion cubic feet of technically recoverable shale gas.

Sinopec Discovers Deepest Gas Well in China

According to the Chinese Ministry of Land and Resources, a shale gas well has been discovered in southwestern China, reported Wanted China Times on February 14, 2014. The Dingye-2HF well was discovered by China's top refiner Sinopecat at a depth of 4,417 metres in Xishui county in Guizhou province. It is now the deepest in the country and has an expected maximum output capacity of 105,000 cubic meters per day. The well exploration is seen as a milestone in China's deep shale exploration field. China is seeking shale gas development to ensure energy security and optimize energy infrastructure. According to a shale gas plan for 2011-2015, China aims to produce 6.5 billion cubic meters of shale gas annually by 2015.

New Performance Standards Established for Shale Drilling in Appalachia

In a step to protect air, water, and land in areas surrounding shale drilling, the Center for Sustainable Shale Development (CSSD) has announced 15 performance standards to regulate shale drilling in the Appalachian region of the eastern US, reported Farm And Dairy on January 29, 2014. CSSD, which is a collaboration of a group of environmental organizations, philanthropic foundations, and energy companies, established an independent certification process to assess performance standards and ensure they are being met. Andrew Place, the interim director, said that the standards were developed by drillers, environmental groups and community representatives.

Split Within the French Government over Shale Exploration Ban

Debates have arisen within the French government over shale gas exploration. Arnaud Montebourg, French Minister for Industrial Renewal and a member of President Francois Hollande's Socialist Party, is backing shale exploration using environment friendly methods, reported UPI on February 3, 2014. France has already banned shale gas development due to the adverse environmental effects of hydraulic fracturing. However, Montebourg attempted to persuade the President to reconsider shale gas exploitation using fluoropropane, a non-flammable liquid used as a propellant in inhalers and fire extinguishers, rather than traditional method which uses a mixture of water and chemical additives to break rock formations. On the other hand, other ministers, including Housing Minister Cecile Duflot of the Green Party, and Socialist Ecology Minister Philippe Martin remain rigid in their opposition to shale development.

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Egypt to Receive First LNG Cargo before Summer

Egypt's Petroleum Minister, Sherif Ismail has said Egypt is set to receive its first cargo of imported liquefied natural gas (LNG) before summer to help meet rising demand as local production slumps, Bloomberg has reported. State-run Egyptian Natural Gas Holding Co [EGAS] is in the "final stage" of reviewing three offers for rental of a regasification unit that would permit LNG imports, he said. The government aims "to secure a reasonable number of cargoes" this year, Ismail said, without giving further details. "We are working on negotiating LNG but nothing is final," Minister Sherif Ismail said in meeting to discuss 2014/2015 financial budget, MENA reported. "Egypt will add additional 1 billion dollars for imports of petroleum products during the coming 4 summer months [June till October] to provide the necessary energy for electricity power plants and to mitigate the power cuts that Egypt faces." Hamdy AbdelAziz, Media Spokesman for Egypt's Ministry of Oil, told Egypt Oil & Gas. Egypt fuel imports are worth 1.2 billion dollars per month.

Natural Gas Pipeline Explodes in Kentucky

A natural gas underground pipeline blew up on February 13 in southern Kentucky, United States on a hillside creating a crater of 60 feet width, according to Adair County Emergency Management Director Greg Thomas. The damages include two injuries, two destroyed homes, and a third home has been damaged, as well as four or five vehicles, reported Star Tribune on February 13, 2014. Thomas added they had to evacuate about 20 homes that lie within few miles of the blast, and residents were able to get back to their homes in the afternoon of the same day. Columbia Gulf Transmission Company, which owns and operates the pipeline, has halted gas flow through the pipeline. The issue caused concern over a separate pipeline project that is planned to extend a distance of 180 miles through Kentucky, leading to the Gulf of Mexico.

Bulgaria Seeking Qatari LNG

Bulgaria is seeking LNG supply from Qatar, and both sides are expected to sign an agreement soon. "Today we have discussed these issues with Qatar and are happy about the outcome of the talks with the country's leadership," said Dragomir Stoynev, Bulgarian Minister of Economy and Energy in an interview with Gulf Times on January 28, 2014 in Doha. Qatar is supposed to invest in a major LNG terminal project in Greece that will supply LNG to many Balkan countries in Europe. Stoynev said, "it will have a wider market as many Balkan countries such as Serbia, Macedonia, Kosovo and Albania will make use of the Qatari gas."

SOCAR's Oil Refinery in Turkey in Operation by 2017

An oil refinery of the Azerbaijan state energy company SOCAR is currently being built in Turkey, and will start operation in 2017, reported Azer News on January 29, 2014. SOCAR Turkey Enerji increased its share since 2008 to 62% in the Turkish Petkim petrochemical complex, which comprises factories that produce high and low density polyethylene, polypropylene and other products. "The construction of a new Star refinery with an annual capacity of 10 million tonnes has started in order to optimize demand for raw materials and reduce the amount of fuel imported to Turkey. The refinery is planned to start operation in 2017," said SOCAR's Vice President for refining David Mammadov. Investments surrounding the project are estimated at $5.5 billion.

Petronet Seeking LNG Beyond Qatar

Petronet seeks other LNG sources beyond Qatar, through which it secures 75% of its LNG supply. Managing Director and CEO of Petronet Ashok Kumar said that the company is negotiating long-term LNG contracts with Angola, Mozambique, Yamal, and Indonesia. The Petronet deal with Qatar has been fluctuating because of unsteady LNG prices which are now dependent on crude oil prices since December. "Long-term contracts will improve utilization at both Dahej and Kochi. However, at what prices these contracts are decided is crucial as the company may not find any buyers if prices are too high," said Dhaval Joshi, an analyst with Emkay Global Financial.

Chinese Refineries Raise Crude Runs in February to 84%

China's state-owned refineries plan to raise their crude oil amount to an average 84% of capacity in February, up from 81% in January, Platts' monthly survey showed. Platts monthly survey in February covered 11 Sinopec and 10 PetroChina refineries, as well as China National Offshore Oil Corp.'s Huizhou refinery. The refineries surveyed plan to process 15.41 million mt (4.03 million b/d) of crude oil in February, accounting for 84% of their combined nameplate capacity of 263.7 million mt/year. The 24 refineries surveyed in January had planned to process a total 18.97 million mt (4.49 million b/d) of crude, equivalent to around 81% of their combined nameplate capacity. There was no refinery maintenance scheduled for February and crude supply was adequate, which could be the main reason for the higher run rates, market sources said Friday.

Transforming Egypt's El Gouna City to Carbon-Neutral

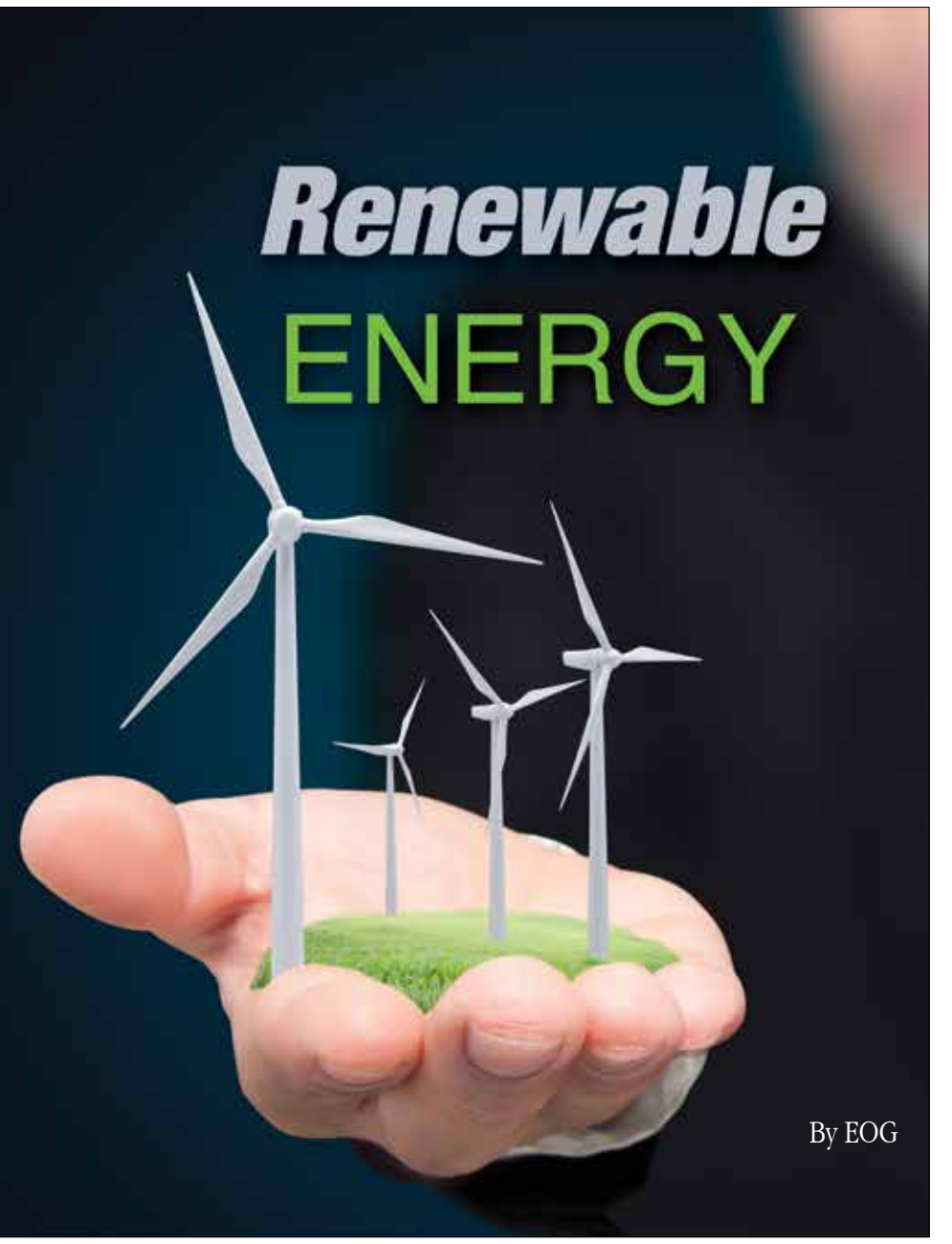
El-Gouna city is on track to be the first carbon neutral city in Egypt and Africa after signing an agreement between the Egyptian Ministry of State for Environmental Affairs, the Italian Ministry of Environment and El-Gouna City, reported E-Turbo News on January 28, 2014. The integrated project is supposed to boost the tourism industry in Egypt as well as support efforts led by the government to maintain sustainable protection for the environment. This city has the potential to be the first carbon-neutral city in the world. "El Gouna would be ready to obtain that title soon, and we will be working on implementing this project in other Egyptian cities," Egyptian Minister of Tourism Hisham Zaazou said.

Jordan Farmers To Go Solar

Jordan intends to expand its solar energy use through a project devoted to help farmers replace their diesel-powered equipment with solar energy, and reduce energy bills, reported Zawya on January 29, 2014. "Because most of the agricultural equipment in Jordan is diesel-powered, which literally means high cost, helping farmers install heat-absorbing panels on their farms will help them reduce their energy bill that devours most of their income," said Mohammad Hiyari, Agricultural Credit Corporation (ACC) Director General. The ACC is planning to give farmers a loan of about USD 42,000 each to install solar panels on their farms, according to The Jordan Times. Hiyari also said that ACC is responsible for funding, while technical issues will be assigned to companies chosen by farmers.

European Commission to Phase Out UK Wind Farm Subsidies

European Commission is preparing to issue a policy to end subsidies for onshore wind and solar power industries. Since the industries are "mature" they shouldn't receive taxpayer funding, said the commission, since European Union governments are not allowed to supply long-term aid to domestic industries that can operate without support, reported The Telegraph. "The commission has been making it pretty clear that it's moving towards saying that these industries are mature and state aid won't be allowed," UK government source said, according to The Herald on February 13, 2014. This new system, which is expected to apply in less than two years, will open competition between wind farm operators for a share of a reduced public subsidies.



By EOG

Insider Perspective:

Former Egyptian Minister of Oil

Osama Kamal

Gives Daring Interview

Can you brief us on your career history up till now?

Originally I started in the 1980s in the private sector as a Process Engineer in water and wastewater treatment. Then moved to ENPPI in 1983, where I worked for around 17 years in different posts, where the last one was as General Manager for projects.

Later on I moved as Assistant to the Chairman in Petrojet, after that I was appointed as Vice Chairman for the Egyptian Petrochemical Holding Company (ECHEM) for planning and projects. This was followed by me moving to Mobco as Chairman and CEO, and then back again to ECHEM as President and Chairman to the Executive Board. Afterwards I became the Minister of Petroleum and Mineral Resources.

I currently freelance as a consultant to many international organizations, specifically in the petrochemical sector. In addition, I am volunteering in a lot of jobs, including the Organization of Building and Developing Egypt encompasses a lot of young, ambitious and creative individual workers, thus integrating their inventions for bigger jobs including solar energy research and application, agriculture, industrialization, even textile you name it.

You became Minister of Oil on August 2nd 2012. In the time of Prime Minister, Dr. Hesham Kandil. What were your expectations? And why did you accept it?

Originally a friend of mine was nominated as Minister of Petroleum at that time and all of a sudden I have been contacted, requesting me to me with the Prime Minister, but what crossed my mind was that I was to work for either the ministry of industry or ministry of investment due to their vacant status.

It was actually a surprise when the Prime Minister at the time told me that the former President [Mohamed Morsi] did not favor the other candidate and he was requested to propose another name for Minister of Petroleum. He told me frankly that I was the last one on the list from the petroleum sector, and if I did not accept that nomination they were going to get someone from outside the petroleum sector. Then I had no choice but to accept out of loyalty to the industry and Egypt.

if you are going to harm the industry you are going to harm Egypt. Unawareness of this sector and its circumstances would lead to a lot of delays due to the need for accommodations.

By Sherif Elhelwa

Why do we have natural gas shortage?

We don't have a shortage in natural gas, we are maintaining the same production rates. The problem is that we had future plans that would lead to consuming more gas quantities, which wasn't produced yet. We were expecting to produce 6.4 BCF per day by 2012 and the required quantities at that time were 6.3 BCF per day, but that didn't happen, and we maintained a 5.5 BCF per day. That's to say we're lacking 1.0 BCF per day. In 2013 production rate was planned to reach 8.4 BCF per day from new developments, which didn't happen. Simply you're lacking developments that lead to increased production.

In order for development to happen you need investors, where are the investors?

The current investors can't inject any more cash unless they've paid their overdue bills. This behavior of delaying payments started in 2010 leading to an accumulated overdue, reaching 6.5 billion USD, which under the current economic situation can't be paid back in a year. As much as we care for compensating the overdue bills, we also want to maintain the current invoices on time.

With the debts to IOCs issue and the challenges currently facing the economy, could you give us your insights on the circumstances surrounding the development of the country?

The debt issue did not impact the bids that we newly announced simply we've awarded approximately 22 new concessions over the last 6 months that were tendered before, some of them in the deep water, some of them in the Western Dsert, some of them in the Red Gulf area and in the Red Sea area.

What we are worried about is the current situation and how to reconcile all their overdue. It is not that tough to handle as we reached an agreement with them to inject some additional investments in order to increase the current production and we allocated a share of this new production as a compensation of their overdue.

