

In Review

## Resolving the Egypt-Ethiopia Nile Dispute

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Guest Column

## Egypt's Energy Trap

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# EGYPT OIL & GAS NEWSPAPER

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## Uncertainty, Instability and Political Progress?

P.16



## Unknown Consequences

This month, the Egyptian people once again made history as 22 million Egyptians took to the streets seeking the removal of President Mohamed Morsi. The military, as an institutional manifestation of people's will, removed Morsi from office with the hope of restoring order and stability to the Egyptian political and economic landscape. To that end, the military has appointed an interim parliament including a new Minister of Petroleum Minister Sherif Ismail, yet security in the Sinai has deteriorated and international petroleum prices have risen.

In the wake of Morsi's removal, and an influx of Gulf Aid, some measure of temporary economic relief has however been achieved domestically. The aid packages from UAE, Qatar, and Saudi Arabia are estimated at 12 billion dollars in the form of energy products, cash, and interest free loans. With the in-

flux of cash, the Egyptian pound has also rallied against the US dollar in the past few days.

In this issue of Egypt Oil and Gas, we examine the events that lead to this point and the potential implications of our currently chosen political path. We include an investigation of the extreme gas lines that crippled Cairo in the days leading up to June 30th, we examine Morsi's first year in office, and we provide an analysis of how the events of the past month will impact Egypt's oil and gas sector in the short and longer terms.

To be frank, even the intermediate consequences of Morsi's removal are unknown. What is known however is that the events of the past month have resulted in division and violence, which will likely continue for some time and possibly make longer term solutions to Egypt's economic difficulties more complex.

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### Prices

Bullion Market		Oil Prices	
GOLD	SILVER	BRENT	NYMEX Crude
1349.05	21.21	103.41	95.73
		USD/BBL	USD/BBL
-4.76%	-7.94%	0.14%	0.98%

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### Kuwait Energy Drills YUSR-60 Well

Kuwait Energy Company recently drilled a new developmental well. The drilling operations occurred in the company's concession area in the Eastern Desert. The YUSR-60 oil producing new

developmental well, was drilled to a depth of 4,731 ft utilizing the ECDC-1 rig. Investments surrounding the drilling process are estimated at 1 million USD.

### Dublin and GPC Complete MESEDA H-13 Well

Dublin and GPC completed the drilling of MESEDA H-13 well, which is considered to be a crude oil producer. The well was drilled in the company's concession area in the Eastern Desert. The

well was drilled to a depth of 4,580 ft utilizing the ZJ-45L rig. Investments surrounding the drilling process are estimated at 700,000 USD.

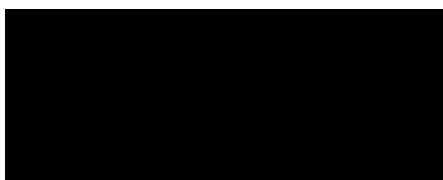
### GPC Completes HF 35/5 Gas Well

CPC completed drilling the HF 35/5 gas producing developmental well. The well is located in the company's con-

cession area in the Eastern Desert. The well was drilled to a depth of 6,978 ft utilizing the ST-4 rig.

### NORPETCO Drills GANNA W-1 Well

NORPETCO drilled the GANNA W-1 well. The well was drilled to a depth of 8,371 ft utilizing the ECOC-2 drilling rig. Expenditures on the well are estimated at 2.572 million USD.



### GPC/SCIMITAR Drills in the Eastern Desert



GPC/SCIMITAR Company recently completed the drilling of new developmental wells. The drilling operations occurred in the company's concession area in the Eastern Desert. The new wells are:

#### ISS-105

The ISS-105 oil producing developmental well was drilled to a depth of 1,450 ft utilizing the SHAMS-1 rig. Investments surrounding the drilling process are estimated at 336,000 USD.

#### ISS-122

The ISS-122 developmental well was drilled to a depth of 1,872 ft utilizing the SHAMS-1 rig. Investments surrounding the drilling process are estimated at 700,000 USD.