Can you describe the mechanism for fuel sales and marketing in Egypt, and what are the obstacles faced while you were a Minister?

Due to local regulations you cannot sell at two prices. We actually spoiled the market by selling not only gas, but oil products as well at very low prices in comparison with the prices of the international market. When we increased the gas price from 3 to 4 dollars per million tubes the producer decided to sell a ton at 620, we spoiled him. They are now used to get something like 150% profit margin and they are not in a position to reduce it, this is not logical. Nobody in the world can imagine that he is getting a 150% profit margin.

Can you define corruption, and what the solution is to combat corruption?

Corruption in this case would be selling natural resources at lower price to a selected a number of business men to make a fortune. I guess we have many of them.

Despite of the realizing growth rates that exceeded 7% this did not actually help the community to recover, we had seen that poor people are getting poorer which means that this 7% was only limited to a limited group of businessmen, but the majority of the society can not feel it.

The solution is that we first of all have to find alternatives to the petroleum products, for energy consumption. We're currently consuming all the natural resources of the country in businesses that do not add real value to the natural resources. Generating electricity from natural gas or diesel oil is not a good solution for energy, taking into consideration that you have alternatives, like solar cells, windmills, and even nuclear resources. Currently you can get cheaper electricity from solar cells rather than oil resources at a rate of 10 cents per kilowatt, while it costs you right now something like 20 cents, so you can get it at a half price. This will actually save not only your budget but also your resources and your natural resources. Second, you can redirect all these oil resources to other higher value industries such as chemicals where you can get an added value of something like a hundred times when you generate power.

In order to replace those corrupt investors you need to have an established government, and established system, to attract newcomers. How long do you think the interim government is going to continue, with no parliament, and do you think investors out there are waiting for things to change?

The oil and gas business has a habit of being resistant to surrounding problems, good examples of that are Libya and Iraq. With the current efforts I do not expect people are going to wait long. Political improvements are needed for us and the investors to explore the future in Egypt. The question really is: are we back to the dictatorship era or are we really going to improve the situation thus applying the rules of freedom?

What's your vision involving the current production sharing model? Is it what we could claim to be financially attractive to investors, or should there be further amendments?

The second day I was appointed as a Minister, I formed a committee led by Dr. Mustapha Refaei, to prepare a report on the added value gained coming from the oil and gas business over the last 15 years. I just wanted to evaluate the current situations and circumstances and how we could improve it. Some people consider the oil and gas business in Egypt as a black box, which it is not, it is truly transparent, the only item which is not announced is the agreed pricing because it is different from contractor to contractor.

Can you explain the bidding process for oil and gas concessions?

The process involves announcing a tender where some areas are allocated where we have expectation of oil and gas reserve in these areas. The people submit offers, they start making analyses, and then if they agree to it, they submit a bid with terms and conditions except for the selling price of the product to the Egyptian market because this is optional, as they can export their share.

Based on this they start making an offer, which includes the number of wells and their costs, including drilling and development.

There are terms and conditions, when calculated over 30 years compared to others, as for each concession you have 4 or 5 different figures. After this, we start making this analysis, and the best conditions that represent the best net present value (NPV) is the winner.

You have the concession but you still do not know how much gas

can be produced and what the real expenses will be. Once you achieve what we call a commercial discovery we discuss the depth of the water, the maturity of the field, and the type of resources it encompasses.
Every bidder has a certain figure in mind as an Internal Rate of Return (IRR). Bidders realize this IRR by negotiating their share (which is around 15-25%), the mechanism of recovering the expenses, the selling price of the product to the local market, specifically to the Egyptian government, keeping in mind that, there are 4 identified for concession agreement; simply royalty, profit sharing, production sharing and services. This is applied all over the world.
First, you get a bidder who is paying for your royalties, 40%-50% that you get per year for this concession. Second, is to know how much the contractor is producing. What are his profits? Then you share with him the profit. Third is the production sharing agreement (PSA) where you form a joint company, then you start operating the company jointly where a certain amount and quantity is allocated to the bidder and you [Egyptian Government Partner] share the rest, and the last one is you get contractor to work on your behalf paying him the actual cost of doing the job and the oil or gas used. These are the four criteria.
In Egypt we are applying the production sharing methodology because it's clear for us, we know how much gas, how much production is realized. We can easily monitor and control the production cost as we are jointly doing the job with the partner. In addition, it allows for some technology transfer, not on the upstream activities, but on the downstream activities, such as oil and gas treatment.
Recently we applied the contractor criteria to the north Mediterranean region with BP, agreeing to pay them a rate ranging from 3.1 to 4 dollars per million standard cubic feet discovered.

Do you see the production sharing model as a conflict of interest since the moderator is the partner at the same time?
EGPC is a partner but carries a share since [they're] not really investing and the partner [IOC] is paying all the investment. There is no conflict. Let's say EGPC is a partner with BG in a field, the partnership actually comes into force when the commercial discovery is announced—when the gas pricing is announced and agreed upon—so there is no conflict. After that what [EGPC is] doing is monitoring and controlling the production activities in order to assure that the fields are producing in accordance with development plans in place.

What are the current reserves for natural gas and oil in Egypt?
The current reserves for Egypt for natural gas are around 70 TCF, and for oil around 30 billion barrels.

Why do we have different figures, why is it that we don't have transparency in information when dealing with this line of work?
It is because of the dynamic state of the reserve figure. The problem is that we have access to the production figures on an hourly basis, so the figure is actually changing every hour.

Who knows about negotiations taking place within the People's Assembly (Parliament)?
Only members who are part of the concession agreement, who happen to be six members from the EGPC board. They're knowledgeable about the circumstances and negotiations. Those members are the Minister of Finance, the Treasurer of Egypt, the Minister of Industry, the Minister of Investment, the Minister of Electricity, the Minister of Local Development, and the Legal Counselor of the Cabinet.

Why are those negotiations top secret?
Complete exposure would hinder the success of the negotiations process. Confidentiality is maintained even after the negotiations. However, we announce the percentage division, and the rate of recovery, expenses and the signatory certificate that is given by the contractor, which is openly announced in the official newspapers.

Why doesn't the losing bidder get to know the reason behind his inability to win the bidding?
For the same reason, the quoted price is never the decisive factor, however, a whole formula is used: the capital expenditure (CAPEX) and the operational expenditures (OPEX) for ten years, leading us to the evaluation price. However I am not required to announce my evaluation criteria to prevent unwanted negotiations.

Allow me to ask you about your personal black box, your conflict with former President Morsi, since you took your role as Minister?
There were never personal conflicts, I used to perceive them as lovely people, but there are ones who hid behind the prime Minister and the president at that time whom I might've had conflict with.

Who are the people veiled by the president and the prime Minister?
I don't like to talk about politics, and it's not honorable to point the finger at people who can't defend themselves, however I'll talk business wise: The fuel consumption rate per year is 80 million tons, the foreign price range is around 880 USD/ton and it increase to USD 910, thus the net price should have been EGP 422 billion, and you want to sell them for 70 billion EGP inside the country. Thus, it sounds rather ridiculous to be asked to sell them with usual price. So if we sell them for 70 the government pays 130. The organization used to account for 200 billion dollars.

Did that have anything to do with the USD exchange rate at that time?
No, those 80 million tons had 70% of them produced by us, this was calculated by the following method: the unrefined oil had a different cost, as the unrefined oil was worth USD 100, which could be used in production of products worth USD 150, so 70% came from national production, thus it costs nothing, which of course is a preposterous theory.
There is a term that applies to this situation, "the code of fortune." According to their theory the other 30% is the percentage reserved for the international supplier, and based on that, the liter of diesel would cost EGP 4.5. It's sold in Europe for 2 USD and the import price was for USD 1,000 per ton excluding the shipping and storage costs, and internationally it was sold for USD 2,000 per ton. Each ton fills up 80 tubes, and the tube at that time was EGP 2.5. When it reaches shore after being taken off the ship, it would cost EGP 200, thus this feasibly was unacceptable, especially if other suppliers are owed, for example to pay the electricity suppliers. Then you were even asked to overcome the debt on your own and that included taxes too.

Are they currently applying the same method?
Yes they are. I've said that the recent number exceeded USD 350 billion, and the current oil Minister didn't retort, even when I confronted him with the current numbers in a symposium. I said that out loud due to the conflict with the treasury. Support is defined by the international price of the product—the price of the product in the national market. The catastrophe caused by the persistence to wrongly use the subsidies rules lead to a deficit of up to 65%, which lead to no one wanting to invest neither internationally nor nationally.
[We need to] put an end to financial conflict caused by the unbelievable expenses that companies had to cover on their own, the operating cost was always an obstacle I had to face. Upon the day of my resignation the electrical bill was worth EGP 50 billion, today that number reached to EGP 80 billion. From the 1st of February till the 28th of April I had to send harsh messages to the electrical company denoting that the sites won't be provided by electricity unless they are paid upfront.
This was a very heavy conflict, as they thought I was instigating the market against them. I was not doing this to move prices—the truth of the matter is that today the electricity costs 100 billion worth of products, then electricity has to stop being supplied in stations working with gas and oil, and should be directed to stations working with solar energy. For example, for every year around 1,000 mega being transmitted through solar energy, costing a rate of EGP 0.7 per watt. Today it costs EGP 1.50.

What would it cost us to use those unconventional methods to achieve that kind of saving?
It costs nothing to apply this method—that is financed by the private sector, which provides electricity for 70p as it part of their sponsorship, and believe me they are making a profit too.

Is the government moving in that direction?
The government does not want to move in that direction, as the energy companies are profiting from the current situation. There are maintenance contracts, and income is being given regardless of the surrounding circumstances. Thus, the current conflict is caused by personal interests and corruption as the private sector would [have to] cut down on their income and profits. That's for the electricity. Another big problem is in the fuel consumption. However, the electrically powered cars can be charged to move longer distances for a cheaper price (2 kilo-watt for 300 km), and the car speed can go up to 200 km/h. If we are dealing with gasoline the expenses would be higher as it requires two barrels of oil per 300 km. I am suggesting this alternative to push the citizen to take decisions in accordance with the needed requirements to develop the country. Thus within ten years, 50% of the support costs would be reduced. All of these suggestions were given to the Prime Minister and the President at that time, and nobody was listening.

Why did you have a hard time implementing your ideas while being Minister of Petroleum?
The application of an idea was highly dependent on the political party that you came from and I belonged to none of them. Their point of view was that diesel oil is is in demand, and the expenses would be cut down by it being distributed among other parties including the civil organizations, which were owned by the Muslim Brotherhood. That would increase the cost of the tube to 8 EGP, and I wouldn't play that kind of game. And if you keep on haggling you become not favored.

Did you know that you were going to be dismissed during the change in the ministries?
I became [Minister] with the state mind of knowing that the state of presidency was temporary. I knew that I wasn't staying for long. That was an incentive driving me to do my best and to leave a big mark behind me that would make a difference.

How many countries did you travel to while you're Minister of Oil to resolve national fuel issues?
I traveled to Russia, Libya, Iraq, Qatar, and that was due to the inefficient output of [Egyptian] refineries, and truly it is ridiculous how we wanted to import products while our refineries' output was 80%. The reason we traveled to Russia was to negotiate importing gas, but we had to give them an alternative for our demands during the negotiations. The method of the Muslim Brothers was dependent on "thug-like dominance" over the gas sources, leading BG to announce force majeure.

Is it true, that we are going to import gas from Israel via BG?
We don't have the right logistics to import gas from Israel. The natural gas pipeline between Israel and Egypt is always under attack, and the borders are not prepared for this kind of arrangement. Plus the import price is higher than the export price we were offering them.

While you were the Minister, the cement companies claimed that they didn't have enough gas to work efficiently. Can you give a brief about the problem?
The claim isn't true, and I asked for a sheet explaining the consumption rate of the dependent companies, as they took more than they needed and the natural gas meters has no control over it. The amount factories need is based on the production rate. As you can see there is a problem with control too, which would lead to facing liabilities by the company situation.

What were the recommendations you provided to solve the Egyptian energy crisis?
I suggested to the new estates and housing compounds to add solar sheets to the houses to provide more energy to the cumulative energy network, thus decreasing the daily cost of the daily consumption of the houses. All these developmental plans have been presented to the Prime Minister and the President of that time, and even the current Prime Minister isn't keen to apply those new methods.

What're your visions to mitigate the crisis?
Well I have been trying for a while and it hadn't resonated yet with the government. Back in the day there was an agenda behind every decision, that is to say they were waiting till their own governments will come then they can take those decisions and relate that to themselves. I am here talking about an all-encompassing vision for the Egyptian society. Imagine that we can use electrical cars and not using gas fueled cars, which would lead us to not need the subsidized rate. We can use that remainder in the needed facilities including the transportation facilities, thus saving EGP 65 billion.

Is there a war between the private-sector mafia and the government?
Yes there is, it is all dependent on personal gains, so what do you expect? They all have this attitude of hindering wills and passions but I will not give up and I will not get frustrated. And currently I am creating alternatives so as not arrive at a dead end.

OVERVIEW OF EGYPT'S UPSTREAM SECTOR

By Laura Raus

Egypt's Hydrocarbon Reserves

There are three major hydrocarbon-producing regions in Egypt: the Gulf of Suez, the Nile Delta, the Mediterranean, and the Western Desert. As of January 1st 2014, the country is estimated to hold 3.36 billion barrels (BCF) of technical liquid (oil and condensates/NGL) contracted reserves, 2.71 billion barrels of them commercial (on-stream or under development). Technical gas reserves total 53 Trillion Cubic Feet (TCF), 28 TCF of them are commercial (contacted). Gas comprises 64% of commercial reserves on an oil equivalent basis, 22% of the reserves are made up of oil and 6% of other liquids, according to a 2013 Wood Mackenzie report provided by EGPC.

The share of gas reserves is expected to grow thanks to discoveries in the Mediterranean and the Western Desert. Especially deeper, unexplored Oligocene plays offer strong potential for new finds, such as BP's recent Salamat discovery. Recent oil discoveries on the other hand have been modest, especially compared to the giant finds made at the Gulf of Suez in the 1950s-1970s. Considering the maturity of the Gulf of Suez, oil reserves will probably grow as a result of applying secondary and enhanced recovery techniques to existing fields rather than through exploration.

Licensing and Production Sharing Agreements

In Egypt, international oil and gas companies (IOCs) can participate in hydrocarbon production via production sharing agreements (PSAs), which stipulate that IOCs pay all expenses, partially to be recovered afterwards. IOCs sign PSAs with national oil and gas companies (NOCs). There are three NOCs in Egypt:

1. Egyptian General Petroleum Corporation (EGPC), established as the General Petroleum Company in 1956, manages the oil industry—licensing, exploration, production, refining, transportation as well as marketing.
2. Egyptian Natural Gas Holding Company (EGAS) was established in 2001 to stimulate the development of the gas sector, while giving EGPC the opportunity to focus on declining oil production.
3. Ganoub El Wadi Petroleum Holding Company (GANOPE) was established in 2003 to spur exploration and production in Upper Egypt, which has many under-explored basins.

Until 2003, EGPC was responsible for all licensing. Since then, EGPC, EGAS and GANOPE offer their own bid rounds. EGAS licenses gas-prone areas in the Nile Delta and the Mediterranean and GANOPE licenses acreage in Upper Egypt and the Red Sea, whereas EGPC awards blocks at the Gulf of Suez and the Western Desert.

Exploration licenses given by EGPC, EGAS or GANOPE give the IOC the right to explore for hydrocarbons in specified concessions. There are several biddable parameters. EGPC has traditionally taken most into account parameters like minimum work commitment and profit oil-gas split. Nevertheless, the latest licensing round indicated growing importance of signature bonuses.

The contract period of seven to nine years is divided into three phases. The IOC must give up 25% of the area at the end of the first and the second phase. At the end of the third phase, the IOC must relinquish the remaining area; except the zones that have been converted into development leases. Since 2001, the IOCs have had to assign USD 50,000 per year to EGPC during the exploration period for training of Egyptian nationals. They also have a commitment to give preference for Egyptian nationals when employing staff.

In case of a commercial discovery, a PSA is drafted and a non-profit joint venture company is established, in which the IOC has a 50% stake but whose expenses are covered by the IOC. Before the issue of a development license, a period of delineation and assessment is permitted up to one year after commercial oil, and two years after commercial gas is discovered. An oil development license is usually granted for 20 years, with one optional five-year extension. A gas development license is granted for 25 years.

Fiscal terms of upstream PSAs:

- Bonuses and fees. A signature bonus, normally ranging from USD 0.5 million to USD 5 million, is payable upon the law that approves the PSA coming into effect. Production bonuses are paid upon average daily production reaching certain thresholds. Their level depends on production volume, and indicative payments range from USD 2 million to 6 million in recent contracts. Since 2001, there exist also development lease payments due upon the approval of development licenses for each block, and an extension payment due upon approval of a five-year extension to a development license.
- Cost recovery. The cost oil/gas limit—a percentage of production that the IOC can use to recover its costs—has been made negotiable since 2001, but is usually not higher than 40%. Exploration and development costs are recoverable at 20-25% per year, whereas operating costs can be recovered in the year they were made. The excess cost oil/gas, which emerges in case of higher-than-expected production, is divided between the NOC and the IOC based on a ratio that is biddable since 2001.
- Profit oil/gas split. Since 2001, the IOC is entitled to 15-30% of profit oil/gas, i.e. the production left after cost recovery, with the rest belonging to the NOC. 30% applies when the output is below 10,000 b/d in case of oil and under 50 MMCF/d in case of gas/LPG. If it exceeds 100,000 b/d or 500 MMCF /d, the IOC´s share is 15%. Under the domestic market obligation, the NOC has priority over other customers to purchase the IOCs share of oil/gas.
- Product pricing. EGPC is entitled to buy oil and condensates at a USD 0.95 per bbl discount to the export price. Gas purchase prices since 2001 are typically linked to Brent and subject to a price floor and a ceiling, with a few projects still retaining the former link to the Gulf of Suez Blend crude. Currently, the floor price is set at USD 2.5 and the ceiling at USD 2.65 per MMBTU. For comparison, international hub prices range from USD 5 per MMBTU in the US to almost USD 20 per MMBTU in Asia. As of last year, the government sold gas to many energy intensive domestic industries at USD 4 per MMBTU, according to Daily News Egypt. In case of a commercial gas discovery, the NOC will try to find a local market and sign a gas purchase agreement with the IOC, undertaking to buy 75% of the daily contracted quantity specified in it on a take-or-pay basis. If no market is found either by the NOC or the IOC within eight years, the NOC obtains the right to the gas.
- Royalties and taxes. Royalties, normally 10% of total production—as well as 40% income tax on profits from the project—is paid by the NOC on behalf of the IOC. There are no additional profit taxes, nor environmental or social development levies in Egypt. IOCs are exempt from sales taxes and export/import duties.

As for downstream fiscal terms, pipeline costs are included in upstream expenses and recovered as other capital expenditures. Generally, the IOC is entitled to use the pipelines it has constructed, but the government can authorize a third party to exploit them. Egypt's LNG plants are tolling facilities. The IOC builds, owns and operates a LNG plant in return for a processing tariff from which it recovers its costs and makes return. Its upstream supply partners retain ownership of LNG.

Fiscal structure of oil and gas contracts in Egypt

The Past, Present, and Future of Egypt´s Hydrocarbon Production

First Steps in Developing the New Industry

Egypt saw its first oil exploration in 1860. The first field discovered in 1869 was named Gemsa at the Gulf of Suez and started yielding oil in 1910. The Anglo Egyptian Oilfields, a joint venture company, was established by British Petroleum (BP) and Royal Dutch Shell (Shell) to develop the field. Several other fields were discovered in the following years by a number of companies and the government's Department of Mines.

As anti-foreign sentiment in Egypt grew towards the middle of the century, the award of new leases was restricted to companies where Egyptian nationals had at least a 51% stake. Consequently, exploration drilling ceased completely by 1951.

This prompted the government to lift the restriction, and main terms of concession agreements were included in the law in 1953. These set royalty at 10% in the Western Desert and at 15% in other areas, and income tax at 17%. As a result, companies commenced exploration again. In 1956, an Egyptian state oil company called "General Petroleum Authority" was set up to carry out exploration on behalf of the state. It was renamed as Egyptian General Petroleum Corporation in 1962.

Regulatory Changes to Stimulate the Sector

In 1962, Anglo Egyptian Oilfields was nationalized. However, a year later, EGPC started setting up joint ventures with private companies in order to encourage foreign participation. The first partners in joint ventures—where EGPC had a 50% stake—were Eni, the American Oil Company (Amoco, which merged with BP in 1998), and Phillips.

In 1973, EGPC introduced production sharing agreements, and existing joint ventures converted to these as well. According to PSA terms, cost oil/gas limit was 25-40%, with 10-25% of exploration costs covered per year and EGPC entitled to any excess. IOCs were entitled to 15-20% of profit oil/gas. Exploitation licenses normally lasted for 20 years, with an option for a 10-year extension. In 1983, a gas clause was introduced, which entitled IOCs to 25-36% of production. The overall terms of PSAs were changed slightly three years later to encourage exploration further. Among other changes, excess cost oil/gas was to be divided between EGPC and IOCs on the basis of profit split. In 1993, IOCs maximum share of profit oil increased to 25%. In 2001, EGAS was established in order to stimulate the growth of gas sector.

Giant Discoveries, Exploration, and Production Boom

Thanks to the new policies, the activity of IOCs in Egypt increased considerably and some giant discoveries were made, in particular Morgan (1965), July (1973), Ramadan (1974), and October (1977) by Amoco at the Gulf of Suez. Shell's promising Badr El Din and Abu Sennan discoveries in the Western Desert in 1981, alongside with the high oil prices of early 1980s, created an exploration boom that lasted throughout the decade. The 1990s saw a series of successful licensing rounds as well, which resulted in most of Egypt's hydrocarbon-potential geography being licensed.

As a result of the giant discoveries, liquids production saw immense growth from 1975 to 1985. Oil output reached its historical peak in 1993. On that year, the average production was 912,000 bbls/d, about three times more compared to 1975.

Gas production also experienced considerable growth throughout the four decades after Eni discovered Egypt's first gas field, Abu Madi, in the Nile Delta in 1967. The growth quickened markedly in the 2000s, supported by rapidly increasing domestic demand and the sanctioning of gas exports in 2001, which lead to the establishment of two LNG terminals. Egypt became the second largest gas producer in North Africa. The production peaked in 2009 at ca 6 BCF/d.

Production Trend Turns Downwards

Since 1993, Egypt's oil production has seen a downward trend. This is largely due to the fact that the Gulf of Suez fields, which have driven Egypt's oil production for decades, have become mature and less profitable. In early 2000s, BP managed to negotiate improved fiscal terms and a license extension for its GUPCO Merged Concession area at the Gulf of Suez, since it had otherwise become uneconomical to exploit further. Similarly, Eni re-negotiated the terms of its Belayim field license and extended its development lease to 2030.

Decline of the Gulf of Suez's oil output has been partly offset by that of the Western Desert, which saw rapid growth of activity in the 1990s, and by 2009 had become the largest producing area. Through acquisitions and extensive drilling in the 2000s, Apache became the key company operating there and the most active onshore driller in Egypt.

Decline in oil output has also been partly offset by condensate production, which first started in late 1970s and saw an upward trend in the following decades. In recent years, condensate production has increased mainly due to several large gas-condensate projects being launched.

The government has tried to encourage new exploration by frequent bid rounds and offering blocks in less known regions like the Red Sea and Upper Egypt. However, there has not been much interest in such regions. Besides, licensing is hampered by lengthy delays since awards need an approval by the parliament before any work can be carried out on acreage.

In addition to declining liquids production, activity in the gas sector decreased due to higher costs. As a result, the government started approving improved fiscal terms for the Mediterranean gas developments in 2008. Under the new terms BP and RWE Dea agreed with EGAS in 2010 for North Alexandria development, and the floor price was set at USD 3.0, with a ceiling price at USD 4.1 per MMBTU, corresponding to Brent oil prices of USD 75 and USD 100 per bbl respectively. Despite this, gas production began a downward trend in 2010.

As another blow to the hydrocarbon industry, in early 2011 several operators had to suspend drilling since expatriates were evacuated due to the January 25th Revolution. However, expatriates soon returned as the political situation stabilized somewhat and the normal level of activity recovered in the second half of the year, although no high-profile discoveries were made.

Despite changes on the top and resulting instability, there have been several bid rounds in recent years. EGPC launched another bid round in September 2011, where 11 blocks were awarded out of 15 on offer. TransGlobe Energy won four blocks and Shell three blocks, with other incumbents obtaining the remaining four. In 2012, EGAS and Ganoub El Wadi Petroleum Holding Company, GANOPE, organized bid rounds. As a result, EGAS managed to award eight blocks out of 15 on offer last year, with BP acquiring two, Edison & Petroceltic two, and Eni, Dana Gas, Sea Dragon as well as Pure Vida Energy a single block each. GANOPE awarded seven blocks out of 20 offered in Upper Egypt. In December 2013, four blocks were under negotiation, with one initial award made to Dragon Oil.

Also some significant discoveries have been made in recent years. In 2012 Apache was the most successful explorer, discovering 90 mmbbl of oil equivalent, much of it thanks to the Western Desert blocks it had purchased from BP in 2010. Eni's Emry Deep discovery in the Western Desert, estimated at 56 mmbbl, was the largest single oil find in 2012. BP/Eni made the largest gas discoveries with the Seth South and Taurt North deepwater fields in the Nile Delta estimated at 500 bcf in total. It is estimated that in the last year, drilling experienced a modest decline compared to 2012. Some smaller operators halted their plans due to political unrest and delayed payments. BP made the largest discovery of the year—the deepwater Salamat find in the Nile Delta that is estimated to contain up to 10 tcf of gas.

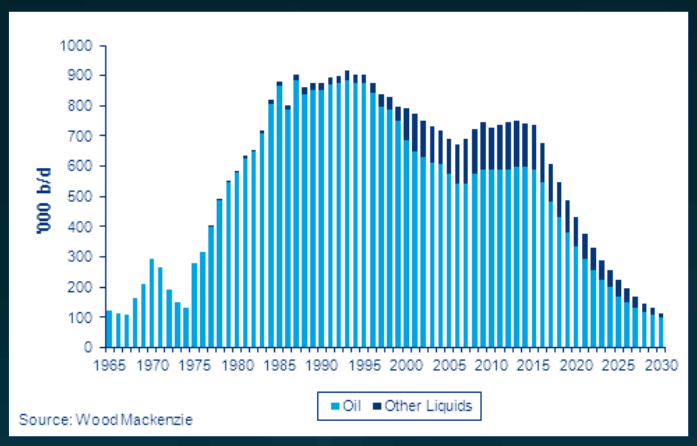
The Future Outlook Is Bleak

In the past decades, Egypt's hydrocarbon sector has been very successful thanks to low operating costs, reasonable financial terms and high drilling success rate (above 25% in the last 20 years). However, this success story has become to an end.

Whereas Egypt's oil output has been in decline for more than a decade already, falling gas production has also become a concern. Egypt still has large gas reserves in the Mediterranean, but the prices the government offers for IOCs for gas sales are not sufficient to undertake costly deepwater activities. Several projects have been delayed, including the vast North Alexandria development in the Mediterranean, for which BP did attain better fiscal terms a few years ago, but that again has become uneconomical to develop because the prices Egypt offers for gas have not kept pace with cost inflation. This is so because gas floor and ceiling prices are not lifted depending on the inflation under the current pricing formula, which was adopted in 2001 because high oil prices of that time made the previous formula disadvantageous for the government, as it did not set limits to the crude-indexed price.

At the same time that gas production is falling, its domestic consumption continues to grow at a fast pace, encouraged by energy subsidies. The consequence is a severe gas deficit, which has adversely affected Egypt's electricity and cement production as well as exports, which have fallen below agreed capacities.

Analysts believe that the government is forced to continue renegotiating the fiscal terms of PSAs for deepwater gas resources and mature oil assets in order to encourage IOCs to develop them. However, despite this, the downward production trend is expected to continue. The fall of gas production is forecasted to quicken at the end of the decade, with only ca 1,500 MMCF/d—a level not seen since early 1990s—being annually produced by 2030. The decline of liquids production is set to quicken in just a couple of years. By 2030, Egypt is forecasted to produce solely an average of 100,000 bbls/d, a level last seen in the 1960s. For comparison, this year Egypt is expected to produce 5,460 MMCF/d of gas and 743,000 bbls/d of liquids.



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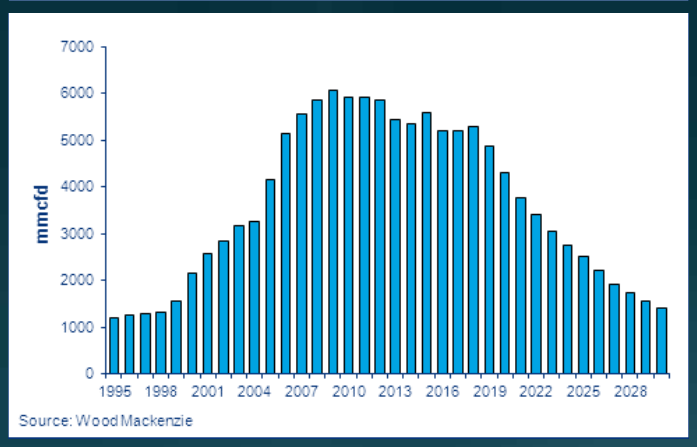


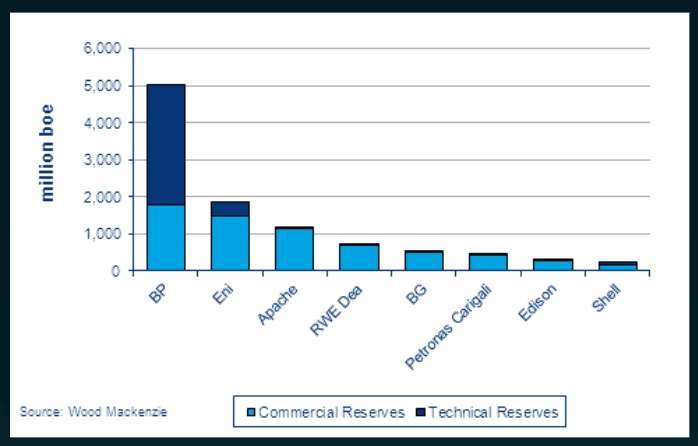
Source: Wood Mackenzie

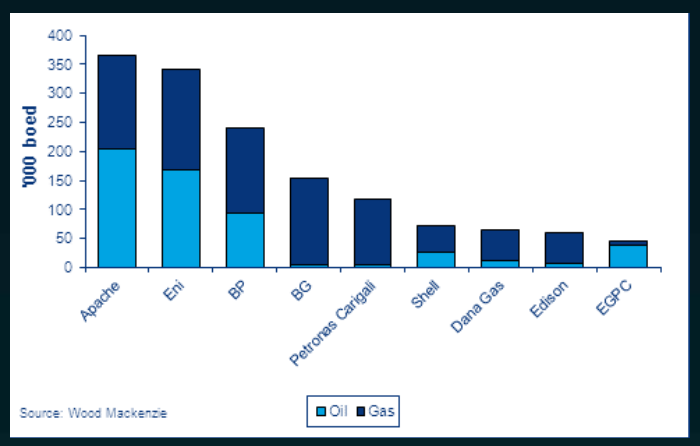
Source: Wood Mackenzie

Key Companies in Egypt's Hydrocarbon Sector

As Egypt offers investment opportunities of varied size and type in the hydrocarbon sector, its corporate landscape is the most diverse in North Africa, encompassing majors as well as small independent companies.