#### ISS-123

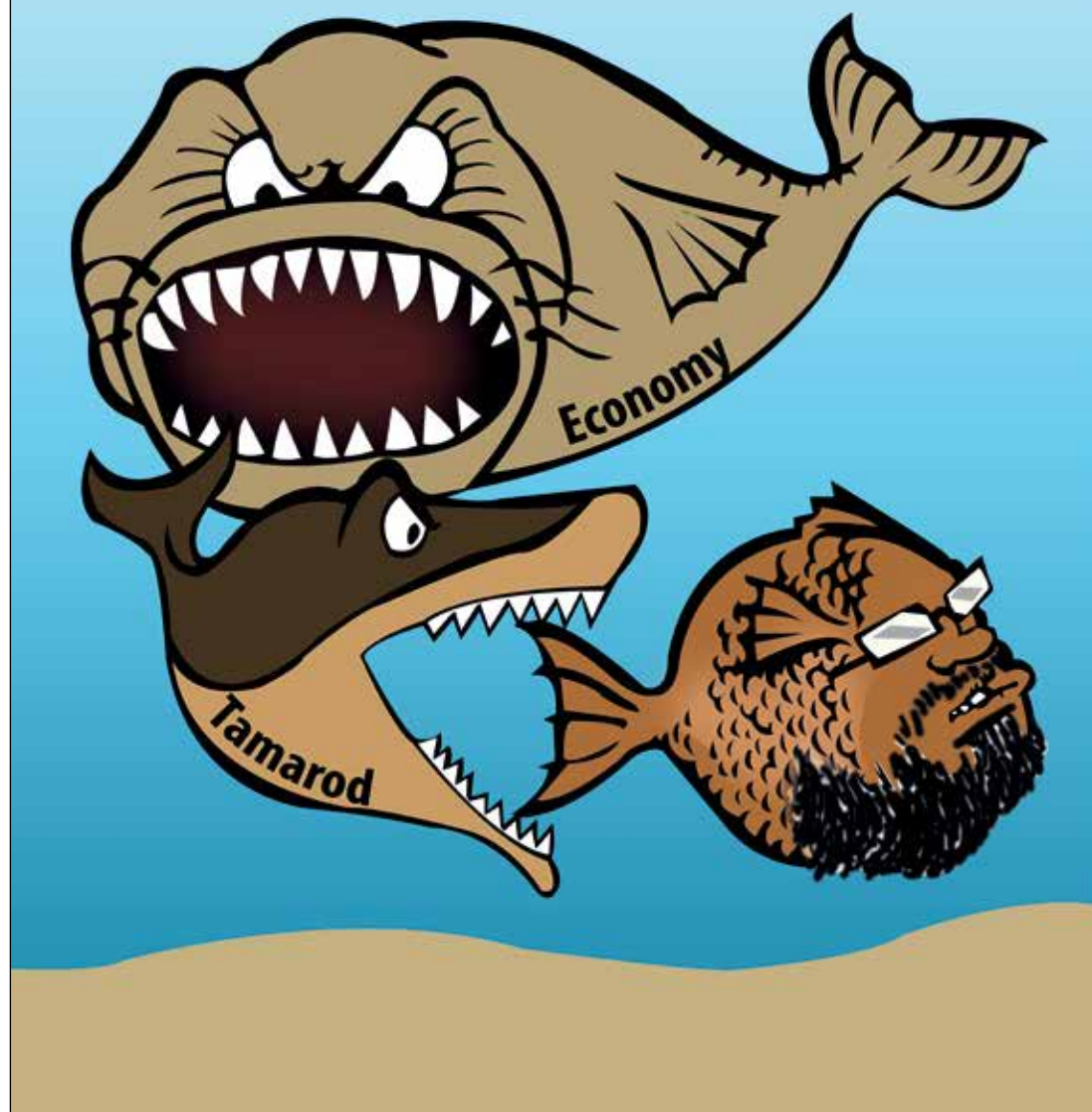
The ISS-123 oil producing was drilled to a depth of 1,822 ft utilizing the SHAMS-1 rig. Investments surrounding the drilling process are estimated at 350,000 USD.

### WEST BAKR Completes K-25 Well

The WEST BAKR Company recently completed the drilling of a new developmental well in the company's concession area in the Western Desert. WEST BAKR is a joint venture

between EGPC and EPEDCO. The K-25 oil well was drilled to a depth of 4,681 ft utilizing the EDC-62 rig. Expenditures on the drilling process are estimated at 1.3 million USD.

### Cartoon



### PETROBEL Drills in Mediterranean and Sinai

PETROBEL, a joint venture company between EGPC and Eni, recently completed wells in the Mediterranean Sea and Sinai Peninsula. In June 2013, the company's production rate reached 3,641,962 barrels of crude oil and condensates and 7,212,743 barrels equivalent of natural gas. PETROBEL's latest wells are:

#### KARAWAN-2

The KARAWAN-2 offshore well was drilled to a depth of 4,596 ft utilizing the SCARBE-4 rig. Expenditures surrounding the drilling process are estimated at 16 million USD.

#### 113-190

The 113-190 exploratory well was drilled to a depth of 10,669 ft utilizing the ST-3 rig. Investments surrounding the drilling process are estimated at 3.3 million USD.

#### BLS-12

The BLS-12 oil producing new developmental well was drilled to a depth of 10,972 ft utilizing the ST-12 rig. Expenditures on the drilling process are estimated at 4 million USD.





## Khalda Drills in the Western Desert



Khalda Company recently drilled several new wells. The drilling operations occurred in the company's concession area in the Western Desert. Khalda is a joint venture between EGPC and Apache American Corporation. Khalda's production rate of crude oil and condensates reached 3,931,275 barrels and equivalent to 4,769,643 barrels of gas in June 2013. Khalda's recent projects include:

### ABRAR-8

The ABRAR-8 oil producing developmental well, was drilled to a depth of 11,170 ft utilizing the ST-2 rig. Investments surrounding the drilling process are estimated at 440 thousand USD.

### RAMOSE-1X

The RAMOSE-1X new exploratory well was drilled to a depth of 14,500 ft utilizing the EDC-41 rig. The well is a producer of crude oil but remains under evaluation. Investments surrounding the drilling process are estimated at 3.8 million USD.

### UMB-221

The UMB-221 oil producing developmental well was drilled to a depth of 12,410 ft utilizing the EDC-18 rig. Investments surrounding the drilling process are estimated at 1.6 million USD.

## Apache Completes Drilling of WKAN-Y-1X and WKAL-N-3X

Apache recently completed two new wells in the company's concession area in the Western Desert.

### WKAN-Y-1X

The WKAN-Y-1X new exploratory well was drilled to a depth of 9,922 ft utilizing the EDC-57 rig. The well was temporarily closed. Investments surrounding the drilling process are estimated at 1.7 million

### TUT-100

The TUT-100 developmental well was drilled to a depth of 9,290 ft utilizing the EDC-11 rig. Investments surrounding the drilling process are estimated at 329,000 USD.

### FALAK NW-1X

The FALAK NW-1X exploratory well was drilled to a depth of 13,800 ft utilizing the EDC-54 rig. Expenditures on the project are estimated at 2.4 million USD.

### AG-102

The AG-102 oil producing well was drilled to a depth of 11,480 ft utilizing the ST-10 rig. Investments surrounding the drilling process are estimated at 1.84 million USD.

### SHROUK E-31

The SHROUK E-31 developmental well was drilled to a depth of 7,660 ft utilizing the EDC-61 rig. Expenditures on the drilling process are estimated at 300,000 USD.

### SYRAH-N-1X

The SYRAH-N-1X developmental well was drilled to a depth of 14,800 ft utilizing the EDC-8 rig. Investments on the drilling process are estimated at 1.4 million USD.

USD.

### WKAL-N-3X

The WKAL N-3X oil producing exploratory well was drilled to a depth of 15,235 ft utilizing the EDC-59 rig. Following the completion of drilling the well was temporarily closed. Investments surrounding the drilling process are estimated at 4.6 million USD.

## PETROSAFWA Drills in the Western Desert

PETROSAFWA, a joint venture between EGPC and Vegas Oil and Gas, recently completed two wells in the Western Desert.

### SAFWA S-1X

The SAFWA S-1X new exploratory well was drilled to a depth of 11,150 ft utilizing the EDC-10 rig. The well was deter-

mined to be dry and was abandoned. Investments surrounding the drilling process are estimated at 2.83 million USD.

### SAFWA-3

The SAFWA-3 oil producing developmental well was drilled to a depth of 4,360 ft utilizing the SNOS-4 rig. Investments surrounding the drilling process are estimated at 670,000 USD.

## PETRODARA Drills New Wells

PETRODARA, a joint venture between EGPC and Dublin Corporation, completed drilling on two wells in the Eastern Desert. PETRODARA's production rate of crude oil and condensates reached 370,932 barrels in June 2013. The new wells are:

### ARTA-64

The ARTA-64 developmental well was drilled to a depth of 4,110 ft utilizing the ST-7 rig. The well

is considered a crude oil producer. Investments surrounding the drilling process are estimated at 750,000 USD.

### ARTA-38

The ARTA-38 oil producing well was drilled to a depth of 4,265 ft utilizing the ST-7 rig. The new well is a crude oil producer. Investments surrounding the drilling process are estimated at 750,000 USD.

## BAPTECO Drills OBA D-37 and BED 3 C-16A Wells

BAPETCO is a joint venture between EGPC and Shell. The company's production rate reached 1,026,588 barrels of oil and the equivalent of 1,824,821 barrels of natural gas in June 2013.

### OBA D-37

The OBA D-37 developmental well was drilled to a depth of 13,659 ft utilizing the EDC-55 rig. The well is considered to be a gas producer. Invest-

ments surrounding the drilling process are estimated at 6.2 million USD.

### BED 3 C-16A

The BED 3 C-16A developmental well, was drilled to a depth of 13,124 ft utilizing the EDC-52 rig. Investments surrounding the drilling process are estimated at 3.7 million USD.

## Agiba Drills in Western Desert

Agiba is a joint venture between EGPC (50%), IEOC (40%) and MITSUI (10%.) The company's production rate reached 1,900,449 barrels of crude oil and the equivalent of 86,831 barrels of natural gas in June 2013.

### E-AGHAR-16

The E-AGHAR-16 oil producing developmental well was drilled to a depth of 6,500 ft utilizing the WF-161 rig. The new well is a crude oil producer.

Expenditures on the well are estimated at 1.2 million USD.

### AMAN DEEP-1X

The AMAN DEEP-1X exploratory well was drilled to a depth of 11,950 ft utilizing the PDI-104 rig. The well was temporarily abandoned. Investments surrounding the drilling process are estimated at 3 million USD.

## Egypt's Gas Pipeline to Jordan Under Attack

Two remote-controlled bombs exploded in the Mazar area of Egypt's Sinai Peninsula on 06 July, shutting down Egypt's gas pipeline to Jordan. The attack also disrupted Egypt's gas supplies to domestic power producers and industry. Egyptian natural gas is used to generate 80% of Jordan's electrical needs. Supplies were suspended as a result of the bombing, forcing Jordan to switch to costlier fuel oil for electrical generation at an estimated daily expense of 2 million USD. Jordan has adopted rationing policy as a result of shortages according to Jordanian Energy Minister Malekal-Kabariti. Violence has escalated in Sinai since 2011. The pipeline to Jordan has suffered at least 13 attacks since 2011. The July 6th blast was the first attack on Egypt's gas pipelines in Sinai over a year. On July 12th, a Palestinian man was arrested in the Sinai and charged with involvement in the attack, reports international media sources. Violence in Sinai has escalated in the wake of Morsi's ouster. On July 5th, a new Islamist group announced its formation, claiming that the removal of Morsi is a declaration of war on their faith and threatening violence to impose Islamic law. On the same day, armed Morsi supporters stormed the provincial headquarters of el-Arish, raising the black flag associated with Islamist militants. Five police officers were gunned down at the checkpoints of Sinai and one soldier was also

killed in the violence.