- In Egypt, BP has mature oil producing fields at the Gulf of Suez and new gas developments in the Mediterranean. Thanks to many discoveries, it owns the largest gas reserves in Egypt. However, much of these have not been developed due to low domestic gas prices.
- Whereas in the 1990s, Eni's Egypt portfolio mostly consisted of oil-producing assets at the Gulf of Suez, improved fiscal terms for gas made it turn to the gas market. By now, it has become the leading gas supplier to the domestic market. The company also invested in an LNG export plant in Damietta, but this has been shut due to supply deficit since 2012.
- Apache entered Egypt only in 1994, but thanks to several asset acquisitions, including obtaining BP's whole Western Desert portfolio in 2010, and active exploration, it has become the leading operator in the Western Desert and the most active driller in the country. In 2013, Apache sold a third of its Egyptian assets to the Chinese giant Sinopec as shareholders undervalued them due to the country´s political instability.
- BG is the main LNG exporter in Egypt, purchasing the entire output from the two-train Idku LNG plant. However, the plant is operating significantly below capacity since 2010 when more gas started to be diverted to the domestic market due to increase local consumption and decreased exports. Accordingly, BG issued force majeure notices on January 27th to avoid legal consequences.





Egypt's Oil and Gas Infrastructure

Egypt has several oil and gas pipelines. The most important oil pipeline is SUMED the 2.4 million bbls/d running from Ain Sukhna marine terminal at the Gulf of Suez to the Sidi Kerir terminal at the Mediterranean via the Dahshour pumping station outside Cairo. The line, owned 50% by EGPC, carries crude from Egypt, Saudi Arabia and Iran.

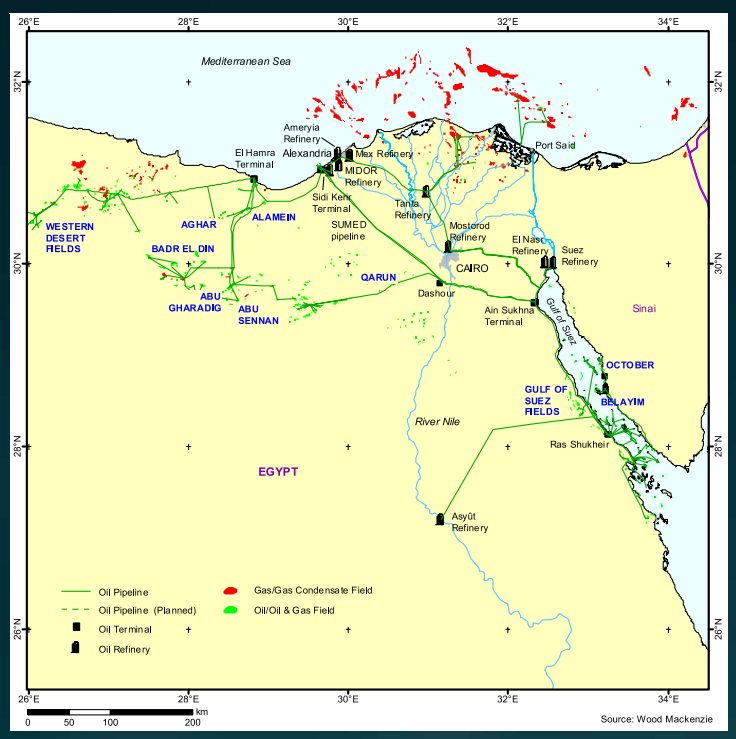
There are two gas export pipelines. In 2003, a 970 MMCF/d pipeline from El-Arish in Sinai to the Jordanian port of Aqaba began operations. Egypt started supplying gas to Jordan with preferential prices and 90% of the daily contracted quantity on a take or pay basis under a 15-year contract. El-Arish-Aqaba line is the first phase of the Arab Gas Pipeline. Upon completion of the second phase in 2006, gas began flowing from Aqaba to el-Rehab on the Jordan-Syria border. By 2008, the line was extended to Syria. Phase four has not been agreed upon. It has been envisaged that the pipeline would be extended from Syria to Lebanon and Turkey, but these plans were shelved after Egypt started suffering from gas supply deficit. Due to the deficit and attacks on the el-Arish-Aqaba pipeline in Sinai, Egypt has not provided Jordan with agreed quantities of gas (240 MMCF/d) for several months, even though the terms of their contract were renegotiated in 2011 so that gas price more than doubled to USD 5 MMBTU, informs Middle East Monitor.

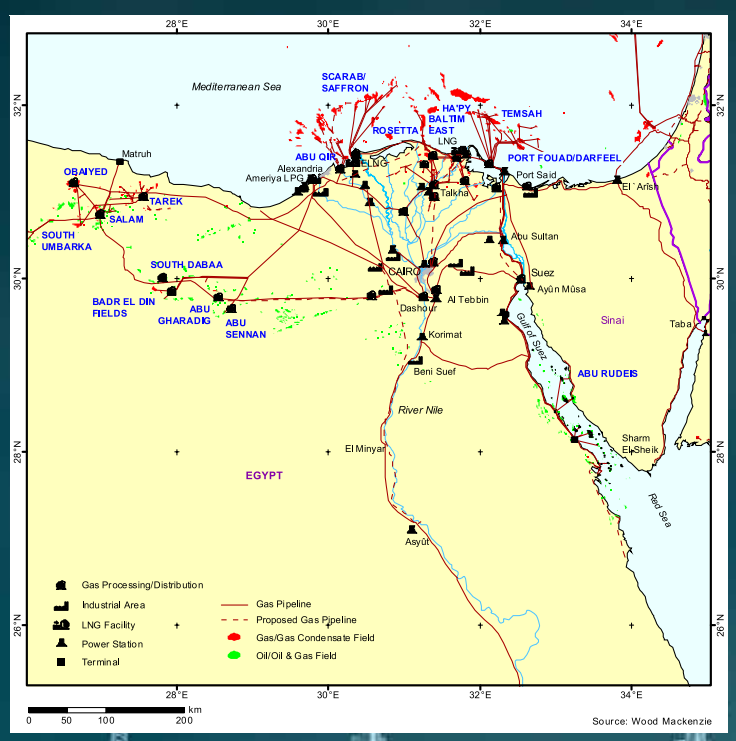
In June 2005, Egypt signed an agreement to supply Israel with 160 MMCF of gas per day over 20 years. A subsea pipeline was built for this from el-Arish to Ashkelon in Israel by 2008. Following the 2011 revolution, the pipeline was repeatedly sabotaged around the el-Arish area. Eventually, in April 2012 Cairo canceled the deal based on popular demand from Egyptians. The deal had been unpopular among Egyptians. Several Egyptian officials were sentenced to prison in summer 2012 for their role in concluding the deal that foresaw selling gas at below market prices, according to BBC.

Egypt can export its gas also via two LNG terminals. The Damietta terminal, with annual capacity of an average of 5 million tonnes (670 MCF/d), became operational in 2004. 80% of the terminal is owned by Union Fenosa Gas, a joint venture between Eni and Spain´s Gas Natural, with the rest belonging to EGAS and EGPC. Union Fenosa Gas and BP have long-term contracts for purchasing its LNG. The Idku terminal, with annual capacity of an average of 7 million tonnes, started operations in 2005. It is owned by BG (35.5%), Petronas (35.5%), GDF Suez (5%) and EGAS & EGPC (24%). The entire output from the train one is purchased by GDF Suez and that of the train two by BG. Due to lack of gas, the Damietta plant has been idle since 2012 and the output of the Idku facility has decreased steadily over the last year, reports Reuters.

In 2012, Egypt launched a tender for a floating storage and regasification unit to import LNG, which is hoped to become operational by summer 2014. LNG imports are expected to reach up to 3.7 million tonnes a year, informs ICIS.

Egypt has nine refineries, with a total capacity of 680,000 bbls/d. The first of them, the Suez refinery, was set up in 1913 by the Anglo Egyptian Oilfields company. The largest refinery is 145,000 bbls/d Mostorod 40 km north of Cairo, built in 1973. The Egyptian Refining Company plans to build an expansion to it by 2016 to provide Egypt with additional lighter petroleum products. According to the company, the refinery would supply 50% of the diesel Egypt is currently importing, informs Mada Masr. The multi-billion-dollar project is a public-private partnership, with EGPC holding a 23.8% stake and other key shareholders being Citadel Capital and EFG Hermes.





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Negotiating Terms and Recovering Costs:

Egypt's Tedious Production Sharing Agreements

Production Sharing Agreements (PSAs) for oil and gas exploration are seen as a characteristic of developing countries that "seek to exploit their resources for economic rents but lack the experience or technical expertise to bear the financial burden," wrote energy law expert Marcia Ashong in her 2010 Dundee University study on cost recovery. While international oil companies (IOCs), desire for swift recovery of costs and profit maximization, delayed payments to contractors have caused frustration for IOCs as national debt mounts in Egypt. However, there is a general concern surrounding the inherent shortcomings of PSAs and the cost recovery structure itself, especially considering the advent of expensive, high-risk forms of exploration such as deep-water or hydraulic fracturing.

By Lily Leach

For oil-producing countries like Egypt that don't possess massive amounts of wealth and resources, one of the main appeals of the production sharing contract (PSC) is that "unlike its predecessor (the traditional Concession) they have turned the balance of ownership of reservoirs from the IOC to the host countries, allowing host governments more control of their natural resources and benefits from production without transfer of investment risks," said Ashong. In production-sharing contracts, IOCs undertake costs and all exploration risks, and the exact terms of the contract regarding cost recovery are open to negotiation. The cost is then recovered in the form of cost oil or cost gas after production profits are made available, and the PSA determines how the remaining production is divided between the contractor and EGPC or EGAS.

As a result of the tight control Egypt wills over its national resources, a long road of negotiations and administrative procedures are imposed upon the IOC to ensure that the cost of every item and expense is eligible for recovery. Yet the risk for Egypt as a host country, as Ashong notes, "is the potential for the IOC to be over compensated" in cost recovery.

Negotiating Contract Terms

According to Mohamad Talaat, partner at Helmy, Hamza & Partners, a member of Baker & McKenzie International, the terms of the PSA are negotiated by a Vice Chairman of either EGPC, EGAS, or GANOPE on the government side, and a team of financial, legal, and technical advisors from the IOC. The terms are negotiated before the concession is awarded "given the fact that each concession requires a new law to be passed to authorize the Minister of Petroleum to enter into the Concession agreement," and concerning the percentage of cost recovery in particular, "this is reached during the negotiations phase depending upon the nature of the project itself, whether the project is onshore, offshore, or deep waters," he explained.

A report published in January 2013 by Wood Mackenzie stipulates, "Bonuses, cost recovery ceilings, the treatment of excess cost recovery and profit oil/gas shares are all negotiable. Negotiated terms have varied over time but within a relatively narrow range." According to Talaat, individual costs include exploration expenditures and development expenditures (both recoverable at a rate of 20% per annum), and operating expenses, where no specified recovery percentage rate exists.

Beyond these fundamental expenditures, the IOC seeks recovery for a range of costs, which include living expenses, travel expenses, and even education fees for expatriate workers and their families, where negotiation can become particularly cumbersome. "Issues arise between the petroleum government entities and the contractor regarding the classification of certain expenditures and costs and the amount of each expenditure and cost," informs Talaat. Ahmed Moaaz, Country Manager and Director of Sea Dragon Egypt says that in some cases, negotiating a single commodity can take approximately six months, and the IOC could have spend ten times the value of the actual item after processing fees and forming the necessary committees. Moaaz believes focusing on details of recovery for individual items can be counterproductive, and advocates a cap be set for all costs surrounding individual expats.

Despite valid frustration over exhaustive negotiations, IOCs are also capable of taking advantage of cost recovery. While Egypt follows international standards for accounting procedures, "the challenge is always deciding what costs actually meet the standard," informs Christopher Gunson, an oil and gas lawyer at Pillsbury Winthrop Shaw Pittman LLP. Egypt's economic and political circumstances pose unique challenges concerning cost recovery for expenses of expatriate partners, expenses that of course aren't covered for the Egyptian partner, as Moaaz points out. Gunson details that, "In Egypt, what if the engineers are evacuated because of the security situation—are those costs reimbursable? What if the engineers are living with family in Dubai, and fly into Egypt only as needed—is the cost of living at the Arabian Ranch villas in Dubai still reimbursable? What about the plane tickets to and from Egypt while they are stationed in Dubai? What if the engineers have kids who go to expensive private school in Dubai? These are the types of cost recovery issues that get contentiously debated and negotiated between a host government and a contractor."

Renegotiation and Post-contractual Terms

According to Talaat, "renegotiation of the initial terms is highly likely after a project is underway." In addition to the preliminary negotiations, every expense during work on a particularly concession needs to pass through the administrative channels if the IOC wants to see those costs recovered. "Renegotiation throughout the life of a project is common even if there is not a contractual basis for such negotiations," says Gunson.

In the event of renegotiation, "the contractor is entitled to notify EGPC of such change and its impact on stabilization," so that negotiation can commence "for the purpose of restoring the economic balance, which existed on the effective date of the agreement," says Talaat. An agreement must be reached within 90 days from the date of notification to EGPC and "shall not in any way diminish or increase the rights and obligations of the contractor as these were agreed upon on the effective date of the concession," he added.

Once terms are set and agreed upon, the degree to which they are faithfully and accurately followed is "always an issue of discussion, and it can often be contentious," said Gunson, adding that the current political situation in Egypt is exacerbating the existing shortcomings of the negotiation process. According to Gunson, formal disputes in the international oil and gas market are rare. Despite this, he noted "we are seeing a number of companies take Egypt to international arbitration due to the situation in Egypt. This is unusual."

Payments and Excess Cost Recovery

"Typically the payment to the government/state partner will be high during cost recovery, and then very high after cost recovery," said Gunson, and explaining that EGPC commonly sees revenue before the IOC recovers costs. Based Article VII of the Concession Agreement, Talaat explains that "cost recovery and production sharing is a parallel process," due to the fact that "an IOC may only recover costs to the extent of the percentage specified in the agreement on quarterly basis from the cost recovery petroleum, and any recoverable costs and expenses not recovered in one quarter are carried forward for recovery in the next quarter."

In the case that there is excess cost oil, in theory this is also to be shared by the IOC and EGPC, according to the percentages set in the concession agreement, according to Talaat. "However," he adds, "practice wise, in most concession agreements, EGPC/EGAS/Gaboub El Wadi Holding Petroleum Company are entitled to 100% of the excess cost recovery petroleum. However, there are some cases where the contactor may be entitled to share excess cost recovery petroleum of specific blocks." As a result, it is rare for an IOC to have a substantial share of this excess, if at all.

Weakness and Possible Solutions

In a previous interview, Moaaz told Egypt Oil and Gas, "There are weaknesses in the current agreement, and everybody knows it," citing the example of the freeze in cost recovery that occurs during the final five years of the concession. Since any expenditure made in the final phase of the concession doesn't get reimbursed by the government body, work on the concession is usually inactive during this time unless the concession has been renewed. Speaking of the fact that most operators in Egypt in the last four five years of the concession "pull the brakes and do nothing" Moaaz asks, "Who's losing? Egypt—because there is no new investing and no new projects. Can we ratify this? Yes we can." He believes that costs during this period should be recovered immediately, saying that current practice has "a tremendous impact on newcomers in Egypt and discourages investment."

However, there are ways to influence swift cost recovery within the terms of the PSA, informs Talaat, including, "Increasing the percentage of cost recovery in the agreement or allowing a percentage of 100% of the cost recovery petroleum." However, since Egypt is currently a net importer rather than exporter of petroleum products, these options "will be very difficult to apply as it does not serve Egypt's main interests." Here again do IOCs interests conflict with Egypt's, and according to Talaat, these can only be "reconciled when Egypt recovers from recent turmoil events and increases its production of petroleum to cover domestic needs and increase its petroleum exports."

Any significant changes or alternatives to the current structure are unlikely given the restrictions in Egypt's current constitution and natural resources law, which attributes such property exclusively to the state. "Therefore, the application of a license arrangement or an agreement of a true concessionary nature which gives complete ownership and control to the contractor over any oil and gas it successfully produces shall not be possible under the current legislations," Talaat informs. However, the "risk service contracts" used in Kuwait, Iraq, and Iran could serve as a potential model for Egypt. In these oil-producing economies, the state still retains ownership of commercially successful exploration, "whereas the contractors recover costs through sale of the oil and gas and receives a fixed payment (usually in cash) from the government," says Talaat.

Besides the efficacy of Egypt's fiscal structure in the oil and gas sector, a general culture of administrative wariness between the foreign contractor and governmental body lies at the root, in a country where economic and political tensions run high. In order to build trust between EGPC and foreign companies, Moaaz says, "We need to rebuild, reengineer, and reeducate."

Egyptian Local Content and Achieving In-Country Value

Since the beginning of petroleum industry and the renaissance era witnessed by all major countries producing hydrocarbons, most regulators of host governments discovered the vital role played by this industry in achieving sustainable development to their people. Whether by achieving a minimum limit for governmental revenue through taxes and royalties, or in the form of petroleum share, regulators discovered that achieving the in-country value throughout an effective local content strategy must be a main target of petroleum industry, in addition to monetary aspects and the petroleum share.

By Mostafa Shazly, Attorney at law,
EGPC Petroleum Agreements Department, Member of AIPN

Delivering in-country value indeed involves a string of measures aiming at supporting local companies in the community. This is achieved through increased procurement of goods and services related to petroleum industry activities, as well as improving the capacity and capability of the citizens working in the petroleum field—including the transfer of knowledge from international oil companies (IOCs) to the people of the host country.

Achieving the in-country value throughout local content is not solely the responsibility of the host country, it is a matter of collaboration between the petroleum industry's main players as well—host governments, national oil companies (NOCs), IOCs, and service companies—who shall seek to achieve sustainable development and building in-country value besides profit interests. To this end, a good investment atmosphere, associated with a comprehensive petroleum act and mutual beneficial petroleum agreements, should accompany the local content.

Petroleum Activity Legislation

The Egyptian regulator has paid great attention to local content, which is directly reflected by petroleum legislations applied in the Arab Republic of Egypt. For example, the "Mines and Quarries" law No 66 of 1953, the production sharing model agreements for exploration of oil and gas (PSAs), as well as Law No 8 of 1997 for "Investment Guarantees and Incentives," each constitute the legal framework for petroleum activities is Egypt.

The mines and quarries law—as amended by law No 86 of 1956—is the Egyptian petroleum law organizing all petroleum operations in upstream projects, including the achievement of the country's local content strategy. Despite this, the law does not satisfy the crucial need for an efficient strategy to guarantee economic and social gains resulting from petroleum projects on the Egyptian territory—particularly in respect to encouraging domestically manufactured materials, improving manpower, and the transfer of knowledge.

Benefits of PSA Model for Host Country

The PSA model was applied in Egypt for the exploration and exploitation of natural resources. It was promulgated through private legislation, which includes a comprehensive treatment for all exploration and exploitation mechanisms, including the host state's right to achieve the main elements of local content. The model directly promotes local contractors, due to their positive contribution in strengthening the domestic economy and providing jobs opportunities in Egypt.

The model imposes an obligation on the contractor or operating company, as the case may be, to give priority to local contractors and sub-contractors as long as their performance is comparable to international performance, and the prices of their services are not higher than the prices of other contractors and sub-contractors by more than 10%. Furthermore, operating companies shall give preference to locally manufactured material, equipment, machinery, and consumables, so long as their quality and time of delivery are comparable to ones available internationally.

In spite of these obligations, if IOCs choose not to use locally manufactured goods, they are exempt from liability as long as the quality of goods is unsatisfactory for the IOCs. In fact, states whose manufacturing sectors do not perform particularly well or enjoy a particularly good reputation internationally cannot hope to develop their economics, unless they develop the technical knowledge and expertise necessary for the oil industry and related sectors. Hence once these capacities have been developed, the government can institute measures aimed at promoting domestic goods, services, and jobs—which are considered the other main element of local content.

To this end, the Egyptian PSA model set the standard and paved the way to transfer knowledge from IOCs to NOCs and other joint ventures' domestic employees by stating that "The IOC shall, after consultation with EGPC, prepare and carry out specialized training programs for all its A.R.E. (Arabic Republic of Egypt) employees engaged in operations hereunder with respect to applicable aspects of the petroleum industry. IOC and operating company undertake to gradually replace their non-executive expatriate staff by qualified nationals as they are available." Furthermore EGPC employees are entitled to attend and participate in training programs relating to exploration and development operations in.

Service Company Incentives

In another step towards achieving local content and increasing in-country value, Act No 8/1997 for "Investment Guarantees and Incentives" paid great attention and gave special treatment to service companies that provide digging and exploration services, as well as installation services for natural gas facilities, and natural gas transport. The companies were given certain incentives and guarantees to encourage the investors in this field. Such incentives and guarantees can be prescribed as follows:

- Companies may not be confiscated or nationalized.
- No administrative body can interfere in setting prices or profit margins.
- Projects may be entirely owned by foreigners. Furthermore, their boards of directors may be wholly composed of foreigners.
- Foreign experts' salaries are exempted from income tax if their stay in Egypt is shorter than one year.

Conclusion

An assessment of Egyptian local content promotion measures clearly reveals the need for a pragmatic approach to local development policies. It is essential to avoid forcing development, as this would risk damaging the development opportunities for the local economy associated with a petroleum discovery.

In addition, it is essential to establish a unique and specialized department in the Ministry of Petroleum to manage local content, monitor implementation of national development policies, and monitor the accurate execution of the planned strategy of local content as prescribed by the law. This department should also promote dialogue between the petroleum industry's main players—foreign and domestic companies. This department should act as a liaison between petroleum sector players to promote cooperation and collaboration, and for gathering resources aimed at developing local capacities.

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An Economy Built upon Sand

Shortly after Defense Minister Abdel Fattah El-Sisi and his Supreme Council of the Armed Forces (SCAF) removed the former President Mohamed Morsi from power, an Egyptian owner of a small technology start-up told me that the ouster of the Muslim Brotherhood president was a positive development for Egypt's economy. "The military understands the importance of foreign investment, and they will bring stability back to Egypt. Foreign investors and tourists will return now that the Muslim Brotherhood is gone," he confidently declared. Nearly eight months later, it is clear that neither foreign investment nor tourists have been pouring into Egypt. Less clear, though, is where exactly to place the blame for Egypt's economic woes. A close examination of Egypt's economy reveals bleak prospects in the short-term; however, there is nevertheless some hope for cautious optimism.

By Robert Mogielnicki

Robert Mogielnicki works as a business analyst with Oxford Strategic Consulting. He is currently pursuing a graduate degree at the University of Oxford where he focuses on issues of economic integration in North Africa, nationalization policies in the GCC, and business development in the Middle East. He can be contacted at robert.mogielnicki@oxfordstrategicconsulting.com.

Egypt's Economy in Context

The three years following the January 25 Revolution of 2011 have not been kind to Egypt's economy. During this period, the inflation rate increased to double digits, unemployment rose by 4%, and economic growth settled at an average of 2% annually. To make matters worse, the Central Bank of Egypt's foreign exchange reserves of $35 billion decreased by nearly 50% in three short years.

The continual political instability within Egypt has certainly played a major role in creating the current economic predicament within Egypt. These last three years can be broadly classified into three distinct periods of relative instability: the post-revolution, Muslim Brotherhood rule and return of SCAF.

The post-revolution period lasted from January 25 of 2011 until the election of Mohamed Morsi in 2012. The transition government installed during this period was unable to undertake any major economic initiatives. Moreover, deadly clashes between protesters and SCAF contributed to a general atmosphere of political unrest. Though the IMF visited Egypt in April of 2011 and outlined a financing package, the negotiations between Egypt and the IMF never came to fruition.

The second period lasted from former President Morsi's election and ended with his removal on July 3 of 2012. This period was characterized less by political instability and more by a general absence of any cohesive economic program. Rather, the Morsi administration appeared to rely more heavily upon divine intervention and financial assistance from wealthy neighbors partial to the Muslim Brotherhood cause than upon a well-formulated set of economic initiatives.

Finally, the last and current stage in Egypt's economic plight was ushered in when Defense Minister El-Sisi removed former President Morsi from power on July 3 of 2013. Saudi Arabia, Kuwait and the UAE immediately responded to Morsi's removal by promising approximately $12 billion in financial assistance. In return, the transition government, led by Hazem el-Beblawy, proposed an economic plan intended to raise the minimum wage, increase the foreign exchange reserves, address energy shortages and implement a financial stimulus package. It remains to be seen how effective these initiatives will be in reviving Egypt's economy.

The Central Issues

While the challenges facing Egypt's economy are various and multi-faceted, the issues of subsidies, tourism, foreign currency and financial assistance from abroad are particularly important in today's economic climate. Exorbitant subsidies are a problem in Egypt that must be solved sooner or later. Annual subsidies account for approximately 10% of Egypt's GDP and consume approximately one quarter of the country's budget. Energy subsidies represent the lion's share of all state subsidies, constituting approximately 20% of state spending. Reforming these unsustainable subsidies is a necessary step towards achieving long-term economic growth as well as a prerequisite for working with the IMF. The transition government of 2013 understood this quite well, but reforming subsidies in Egypt is no easy task. The state has long relied on subsidies as a quick-fix solution for complicated economic issues. As a result, many of Egypt's poorer citizens have become dependent on the continuation of subsidies. Removing or curtailing these subsidies, especially during a period of economic hardship, would put millions of Egyptians at risk.

Egypt's large tourism has also suffered substantially during the last three years, and 2013 was a particularly difficult year for the industry. Last year, the tourism industry brought in 41% less revenue than the previous year. Unfortunately, the beginning of a new year has not resulted in any good luck for this ailing sector of Egypt's economy. Following a string of bombings throughout Egypt, a suicide bomber recently targeted a tour bus in the Sinai Peninsula. Ansar Bayt al-Maqdis, a terrorist group with ties to al-Qaeda, claimed responsibility for the suicide attack that left two South Koreans and one Egyptian bus driver dead. The group then warned tourists to leave the country in a move that was apparently part of the group's attempt to cripple Egypt's suffering tourism sector.

It is also important to note that tourism is largest source of foreign currency for Egypt. Huge losses in the tourism industry combined with violent protests in 2012 sparked a run on the currency that forced the government to spend billions of dollars in an attempt to stabilize the Egyptian currency. Nevertheless, the Egyptian pound continues to weaken, reaching nearly 7.0 pounds to the dollar. Economic forecasts predict that the pound could fall to as much as 7.29 pounds to the dollar by June of 2015.

The billions of dollars in financial assistance to Egypt from Gulf states played a central role in Egypt's economic plight. Relying on financial assistance from Gulf states is not sound economic policy, and this is especially true when the financial assistance seems heavily influenced by political circumstances. It is no great coincidence that Saudi Arabia, Kuwait and the UAE pledged $12 billion to Egypt just days after SCAF removed former President Morsi. Considering that America suspended its annual aid to Egypt, it is particularly troubling that Egypt is more dependent than ever on Gulf handouts that come with unspoken political expectations.

On the other hand, the financial assistance from the Gulf has provided the country with much needed capital. The transition government already used some of this aid to implement a $4.3 billion stimulus package intended to increase employment and consumption. This fiscal stimulus package funded spending on infrastructure and increasing wages, and the IMF supported the initiative. Though it has yet to be introduced, a second stimulus is planned to increase the salaries of public sector workers. The IMF's approval of these fiscal initiatives is encouraging and provides some reason for cautious optimism.

Hope for the Future

Though many of the economic indicators in Egypt are worrying, there are some signs for optimism. First, Egypt has secured, for the time being, capital in the form of financial assistance from the Gulf. With billions of dollars having already been secured and billions more promised, the Egyptian government can temporarily afford to be less concerned with its relationship to America as well as the suspended US aid. Instead, aid from Saudi Arabia, Kuwait and the UAE funded an economic stimulus intended to improve infrastructure, and a second stimulus promises to increase the wages of public sector employees. These measures are likely to result in modest increases in employment and consumption, and consequently it is unsurprising that the IMF approved of these initial measures.

The elusive IMF loan to Egypt may also become an actuality at some point in 2014. Talks over the loan, which would provide approximately $4.8 billion to Egypt, began in 2011 but fizzled out over the past two years. It is unlikely that the transition government will finalize any final agreement with the IMF, and this is especially true because any IMF loan will only be dispersed if strict financial reforms are enacted. Therefore, it is likely that the transitional government will let the new government weigh the costs and benefits of introducing austerity measures in order to secure an IMF loan.

Of course, the IMF's $4.8 billion pales in comparison to the money that Gulf states are pouring into Egypt. Yet Gulf aid is influenced heavily by the prevailing political situation in Egypt, and the political winds in Egypt are prone to change directions quite quickly these days. An IMF loan, on the other hand, would be dependent on enacting sound economic policy, a move Egypt can't afford to postpone much longer.

Political instability, increasing instances of terrorist attacks and long-ignored economic challenges have severely hampered Egypt's ability to demonstrate significant economic growth since the January 25 Revolution of 2011. For the time being, Egypt has secured capital from the Gulf; however, that money will not last forever nor is it entirely unconditional. Egypt must seize the opportunity to develop a coherent fiscal policy and a sound economic vision for the country. Considering that Egyptians built the Great Pyramid of Giza nearly 4,500 years ago, there's no reason to believe that they can't come together to create a more effective economic policy today.

"Strike!" Is Egyptian Petroleum Safe from Industrial Unrest?

Mahalla – the spiritual home of Egypt's labor movement.