The attacks on the pipeline in Sinai have made Jordan's gas imports from Egypt increasingly expensive and unreliable. In June, the Jordanian initiated talks to purchase gas from Israel, despite widespread demonstrations protesting the move. Israel used to import 40% of its gas from Egypt via pipeline. Egypt suspended the agreement last year, claiming that the Israeli-Egyptian firm that was purchasing gas was not making payments. Israeli officials denied these allegations.

Recent large gas discoveries have opened for Israel the prospect to become gas exporter itself. However, in June the government passed a limit on exports to about 40% of the country's offshore reserves.



## Choice Words



The level of subsidies in Egypt is unsustainable, and the situation is critical. Subsidies have exceeded reasonable limits, and take more than 25% of the budget. This contributes to a broadening budget deficit, which forces us to borrow from other countries with interests as high as 25% of the budget. So in reality, subsidies represent about 50% of the total budget, which deepens the deficit. It is a pressing shortfall, and if continued may blow up into a dire threat to the Egyptian economy.

**Hazem El-Beblawy**, Egypt's Interim Prime Minister



The Freedom and Justice Party (FJP) expresses deep gratitude to the millions of civilized and alert Egyptians who responded positively and rallied in all the governorates of Egypt in enormous yet peaceful protests, through which they stated their utter rejection of the brutal military coup and demanded reinstatement of President Mohamed Morsi to his constitutional duties and cancelation of all constitutionally-invalid proceedings and decrees

**Essam El-Erian**, Vice Chairman of the Freedom and Justice Party



The United States is monitoring the very fluid situation in Egypt, and we believe that ultimately the future of Egypt can only be determined by the Egyptian people. Nevertheless, we are deeply concerned by the decision of the Egyptian Armed Forces to remove President Morsi and suspend the Egyptian constitution. I now call on the Egyptian military to move quickly and responsibly to return full authority back to a democratically elected civilian government as soon as possible.

**Barack Obama**, US President



There are two ways to legalize the political system: internal and external legitimacy. The source of internal legitimacy is the people and the sovereignty of the nation. A country should obtain its power from the people if it wants to be stable. If this ends, the debate over legitimacy starts. This is the main problem in Egypt now. It is not clear where the tendency of radicalization will stop.

**Ahmet Davutoglu**, Foreign Minister of Turkey



## Qarun Drills Several New Wells in the Western Desert

Qarun Petroleum Company recently completed several new wells in the company's concession area in the Western Desert. Qarun is a joint venture between EGPC and Apache Company. The company's production rate for crude oil and condensates reached 1,384,195 barrels in June 2013. Qarun's latest projects include:

### SAMRA-86

The SAMRA-86 exploratory well was drilled to a depth of 5,800 ft utilizing the EDC-63 rig. Expenditures on the well are estimated at 500,000 USD.

### SAMRA-81

The SAMRA-81 developmental well was drilled to a depth of 5,820 ft utilizing the EDC-63 rig. Investments surrounding the drilling process are

estimated at 1.2 million USD.

### HAMRA-26

The HAMRA-26 developmental well was drilled to a depth of 5,900 ft utilizing the EDC-64 rig. Expenditures on the drilling process are estimated at 600,000 USD.

### HNE-32

The HNE-32 well was drilled to a depth of 6,070 ft utilizing the PD-1 rig. Investments surrounding the well are estimated at 920,000 USD.

### KARAMA-18

The KARAMA-18 exploratory well was drilled to a depth of 8,350 ft utilizing the EDC-47 rig. Costs of the drilling process are estimated at 1 million USD.

## PETROSILAH Drills SILAH-7-1 Developmental Well

PETROSILAH, a joint venture between EGPC and MERLON International, completed the SILAH-7-1 well in the company's concession area in the Western Desert. The SILAH-7-1 developmental well was drilled to a depth of 7,900 ft utilizing the EDC-49 rig. The new well is considered a crude oil producer but remains under evaluation. Investments surrounding the drilling process are estimated at 2.45 million USD. PETROSILAH production rates of crude oil and condensates reached 136,871 barrels in June 2013.



## Chairman of GANOPE Becomes Oil Minister



Egypt's interim government sworn in after the ousting of President Mohamed Morsi includes Sherif Ismail as Minister of Petroleum and Mineral Resources. Ismail was formerly Chairman of Ganoub El-Wadi Petroleum Holding Company (GANOPE). Ismail stated he would focus on meeting domestic demand for petroleum products by raising natural gas production and continuing imports of diesel and low-quality mazut fuel.

Thirty Four ministers were sworn in on July 16th before Interim President Adly Mansour. Mansour is the former head of the High Constitutional Court where he has served since 1992.

Interim Prime Minister Hazem El-Beblawi is a co-founder of the Egyptian Social Democratic Party. He served as Under-secretary-General at the UN from 1995 to 2000. He also served as a Minister of Finance from July 2011 to October 2011.

The Defense Minister since August 2012, Abdel-Fattah al-Sisi, retained his post and also became first Deputy Prime Minister.

Ahmed Imam remains Minister of Electricity.

Ahmed Galal became Finance Minister. Galal is the former Managing Director of the Economic Research Forum in Cairo. He worked at the World Bank for 18 years.