For 12 days in February, workers at the state-owned Misr Spinning and Weaving Company staged a massive strike demanding the removal of holding company Chairman, Foaud Abdel-Alim, and the implementation of a EGP 1,200 minimum wage promised to public sector workers in January.

Tom Rollins is a freelance journalist based in Cairo. He tweets at @TomWRollins

After a fortnight of failed negotiations, Mahalla's workers made a patchy deal with the government on February 22: "You have two months to meet our demands, or we strike again." The government has promised to implement the minimum wage. Before, an agreement between workers' representatives and Labor Minister Kamal Abu Eita to oust Abdel-Alim was left unsigned by the Investment Ministry. The minister, Omar Saleh, instead offered a replacement board of "experienced members," an offer flat-out rejected by striking workers.

"We overthrow Mubarak but not him?" one worker, Iman Khali, asked not far from the imposing chimneys of the Nile Delta textiles plant. "Why?"

Conversations often come back to the revolution, the power of the workers. In the days, months and years leading up to Hosni Mubarak's fall, what now appears more of a historical inevitability than what at the time was a revolutionist pipe-dream, workers helped drive the uprising. Stanford University History Professor Joel Beinin wrote just after the 18 Days how workers "in textiles, military production, transportation, petroleum, cement, iron and steel, hospitals, universities, telecommunications and the Suez Canal" joined together as a significant force. "The demographic and economic weight of workers in the popular uprising was likely one of the factors that persuaded Egypt's military chiefs to ask Mubarak to step aside," Beinin claimed.

Fuel labor safe?

On the one hand, Egypt's fuel sector looks safe. Its workers are on average higher earners. According to the latest Central Agency for Public Mobilization and Statistics (CAPMAS) annual figures, a public sector worker in exploration earned an average wage of approximately EGP 1,400, whereas a manufacturing worker in the public sector would receive around EGP 1,100, (although some Mahalla workers are reported to earn as little as EGP 500). Plus, the petroleum sector is not going away any time soon.

Compare this with the textiles industry. Its workers exist in a more unstable sector, threatened by competition from overseas (countries such as Bangladesh, China and India) where labor is cheaper and production higher. The sector still contributes 26.4 percent to Egypt's national Gross Domestic Product (GDP), according to official figures for 2007-2008, but some fear the future of the industry.

A far lower percentage of Egyptian petroleum workers are also members of trade unions, although unions have not – at least not on the national level – pushed for industrial action during Egypt's post-Morsi transition.

"Egyptian workers understand that [the country] is in a fortress against terrorism," said Egyptian Trade Union Federation (ETUF) head Gebaly al-Maraghy. Egyptian Federation of Independent Trade Unions (EFITU) leader Malek Bayoumi also said the labor movement was in a "holding period" of grass-roots organization and consolidation during the transitional period. The labor ministry, despite being headed by former EFITU chief Kamal Abu Eita, has also repeatedly called for calm from Egypt's labor movement.

"No strikes" has been the top-down consensus for some time now. But for two weeks, Mahalla posed a threat to that consensus.

Petroleum industry bosses say they are unphased. "I don't think this is going to spread," a source at one of Egypt's major petroleum firms claimed, speaking on condition of anonymity. "Strikes like that don't spread sector to sector…they [tend to] concern particular companies, case by case."

On the one hand, this is true of the latest Mahalla strike. Since Mahalla Textiles Holding Company Chairman Abdel-Alim entered the company, workers have repeatedly demanded his removal alleging corruption, inefficiency and deliberate attempts to squander the company's resources in order to privatize it at a later date.

But solidarity strikes, protests and sit-ins followed. Textile workers in Helwan, Kafr al-Dawar, Tanta and Zagazig joined Mahalla, often making similar or identical demands.

In February, Mada Masr also reported that "resurgent" industrial unrest was beginning to bleed over into new sectors. Low-ranking police officers in Minya, Sharqiya and Wadi al-Gadeed launched partial strikes for better bonuses and compensation payments, as well as the minimum wage. Police protests in Gharbiya and Alexandria did the same. Doctors Syndicate employees have also continued partial strikes for weeks, demanding improved salaries, working conditions and a larger national healthcare budget.

The petroleum industry has witnessed similar creeping industrial unrest before. In February 2013, workers at the Arab Petroleum Pipelines Company (SUMED) staged strikes and sit-ins demanding permanent contracts. Similar protests continued after the revolution, including one in October 2011 with demands "spiring from [employees'] ambiguous employment position," state-run newspaper Al-Ahram reported at the time.

"Things like that can spread," said Mika Minio-Paluello, a Cairo-based campaigner on social justice in the global petroleum sector. "You could see a spread within public sector oil and gas operations on issues like that. [But] it's more likely to happen with service sector issues and state companies…rather than Shell, Exxon [and] Mobil." This is borne out by a two-week strike by Egyptian Natural Gas Holding Company (EGAS) bill collectors in December 2012 over pay. While many oil and gas exploration agreements are based on a 50-percent public stake, the public ratio in distribution and service-end jobs can be much higher.

Sectorial fragmentation

But is this simply a sectorial issue? Yes, Mahalla's textile workers staged their walk-out against a holding company management structure deemed to be inefficient, corrupt and unpopular. But workers were also demanding a minimum wage, promised by the end of January for all public sector workers (translating to approximately 30 percent of Egypt's total workforce). In fact, Misr Spinning and Weaving workers were the first to make the demand for a EGP 1,200 basic salary during a strike in 2006. Employees at the Mahalla Textile Holding Company, which administers 31 other operations across the country, are still waiting.

Experts have warned that the threat of a groundswell in industrial action based on pay and conditions – particularly the much-discussed minimum wage – is a real one.

"It would be expected that some sectors might find it more difficult to implement the minimum wage than others," explained economist and Al-Hayat columnist Lahcen Achy. "That's why in some countries they have sectorial minimum wages and sectorial negotiations." Other Arab states, like Morocco and Algeria utilize this system with different wages set for agricultural and manufacturing sectors. And yet Egypt's complex, and at times esoteric, organization of labor can make initiatives like this harder to realize. "That's why in Egypt where there isn't the same organized labor force, it makes it difficult to do these kinds of negotiations."

In more vulnerable sectors, like textiles, that means more industrial unrest. "I would expect to see strikes and, I'd say…anarchic strikes," Achy claimed. For now, the petroleum sector may see a very limited spill-over from a broader wave of public sector unrest currently trundling through sections of the Egyptian economy.

"I wouldn't expect it to spread in a big way," explained Minio-Paluello. "Both the government and the companies themselves really don't want this to happen." Tourism and petroleum are traditionally two of Egypt's main economic driving forces. After the death knell of February's bomb attack on a tourist bus in South Sinai, later claimed by jihadi group Ansar Bayt al-Maqdis, the state will probably have to acknowledge that tourism revenues are not flooding back any time soon. The fuel sector may have to take up the slack.

Without a genuine wave of workers' unrest to rally around, like that seen before the 2011 revolution, prospects for major petroleum sector strikes remain limited. And the government will likely not have forgotten April 6, 2008, the day Mahalla's textile workers demanded the fall of the regime and created a new rallying point for activists, unions and workers alike.

At the same time, Egypt's government and business community must factor in workers' demands at a time of economic uncertainty and energy hardship. If not, they risk provoking the steamroller of Egypt's labor movement once again.

Conductor℠ Fracturing Service

Advanced Pillar Fracturing Technology Provides Improved Long-Term Production from Specially Selected Formations

Conductor℠ Service Helps Improve Pillar-Type Fracturing Results

Operators are finding that conventional pillar or channel fracturing techniques provide good initial production from some formations but the production often declines more rapidly than expected. The production rate can be maintained longer by careful consideration of several design and execution factors including the following:

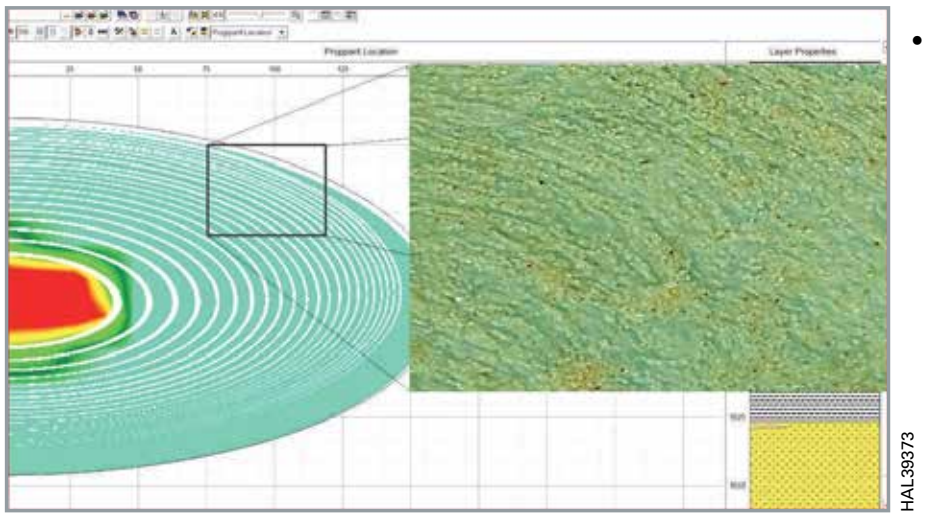
- Proper candidate selection
- Installing stable pillars to prevent fracture closure

Conductor℠ Service Helps Improve Pillar-Type Fracturing Results

Conductor℠ service addresses these factors and provides a high-performance fracturing technique, especially important for wells producing oil and gas liquids.

The following aspects of Conductor service can result in more productive wells:

- **Rigorous candidate selection process.** In-depth basin and formation understanding, and specially developed software enable the selection of appropriate candidate wells.



HAL39373

Conductor℠ fracturing service provides infinite acting conductivity for improved production of liquids. The left portion of the image above is output from Halliburton's Conductor service model. The right portion is a photograph from a laboratory slot model demonstrating the effects of pulsing while pumping. Proppant is deposited in random pillars within the fracture and stabilized by coating the proppant on the fly with liquid SandWedge® ABC enhancer, which makes the proppant remain sticky, consolidating the pillars.

- **Modeling capability.** Enhanced modeling capability enables improved job design.
- **Stabilized pillars.** Consolidated, stable pillars resulting from proppant coated on the fly with liquid resin (SandWedge® enhancer) help sustain improved production. Conductor service pillars can withstand the dynamics of well operations and keep fractures and flow channels open.
- **Proven pumping and pulsing capability.** The necessary equipment and processes have been extensively tested and field operations proven to provide dependable performance.

Performance Enhancement Options Available with Conductor Service

- **PermStim™ fracturing fluid.** Near-zero-residue fracturing fluid can be used to improve production by reducing formation damage that can occur with guar- based fluid systems.
- **AccessFrac℠ service.** Fully degradable diverter system can be used to help assure every zone is treated and to enhance fracture connectivity and density. In addition, this service can reduce or even eliminate the need for plugs in multi-stage fracturing treatments.
- **RockPerm℠ service.** Process for developing stimulation fluid additive formulation using a unique comprehensive evaluation process. The process results in a fluid formulation customized to enhance productivity of the reservoir. RockPerm service can include the selection of an optimized OilPerm Formation Fluid Mobility Modifier (FMM). The FMM enables improved fluid recovery and liquids production.

HALLIBURTON
Production Enhancement

VAST AMOUNTS
OF OIL HIDEN IN EGYPT´S KEROGEN ROCK

Besides conventional and shale oil, Egypt has a large amount of another hydro-carbon called oil shale. The country has conducted studies on this kerogen rich resource for decades, but its economical exploitability remains in question.

By Laura Raus

What is Oil Shale? – Not Shale Oil

Although the terms “oil shale” and “shale oil” are sometimes used interchangeably, there is a difference between them. Oil shale is in fact not shale and does not contain oil as such. According to the International Energy Agency (IEA), it is a sedimentary rock that contains organic matter rich in hydrogen, kerogen, which can be converted into shale oil by heating it to at least 300 C. Besides converting to oil, oil shale is used as fuel for thermal power pants and for chemicals production. Cement can be obtained as a by-product of oil shale heat retorting, informs the World Energy Council.

Reserves Comparable to Crude Oil

IEA estimated in 2010 that global oil shale resources are equivalent to over 5 trillion barrels of oil in place. However, they often lay kilometers underground and are almost impossible to extract. Over 1 trillion barrels of oil shale is technically recoverable, but it is not known how much can be extracted economically. The ratio of energy outputs to inputs is only up to 3 to 1 for oil shale, whereas it is around 20 to 1 for crude, writes the Christian Science Monitor. EIA said in 2010 that commercial oil shale exploitation is possible at crude prices of USD 60 per barrel.

Besides costs, oil shale development is inhibited by its environmental impact. Its transformation into shale oil as well as its direct combustion emits more CO2 than any other primary fuel. Oil shale mining creates the risk of groundwater contamination, according to the US Government Accountability Office. Oil shale processing also requires vast amounts of water. One needs two barrels of water to obtain one barrel of oil from oil shale, informs IEA.

Volatile Industry

For those reasons, oil shale has never become very popular, although it has been used for centuries because its high-quality deposits easily burn without processing and it has been at times hailed as a true alternative to crude. In the 1800s, oil shale industries were set up in several countries including Germany, Canada and Australia, which yielded products such as lamp oil, nafphta and paraffin wax. In the 1970s, interest in oil shale grew considerably in the US due to high crude prices, but cheaper crude of the 1980s lead to the shutdown of almost all oil shale projects there, informs Environmentally Conscious Consumers for Oil Shale. When Exxon closed its Colorado oil shale project in 1982, 2,000 people lost jobs, writes the Daily Sentinel. By 1986, the federal government had ended its support for the oil shale industry. The industry has also vanished in several other countries. Only China, Brazil and Estonia have sustained commercial oil shale exploitation for decades, writes the journal Oil Shale.

Players in the Oil Shale Scramble

About two-thirds of oil shale deposits lie in the US, but China, Israel, Russia, Brazil, Jordan and Australia also have sizable reserves. There are significant reserves in the MENA region as well.

Estonia: Almost All Electricity from Oil Shale

Most oil shale mining takes place in Estonia. According to the national energy company Enefit, Estonia’s oil shale power capacity is 10 TWh a year, enough even for exports. The country uses oil shale also for chemicals and fuel production. By 2020, it aims to produce up to 20,000 bpd of diesel from oil shale, significantly more than its domestic demand currently, reports Platts.

Estonia has mined oil shale for over hundred years, although there is some opposition to that on environmental grounds. For example Valdur Lahtvee of the Stockholm Environment Institute told CNN: “Oil shale industry contributes approximately 4% of Estonia’s GDP, but at the same time accounts for 90% of its hazardous waste, 80% of major air emissions and 70-80% of water usage.”

However, Estonia is developing a cleaner oil shale industry, informs IEA. In 2012, Enefit launched a technology that utilizes 100% of mined oil shale, yielding shale oil, electricity and retort gas. The only by-product is ash, which can be used for making construction materials. Excess heat and retort gas is used to produce additional electricity and almost no water is needed in the whole process.

Jordan: First Steps in Oil Shale Production

Jordan, whose oil shale can yield 34 billion bbls of shale oil according to AP, has signed several memorandums of understanding since 2006 for the development of the resource, which it hopes to give 14% of the country’s energy by 2020. The developers include Shell, Petrobas, Total as well as Chinese, Russian and Gulf companies, informs the annual report 2011 of Jordan’s Ministry of Energy and Mineral Resources.