Mohamed Abu Shady is the new Supply Minister. Shady is a former police officer that served in the Ministry of Trade and Industry under Mubarak.

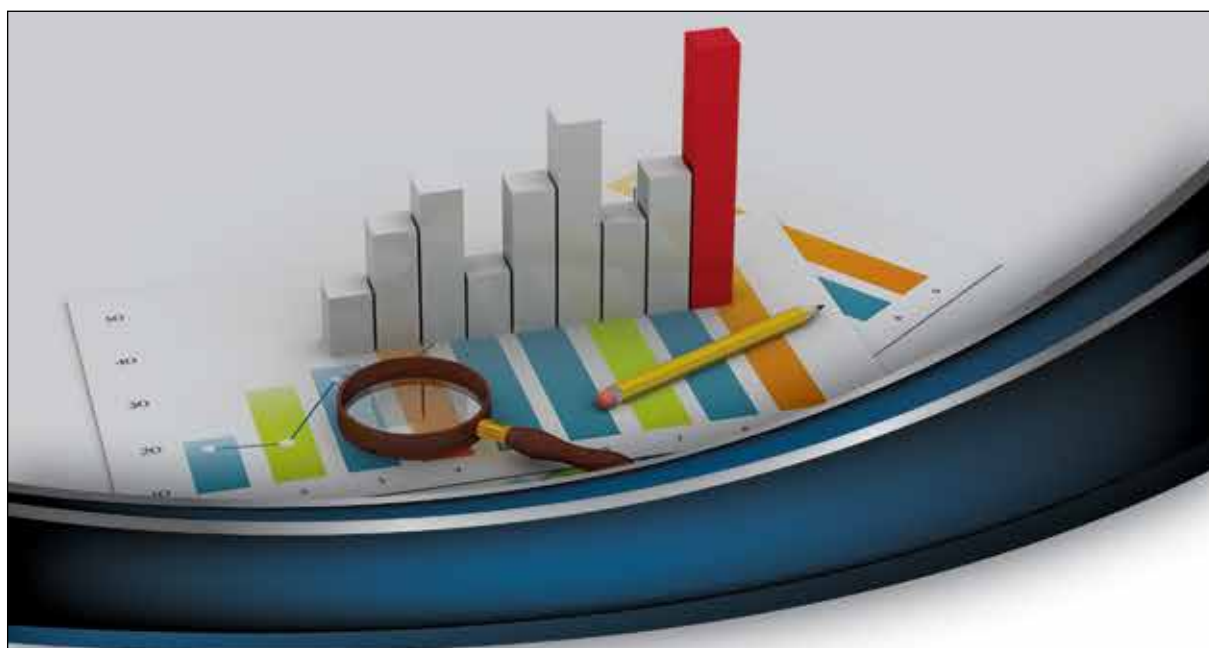
Osama Saleh is the new Investment Minister, a position that he held from August 2012 to May 2013.

Mounir Fakhry Abdel Nour is the Minister of Industry and Foreign Trade. Nour briefly served as Minister of Tourism just before the 2011 revolution.

Kamal Abu-Eita, a long-time labor activist, was appointed Minister of Manpower. Abu-Eita was the head of the Egyptian Federation of Independent Trade Unions, and General Manager of the Giza Real Estate Tax Authority. He vowed to set minimum wage policies and issue a syndicate freedom law.

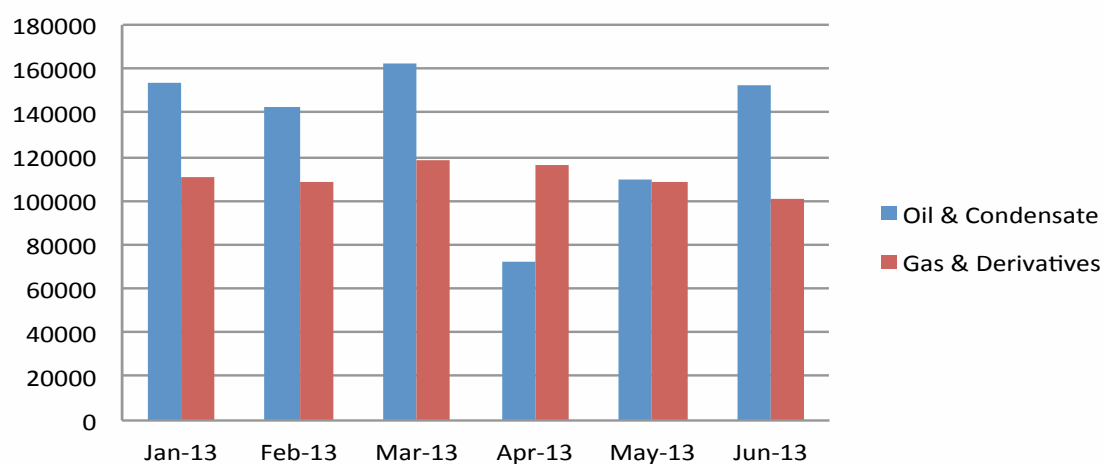
Ashraf El-Araby once again became Minister of Planning after losing this post in May 2013.

The new cabinet consists of three women and three Christians, but no Islamists. The Muslim Brotherhood has refused to take part in the interim government, calling it illegitimate. Theoretically, the interim cabinet plans to govern until parliamentary elections are held in early 2014.



## AMAPETCO's Oil Production Fluctuating, Gas Steady

Amapetco's oil Production Indicators January 2013 - June 2013.

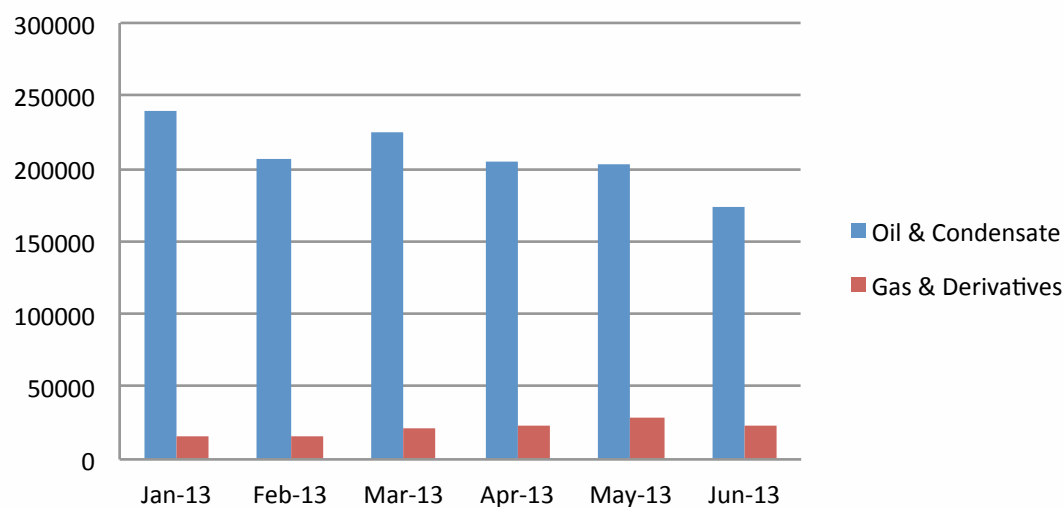


The oil and condensates production of Al Amal Petroleum Company (AMAPETCO) has been fluctuating considerably in the past few months. In March it produced 162,573 barrels, but production fell by 56% to 71,866 barrels in April. In June production started to rise again, reaching 152,743 barrels,

about the same level it was in January. The company's gas and derivatives production has been steadier, staying in the range of 100,000 to 120,000 barrels equivalent per month throughout January to June. However, June saw the lowest production of the last six months, at 100,357 barrels.

## Zetco's Oil Output Falling, Gas on Rise

Zetco's Oil Production Indicators January 2013 - June 2013.



The oil and condensates production of East Zeit Petroleum (Zetco) has seen a downward trend in recent months. The production was 239,519 barrels in January, but only 173,744 barrels in June. This represents a 28% decline over six months. Gas and derivatives production, on the other hand, has been increasing.

It was 15,868 barrels equivalent in January, but grew to 29,512 barrels by May. Demonstrating growth of 86% over five months. In June, the production fell by 22% to 23,065 barrels, but this is still a slightly higher level compared to April.



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## Jordan Considers Buying Gas from Israel



Jordan has initiated talks to become the first country to buy natural gas from Israel, as the former recently discovered vast energy reserves beneath the Mediterranean Sea. "Jordan is in the most immediate need and would be the first client" for Israel, affirmed Oded Eran, a former Israeli ambassador to Jordan. According to Eran, a fellow at the Institute for National Security Studies, the disruptions of gas supply from Egypt spurred the negotiations. According to the Wall

Street Journal, Jordan is receiving less than 40% of the stipulated supplies from Egypt. Due to the shortages, the price of cooking gas has risen by 50% and electricity has also become more expensive, which prompted anti-government protests in October. A gas deal with Israel would mark a significant tightening of the relations of the two countries who signed a peace treaty in 1994, which could trigger criticism from other Arab countries.

## Sound Oil Makes Gas Discovery in Italy



Sound Oil, an Italian focused upstream petroleum company incorporated in the UK announced it has discovered gas in Nervesa. "In October 2012, we set a strategy of significant growth through the drilling of four material wells in Italy within twenty-four months. Nervesa is the first of those drills and has confirmed a gas discovery," said the company's CEO James Parsons according to

Your Oil and Gas News. "Whilst a comprehensive technical review is now required to confirm the size of the discovery, it appears sufficiently large to deliver important cash flows and provide funding alternatives for the 2014 drill programme," the CEO added. After completion testing, Sound Oil plans to apply for a production concession, hoping to start selling Nervesa gas in 2015.

## Algeria: Foreign Firms Blacklisted Amidst Corruption Charges

Speaking to parliament, Algeria's Energy Minister Youcef Yousfi said on June 20th that foreign companies involved in corruption investigations will be blacklisted, cannot sign new contracts in the country, and may be subject to reparations. Algeria has recently seen a number of corruption scandals involving foreign firms paying bribes to win oil and projects, reports AP. Currently, the country is investigating Italian petroleum contractor Saipem and Canadian engineering company SNC-Lavalin. Most deals under investigation have involved the state energy company Sonatrach.