Together with its partners, Enefit expects to establish Jordan’s first oil shale power plant, with a capacity of 500 MW and cost of USD 1.5 billion, by 2017. The government has committed to buying the plant’s electricity for 30 years. By 2020s, Enefit also aims to set up an oil plant. However, full financing for both projects is yet to be found. The Saudi Arabian Corporation for Oil Shale hopes to start producing oil from Jordan’s oil shale in five years by utilizing a Russian technology and to produce 30,000 barrels by 2025, but feasibility study for the project has not yet been done, reports Zawya.

“The people have long requested the successive governments of Jordan to start with oil shale business knowing that 97% of Jordan´s energy is imported,” said Awni al-Otoom, Professor at Jordan University of Science and Technology, who considers oil shale an excellent option for the country. Oil shale can decrease Jordan’s energy dependence, but not necessarily costs. According to al-Otoom, oil shale electricity costs as much as that of heavy oil and twice as much as that of gas. Besides, technology for large-scale oil shale extraction has not yet been well developed. Another obstacle is the fact that Jordan is among the top five poorest countries in terms of water supply.

Israel to Risk with a New Technology

In 2009, Israel discovered huge oil shale deposits that could yield almost as much oil as Saudi Arabia has in proven reserves. Israel already has experience with small-scale oil shale mining and now IEI, a subsidiary of New York traded Genie Energy, plans to try an innovative technology, in- situ retorting, for exploiting this resource, reports Business Insider.

This technology has been tested by several companies for decades, but has not yet proven commercially viable. In case of in-situ retorting, oil shale is heated for several months while it is still underground until it produces liquid, which is pumped to the surface. While this process could access vast deposits of oil shale that lay very deep underground, some experts say that it could also cause groundwater contamination. Israel’s environmentalists sued the government for its plans to exploit oil shale by in-situ retorting. However, the highest court of the country in December 2012 rejected their claims, informs Business Wire.

In the US, ExxonMobil is experimenting with in-situ retorting and Shell plans to try it in Jordan. Nevertheless, experts think that commer-

cial utilization of this technology is still several years underway.

The US and Australia Are Hesitant

Other countries that own significant oil shale reserves have been less determined to exploit them. In Queensland, Australia, a 20-year moratorium was imposed to a large oil shale project in 2008 due to opposition from environmentalists. In February 2013, the local government announced that it would allow oil shale development under strict environmental conditions, but the moratorium would remain in place, reports ABC News.

In the US, interest in oil shale revived in the 2000s due to high oil prices, informs the Congressional Research Service. However, in February 2012 the government cut down the land set aside for oil shale and tar sands development in Colorado, Utah, and Wyoming by two-thirds, to the disappointment of Shell, Total, ExxonMobil, and Enefit that were eying opportunities there. "Because there are still many unanswered questions about the technology, water use, and impacts of potential commercial-scale oil shale development, we are proposing a prudent and orderly approach," explained Bob Abbey, the Director of the Bureau of Land Management, according to Northern Colorado Business Report.

In the same month, Chevron pulled out of its oil shale research project in Colorado. In September 2013, Shell announced it would shut down its oil shale pilot project in Colorado after 31 years of experimentation, saying that it has more profitable opportunities elsewhere, reports FuelFix. The US Energy Information Agency does not foresee major oil shale production until 2035 due to cheaper alternatives.

Can Egypt Benefit from Oil Shale?

Oil shale was discovered in Egypt in the 1940s, according to Shale Oil Processes, a book by J. Speight, and several studies have been conducted on it since.

The 1984 survey conducted by Egyptian Mineral Resources Authority (EMRA) with University of Berlin determined that oil shale could yield 4.5 bbbl of oil in the Safaga-Qusier area, and 1.2 bbbl in Abu Tartur where it could be obtained as a byproduct when mining phosphates. The 2006 study EMRA conducted with the Canadian consortium Centorion, later bought by Dana Gas, estimated total reserves of the Abu Tatur plateau and the Red Sea province, at 8.11 bbbl. EMRA considers the figure of the 1984 study more realistic, but also points out that large areas such as the Nile Valley and Sinai are believed to contain large deposits of oil shale, and should be pursued for oil shale exploration as well.

Most studies suggest that the best use of oil shale in Egypt would be direct combustion for electricity generation but the exploitation of this resource only makes sense if the cost of alternative fuels is high. Al-Otoom believes that oil shale development would be reasonable in Egypt at present. "The worst thing to do is to generate electricity with the depleting conventional oil and gas, particularly for a country with fast population growth such as Egypt," he noted. "Conventional fuels should be saved for transportation purposes."

Ingo Valdma, Head of the Department of Mining at Tallinn University of Technology, on the other hand thinks that oil production would be a better way to utilize Egypt´s oil shale because this is a generally a more profitable use of this resource. But since the oil content of Egypt´s oil shale is low, the professor thinks that oil shale utilization would probably not make sense in Egypt.

According to University of Oxford energy expert Justin Dargin, oil prices should be at least around USD 120 pbbl to even consider investment in oil shale with currently available technology. However, in-situ conversion could reduce costs to about USD 30-40 pbbl. "If this process is scalable, then perhaps large scale production in Egypt could take place in the long term," thinks Dargin.

At least in 2010, Egypt´s government seemed to believe in the viability of oil shale industry. In that year, it signed an agreement with Jordan, Syria, Turkey, Morocco and several companies for the establishment of an oil shale development center. However, the establishment was stalled due to the Arab Spring.

Conclusion

IEA predicted in 2010 that under existing-policies scenario, 0.5 million bpd of oil would be produced from oil shale by 2035, whereas the production in 2010 was just 15,000 bpd. However, oil shale would continue to comprise just a fraction of oil supply. No oil shale revolution is expected unless in-situ retorting proves commercially viable.

If the latter happens, Egypt may obtain benefits from its oil shale. However, this could not happen under current policies. "Egypt's existing contracting frameworks for conventional oil and gas projects are unlikely to be attractive for shale development given even conventional oil and gas producers find it difficult to generate sufficient margins under current arrangements," said Laura El-Katiri, Research Fellow at Oxford Institute for Energy Studies. Unless there will be thorough reforms in Egypt´s energy sector, the country is unlikely to see significant production of oil shale as well as other unconventional resources even if technologies evolve.

Table: Reserves of conventional versus unconventional oil (billions of barrels oil-in-place)

	Proven conventional oil	Technically recoverable shale/tight oil	Technically recoverable oil shale
Egypt	4.4 (2013)	4.6 (2013)	5.7 (1984)
World	1,526 (2012)	345 (2013 estimate of 41 countries)	over 1,000 (2010)

* There are more types of unconventional oil – bitumen (mostly in Canada´s tar sands, which can yield 169 billion bbls of oil), extra heavy oil other than bitumen, and oil from coal, biomass and gas conversion, but total size of such reserves is unknown.

Sources: EIA, IEA, EMRA, CAP

Khalda's Qasr Compression Project:

Monthly Progress Report (November 29 to December 27, 2013)

Reporting by Wael Elserag

Project Description

Qasr is a large, normally pressured gas-condensate reservoir located in the Western Desert, approximately 525 km west of Cairo. The field is operated by Khalda Petroleum Company (KPC), a joint venture between Apache Khalda Corporation and Egyptian General Petroleum Corporation (EGPC).

Field production is initially handled at the Start of Line (SOL) Qasr plant. After initial treatment (cooling and water removal), the gas/condensate is exported to a combination of the Salam, Tarek and Obaiyed gas plant for further treatment. The Qasr gas and condensate currently freely flows from the wellheads through the Qasr Phase I and Phase II facilities and export pipelines to the SHAMS manifold and Salam gas plant under reservoir pressure. As the reservoir pressure declines, the peak gas rate of 800 mmscfd will no longer be achievable.

The Qasr Compression Project is designed to improve recovery as the reservoir production rate and pressure decline. Its starting date is December 10, 2012, and completion date March 16, 2015.

Project Scope

- Gas turbine driven compressor sets
- Inlet and discharge scrubbers
- Discharge coolers
- Condensate suction drums
- Condensate export pumps
- Instrument air system
- Nitrogen generation system
- Fuel gas system
- Closed drains
- Utility systems
- Expansion to power generation and control system
- Fire fighting, detection and alarm system
- Permanent camp
- Tie-in to existing flare system, cold vent; water degassing systems and diesel supply system

Project Background

- In order to achieve the overall project targets, and the above-mentioned process, utilities and infrastructure as a result of the recommendation from the evaluation team and EGPC, and shareholders agreement, KPC awarded the EPC phase activities to Enppi.
- Project budget, including EPC contract price, is USD 310,700,000.
- Project period is 27 months from December 16, 2012.
- Expected arrival time of process gas centrifugal compressor at site is 17 months from Purchase Order (PO) dated February 20, 2013.
- Expected arrival time of pressure vessels at site is 11 months from Fax or Commitment (FOC) dated July 30, 2013.
- Initial operation period is three months after project completion.
- Overall project progress: plan: 40.79% – actual: 37.81%.

Executive Summary

HSE

- No lost time incident.
- During the report period, two near misses have occurred.
- During the report period, one medical treatment case has occurred – finger cut (scratch).
- Site safety induction completed for all project contractors.

Key Highlights

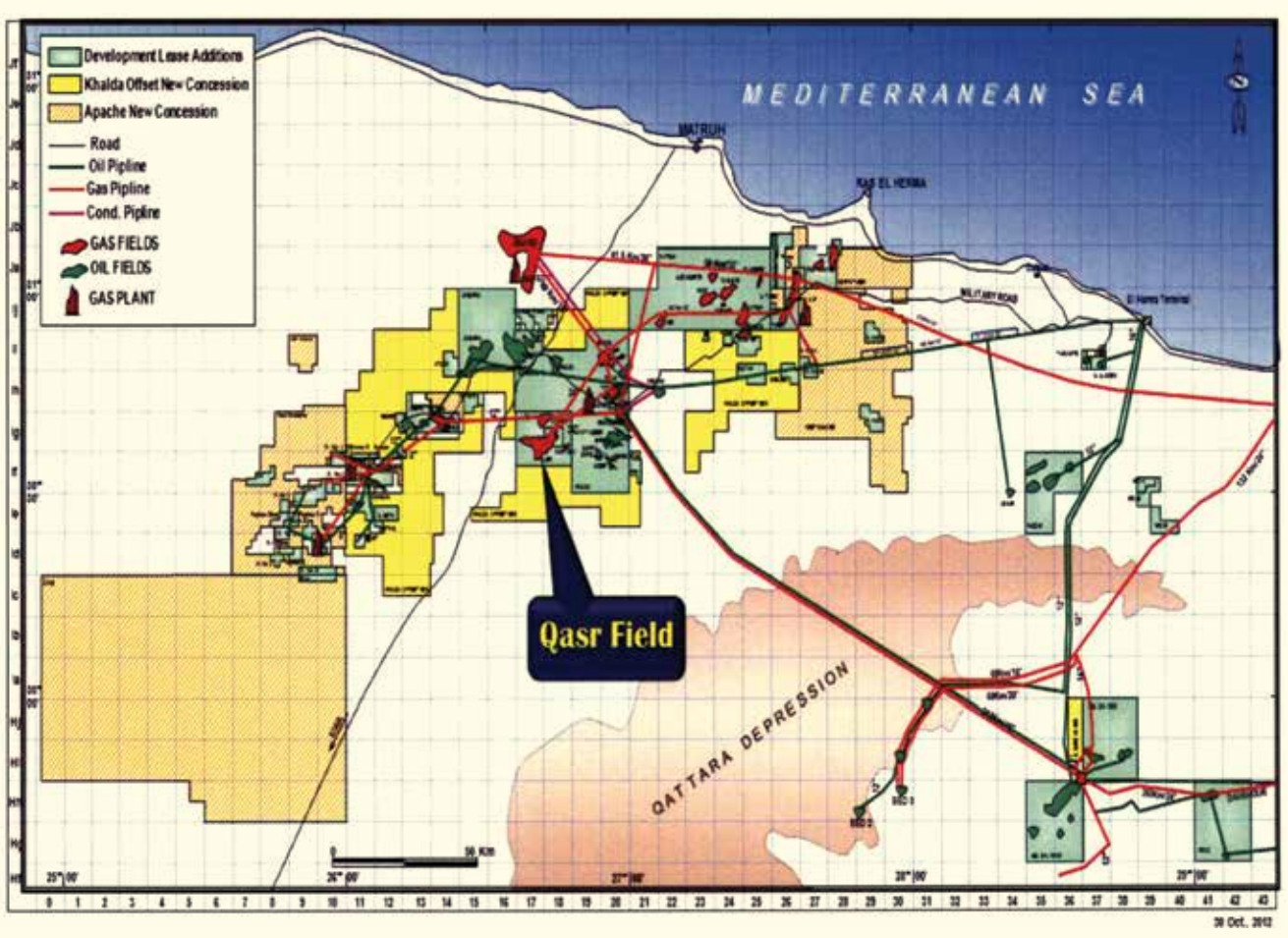
- Project document reviews continuing.
- Enppi continues the issue of documents for design and construction (IFD & IFC).
- Enppi issued Material Request Quotations (MRQ) for heat tracing material.
- Enppi issued Request for Quotations (RFQ) for potable water pump.
- Enppi received bids for SIMOP study and aluminum bronze gate valve.
- Enppi completed Commercial Evaluation (CER) for oxygen analyzer, Salam CCR DCS Modification and HVAC.
- Enppi issued Material Request Purchasing (MPR) for oxygen analyzer.
- Enppi issued Fax and Commitment (FOC) for oxygen analyzer, Salam CCR DCS Modification and HVAC.
- Enppi issued Purchase Orders (PO) for nitrogen compressor package, Salam CCR DCS Modification and Oxygen analyzer.
- Vendor Start of Fabrication (VSF) for electrical cables, piping ball valve, AC & DC UPS, extension of LAN/PABX system, fire and gas cable tray and venturi meter, pressure and temperature gauges.
- Delivery at site for instrument cable tray.
- Major construction highlights:
  - » Excavation of LER foundation completed.
  - » Excavation of social building completed.
  - » Excavation is ongoing for pipe rack A1-A2, B1-B2.
  - » The new route of the cable passing through the construction area to the telecom tower area has been approved and in progress.
  - » Rough grading for fire-fighting area is ongoing.
  - » Shuttering and reinforcement of compressor D, C, A foundation is ongoing.
  - » Installation is ongoing for temporary fence.
  - » Shuttering plain concrete for villa 1.
- Close out of Client Document Review Forms (CDRF) ongoing with PMT and Enppi.
- EGAS meeting held on December 2, 2013.
- Meeting held on December 3, 2013, to review piping Q1 2014 tie ins.
- PMT attend project monthly meeting on December 18, 2013.
- Gas compressor string test has been conducted for the first compressor, attended by KPC engineers in the US.
- PMT attend senor management meeting with Petrojet, held on December 16, 2013.
- PMT attend procurement status meeting (brainstorming).

Issues requiring attention

- Enppi remain behind the project overall plan. Following PMT request, Enppi has produced and issued revised recovery plan. Enppi expect to be back on plan by the middle of February 2014.
- Project tie-ins remain a concern. Total number of piping tie-ins has increased from 88 to 107. Meetings ongoing to finalize tie-ins and types of shutdowns required.
- CDRFs and documents:
  - » Closeout of CDRFs by Enppi is still slow and further improvement is required.
  - » Review meetings are ongoing.
  - » Enppi is reissuing some but not all documents following closeout of CDRFs.
- Enppi internal communication and coordination needs to be improved. The issue continues to be seen during the review of documents. This has been brought to Enppi attention during weekly progress meetings and via comments made in the CDRFs.
- Enppi ability to maintain the planned IFC baseline schedule dates. The current status and the level of completeness of the civil engineering and design deliverables, if not improved, may not be able to feed into IFC documents as planned.
- 60% 3D model: An intermediate review has been held to enable civil drawings to be released AFC. Enppi has been requested to report on progress of closing 60% of model review tags. PMT are concerns with the quality of the model and clash checking.
- Aluminum bronze gate valves (substitute for ductile iron gate valves) – subject of re-enquiry (KPC raise the comment on June 16), commercial evaluation expected to be completed on January 3, 2014. PO is expected January 14, 2014. May have schedule impact.
- TCF accommodation is not ready for occupation due to a number of issues with the site kitchen, a joint inspection was carried out and a punch list raised by KPC Safety and Administration, Enppi did not fulfill the re-auditing date of December 15. KPC advised Enppi that such delay is not acceptable as it affects the safety and execution of the construction phase of the project.
- Project schedule critical (float 0-30 days) items for delivery include: piping bulks (CS & duplex), pumps (condensate export BB5, centrifugal VS4), valves (piping ball valves, cast & forged gate, globe, check valves), manual valves (required for tie-ins), PV, ultra sonic flow meter. LER & camp HVAC and emergency diesel generator.
- KPC issued two letters (70 and 74) regarding pending drawing related to camp networks (TV and telephones) and PABX system included in Enppi's scope of work.
- Enppi pending reply for KPC's various requests to conduct HAZOP session for various design package required.
- Calibration of the Petrojet concrete batch plant report under Enppi review.
- Temporary fence marking both green and brown fields' boundaries still not complete.
- Excavation for workshop building has not started. Planned to start December 25, 2013.
- Total number of equipments and manpower mobilized to site do not comply with constructability plan rev. 02.
- Pipe rack prefabrication still pending due to late-issued AFC drawings (37 days in delay).
- Vessel delays: six from 16 vessels ordered now have a forecast delay at site of 4-8 weeks, with a further four vessels with a forecast delay of 2-4 weeks. Enppi expecting Petrojet to improve delivery dates. Six vessels are forecast to arrive at site earlier than the PO contract date. Petrojet advised that air freight is not foreseen due to increased cost. However, fabrication schedule has been reduced from 18-20 weeks to 14-16 weeks. KPC requested Petroject to issue revised schedule for review. Further meetings with Petrojet senior management to be arranged by KPC Project Manger.

Progress Status

- Due to the weighting factor of procurement, any delays in placing PO will have a major affect on the overall project progress.
- Enppi remains behind the project baseline plan. The variance decreased from last month. This was expected during December based on recovery schedule details issued by Enppi.
- Overall progress slippage has decreased by 2.15%, from -5.13% to -2.98%.
- Procurement slippage has decreased by 3.01%, from -7.34% to -4.33%.

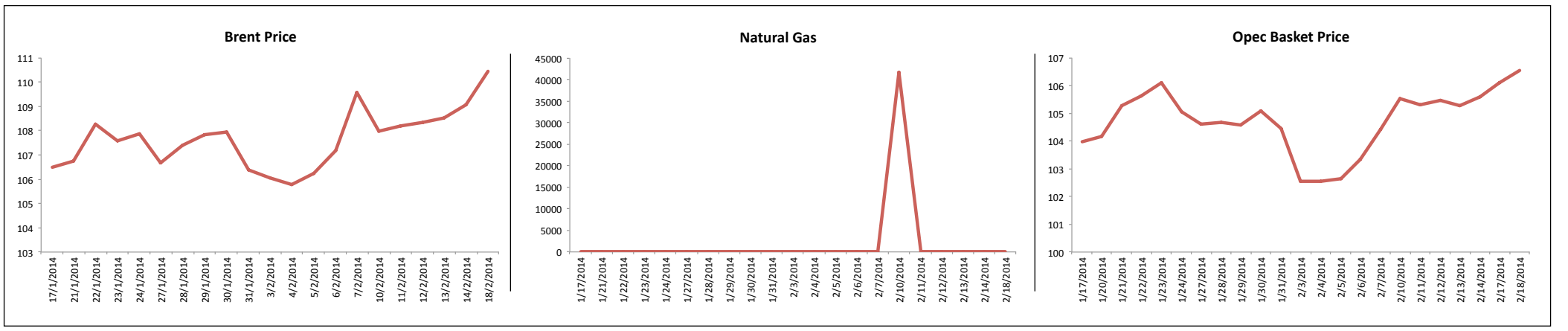


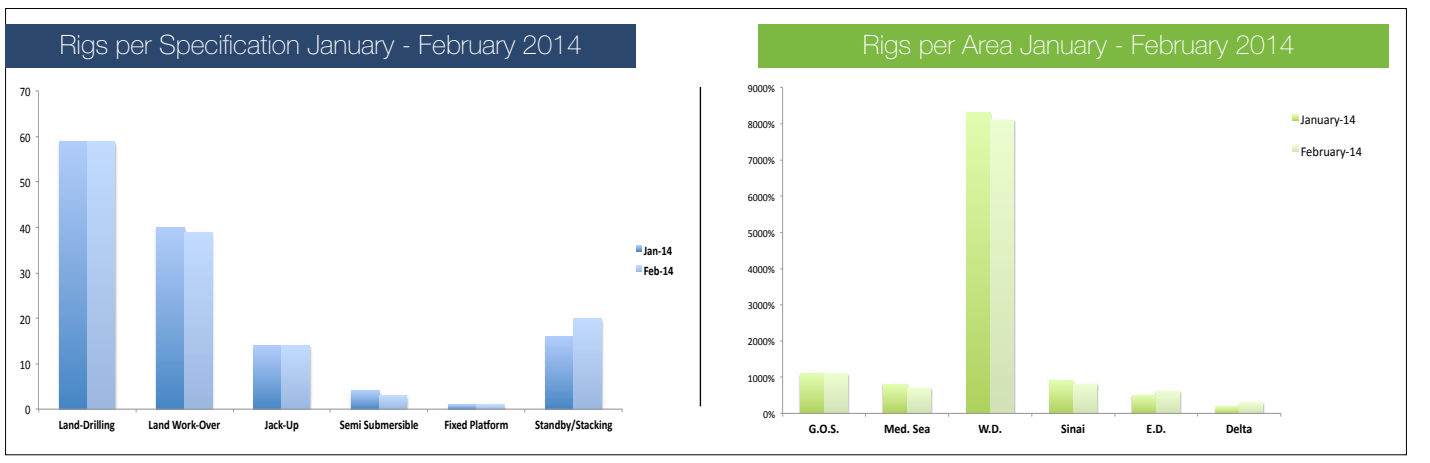
Egypt Statistics

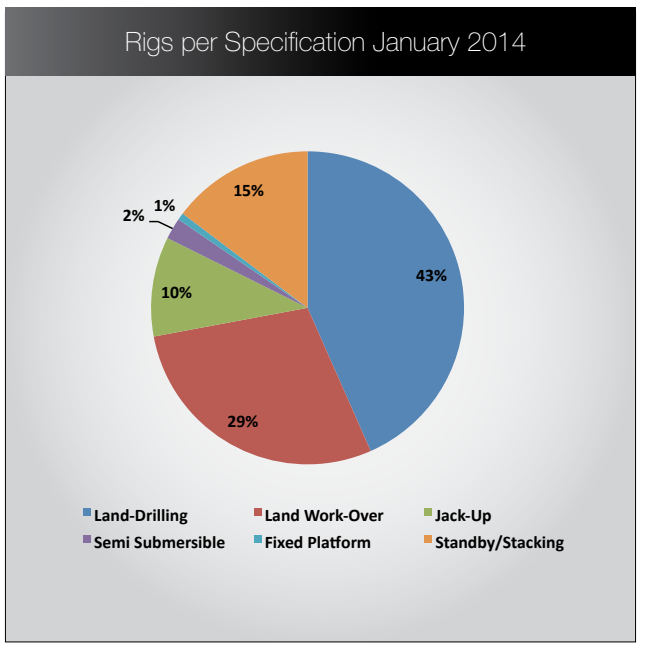
Egypt Rig Count per Area – December 2013

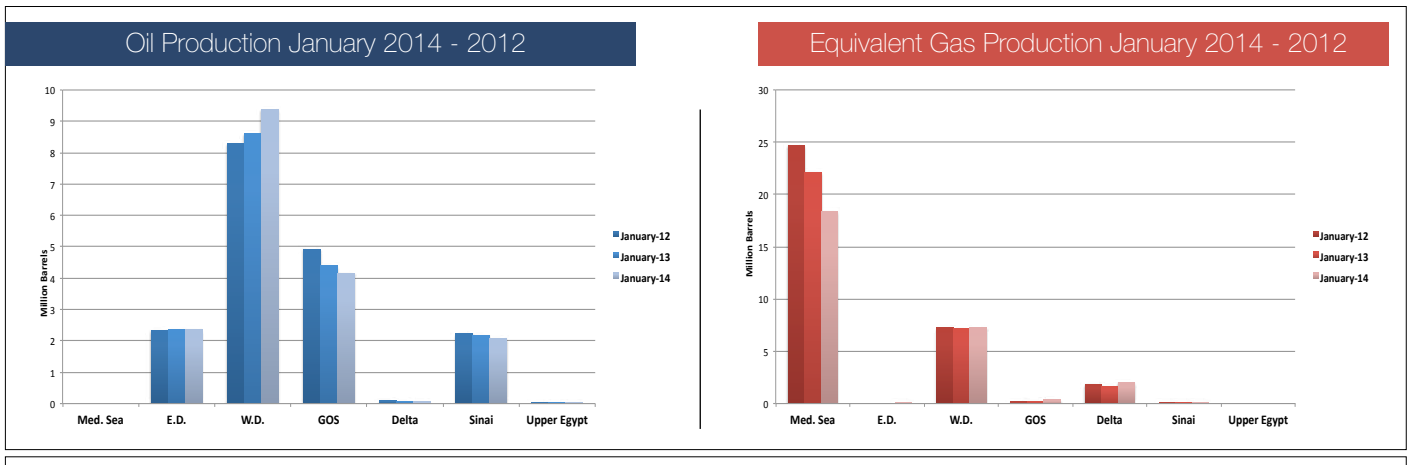
Area	Total	Percentage of Total Rigs
Gulf of Suez	11	9 %
Mediterranean Sea	7	6 %
Western Desert	84	70 %
Sinai	8	7 %
Eastern Desert	6	5 %
Delta	3	3 %
Total	116	100%

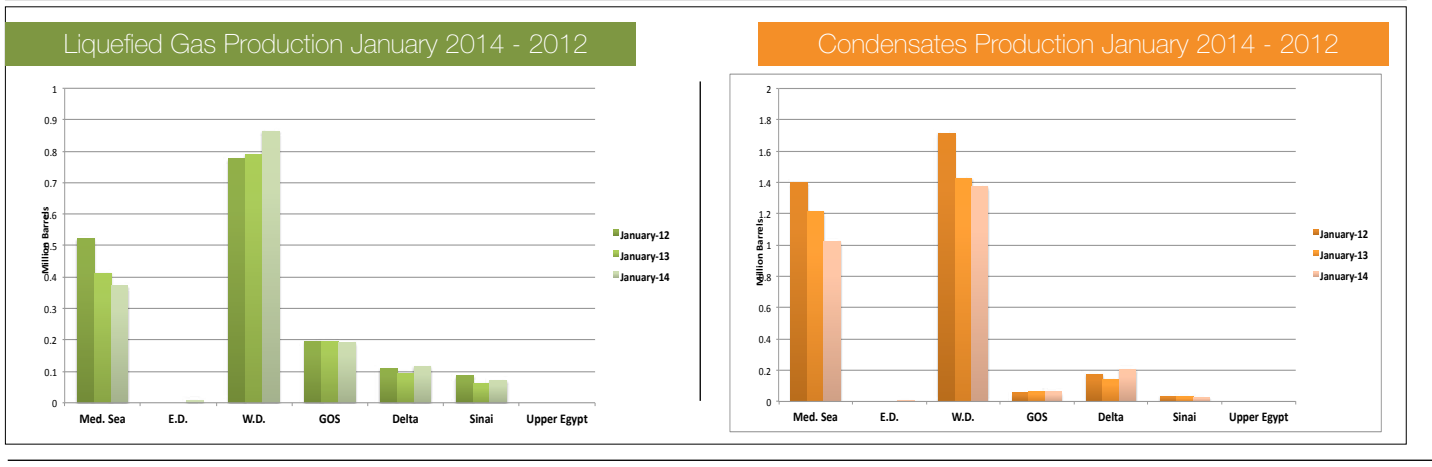
	Oil			Equivalent Gas			Condensate			Liquefied Gas		
	Barrel			Barrel			Barrel			Barrel		
	January-12	January-13	January-14	January-12	January-13	January-14	January-12	January-13	January-14	January-12	January-13	January-14
Med. Sea				24716071	22074107	18342679	1398330	1214914	1019915	522218	411918	372013
E.D.	2341192	2358012	2371731			58214			3057			6648
W.D.	8297080	8621185	9364431	7259464	7182143	7262143	1714723	1426752	1373998	776060	788634	864133
GOS	4927096	4390881	4157944	193929	236071	344464	56524	63773	61348	195866	195150	190096
Delta	100053	81127	62777	1870536	1613750	2010000	174417	141816	201185	107570	94205	116304
Sinai	2219457	2164438	2080387	893	3929	10893	33740	30813	27346	86313	60409	70206
Upper Egypt	16889	11715	11712									
Total	17901767	17627358	18048982	34040893	31110000	28028393	3377734	2878068	2686849	1688027	1550316	1619400

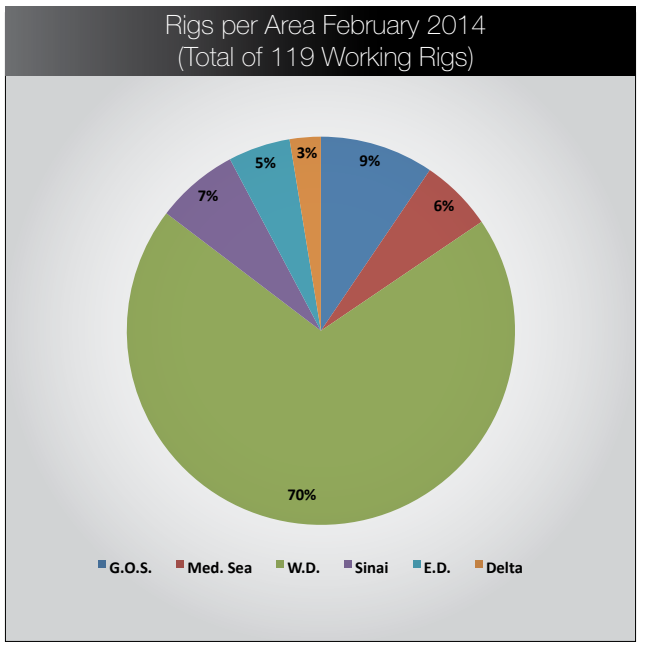












PLAN. THE PERFECT STAY

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