## Oil Spill Threatens Wildlife, Tourism off Coast Cyprus



A tanker spilled more than 100 tons of fuel oil on July 16th close to the Karpasia peninsula of northern Cyprus, which is a nature reserve. The spill occurred as the tanker offloaded fuel at a power station owned by the Turkey-based electricity producer Aksa Eerji, reports Reuters. "The company says the spill occurred due to a problem with the pressure but it may have been due to an improper connection", said Turkish Cypriot Environment Minister Mehmet Harmanci. A barrier was established to contain the spill and clean-up materials from Turkey were sent, but officials are worried about further leakages.

## Israel Approves 40% Limit on Gas Exports

On June 23rd the Israeli government approved limits on natural gas exports to about 40% of the country's recently discovered offshore reserves. Environmentalists and opposition forces sought an even stricter limit. Conversely, exploration companies lobbied for a large export quota, arguing that the Israeli market alone was too small to guarantee further investment in developing the offshore fields, reports Reuters. "We did the right thing for Israel. Without gas exports, there will not be gas for the domestic market," said Israel's Prime Minister Benjamin Netanyahu. "This mistake, this surrender to populism 'let's save the gas for ourselves,' a number of countries did this, and they saved the gas for them-

selves. It's still buried, under the ground and water, beneath layers of populism and bureaucracy." According to Israel's government, gas exports will bring the country USD 60 billion over the next two decades.



## Cyprus to Build LNG Plant with US-Israeli Backing

Cyprus on 26 June signed a memorandum of understanding with the US Noble Energy, Israel's Delek and Avner, launching negotiations for the construction of an LNG export terminal. A definitive deal is set to be signed by the end of this year and the first LNG cargo from the Vasilikos plant is expected in late 2019 or early 2020, reports Reuters. According to Forbes, the terminal would also provide a transport line for Israel and Lebanon who also have large offshore reserves in the re-

gion. Cyprus recently signed new agreements with France's Total, Italy's Eni and South Korea's Kogas in order to expand exploration in its waters. However, Turkey claims that the exploration is unfair because the Turkish Cypriots who run their own state in the north of the island should also have a say on the reserves. The latest LNG memorandum prompted Turkey's foreign ministry to warn that the country "won't let the Cypriot issue continue in this way".

## Turkey: Gas Feud May Divide Cyprus Formally

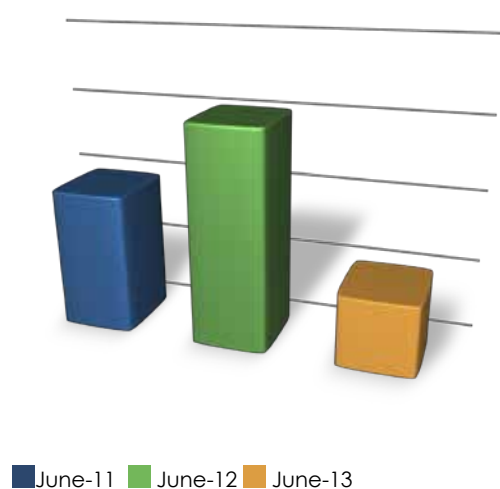
According to Turkey's Deputy Prime Minister, Besir Atalay the formal partition of Cyprus may arise as an option if negotiations with Greek Cypriots fail. Negotiations to reunify the island have become strained as Greek Cypriots began exploring recently discovered gas deposits, reports AP.

Turkey is opposed to gas explorations carried out by the Greek Cypriot government, claiming it is unfair towards Turkish Cypriots. However, the Greek Cypriot government has said that it can share the benefits of gas with Turkish Cypriots if a reunification accord is reached. This is the newest chal-

lenge to peace talks that stalled last year.



Mediterranean  
Statistics



Equivalent Gas			Oil		
June-11	June-12	June-13	June-11	June-12	June-13
21,462,321	22,262,143	20,739,286	N/A	N/A	N/A
			Condensate		
June-11	June-12	June-13	June-11	June-12	June-13
382,981	388,952	393,756	1,319,093	1,155,228	1,369,767
Mediterranean Rig Count 2013			Total	Percentage of Total Rigs	
			9	7 %	



## LNG Donated to Egypt by Qatar Likely to go to Foreign Firms

The five cargoes of LNG that Qatar gave to Egypt is expected to be given to foreign partners, GDF Suez and BG Group to compensate for declines in exports. Reuters reports that by using the cargoes to meet obligations to export firms, more of the domestic supply will be able to stay in the country. Of the five cargoes from Qatar, three will go to GDF Suez to send to Europe and two will go BG Group to export to Asia. However, this agreement has not been finalized.

Delays in the agreement have arisen due to Egypt's recent unrest and Qatar's change in leadership. The cargoes come as part of a larger agreement between the countries in which Qatar pledged

to provide 18-24 LNG cargoes to firms that Egypt has export agreements with. Due to growing domestic consumption and supply shortages, Egypt has been forced to cut exports. The cargoes from Qatar would supply firms, which Egypt has export agreements with, allowing Egypt to keep its LNG domestically. However, Qatar has obligations to its foreign partners, which has resulted in disputes over pricing. Reportedly, Qatar's foreign partners in the LNG plant that is expected to provide the cargoes have agreed on the price of USD 13/mmBtu for the cargoes. Egypt has remained reluctant to agree to the price given the country's current economic crisis.

## Qatar's Financial Support to Egypt May Erode

The political and financial support that Qatar has provided to Egypt since the 2011 revolution is in question following the removal of former president Mohamed Morsi. In January Qatar gave Egypt a USD 2.5 billion loan and in May provided the country with USD three billion by agreeing to purchase Egyptian bonds at 3.5% interest. Since Morsi's ousting, three other Gulf countries have pledged a total of USD 12 billion to Egypt, minimizing the importance of Qatar, reports the Daily News Egypt.

However, Sherif Sami, a member of the General Authority of Invest-

ments, expects that Egyptian-Qatari relations will strengthen despite the overthrow of Morsi. Hana Ebeid, a researcher at Al-Ahram Centre for Political and Strategic Studies, on the other hand, expects the relations between the two countries to weaken. "The fact that Morsi was in power was enough reason for Qatar to support Egypt in aid and politics", she explained, noting Qatar's relationship with the Muslim Brotherhood. The Egyptian public has been very critical of Qatari aid in recent months, considering it an attempt to gain influence in the region.

## Gulf Aid Helps Egypt Pay Dues to Foreign Oil Firms

Following the removal of Mohammed Morsi, several Gulf countries have promised assistance to Egypt that will help the country pay its debts to foreign oil companies operating in the country. Kuwait, Saudi Arabia and UAE have pledged Egypt a total of USD 12 billion. "The Gulf aid will give a more robust financial flexibility to the Egyptian General Petroleum Company (EGPC)", said an EGPC's official, reports World Bulletin. In mid-2011, EGPC signed an

agreement with foreign oil companies that permitted payments in installments after a 6-month grace period. The deal was reactivated in 2012, but Egypt has had difficulties with paying the dues in the past four months. The debt of the Egyptian government to foreign oil companies is currently estimated at 5.4 billion USD. The official affirmed that the EGPC has continued paying its debt despite the political turmoil.

## Kuwaiti Petrol Supplies Arrive in Egypt

Two tankers, one carrying approximately 100,000 tons of diesel and the other 1.1 million barrels of crude, have arrived in Egypt, informed the Al-Rai newspaper. Kuwait will give Egypt a total of USD 4 billion in loans and energy products reports. Other Gulf States have also vowed to help Egypt financially after the ousting of former president Mohamed

Morsi. Saudi Arabia said it will grant Egypt USD five billion and the UAE has pledged USD three billion. The Saudi aid includes a USD two billion deposit, USD one billion of cash and USD two billion of petroleum products. The UAE will contribute USD two billion as an interest-free deposit with the central bank and USD one billion as a grant.

## Stoppage in Iraqi Oil Exports via Turkey

Iraqi oil exports travelling from Kirkuk to the Mediterranean port of Ceyhan in Turkey stopped at the end of June due to a leak in pipeline. The leak occurred in the Iraqi part of the pipeline. An attempt to continue transport via the pipeline was made on 11 July, but failed. "The flow was resumed for few hours late Thursday but it was stopped again on Friday," a shipping agent based in Ceyhan told Dow Jones Newswires. Over the last few months the transport via the pipeline has been dis-

rupted on several occasions due to sabotage as well as technical problems.



## OPEC May Cut Oil Production in December



OPEC may decide to reduce its oil output for the first time in five years due to the growth of production in US shale oil. According to a report of the International Energy Agency (IEA) published in July, the demand for OPEC oil next year will be less than its current production of 30 million barrels a day. A delegate from a Persian Gulf country told the Wall Street Journal that the IEA's forecast will likely lead to a reduction in OPEC's oil output. Another OPEC

delegate said that a cut of about 500,000 barrels a day will probably be discussed at the December meeting of the organization. In recent meetings, Gulf countries have supported keeping the output at 30 million barrels a day, saying that the world economy is still too fragile to face higher oil prices that would be a consequence of production cuts. OPEC has a goal to maintain production levels that keep oil prices from falling below USD 100 per barrel.

## Qatar in Talks to Buy RWE's DEA

German owned RWE initiated talks with sovereign wealth fund Qatar Investment Authority about selling its DEA oil and gas exploration and production unit. Analysts have valued the unit at about 5 - 8 billion euros (approx. USD 6.5-10.4 billion), reports the Wall Street Journal. RWE announced in March that it plans to sell DEA in order to cut its capital spending and debt. RWE does not expect the deal to be concluded this year, as there has not been much interest in buying the unit. BASF group, Wintershall, seems to have expressed interest in purchasing DEA.



## Iran Plans to Build a Gas Refinery

Iran plans to build a gas refinery with a production capacity of 80 million cf per day on the southern Persian Gulf island of Qeshm. Heydar Yarveisi, the head of Qeshm operational zone at the National Iranian Offshore Oil Company, said that the refinery will be built in the center of the country's energy zone. "The development of 16 new oil and gas fields and pro-

duction of 12,000 MW of electricity have been planned for Qeshm Island," he informed, according to Iran Daily. "Due to its geographical situation and proximity to the southern Persian Gulf littoral states and the strategic Hormuz Strait, Qeshm can turn into a hub for storing and exporting oil, gas and petrochemical products," Yarveisi added.

## Gulf States Benefit from Iran's Export Decline

Gulf Arab States have seen increasing oil export revenues thanks to a sharp fall in crude exports from sanction-ridden Iran. Excluding Iran, the net oil export revenues of OPEC members reached USD 982 billion last year, which is the highest number since 1975 when the US Energy Information Administration started gathering data. However, EIA predicts that the export revenues of OPEC, excluding Iran, will decline significantly in the coming years, partly due to the shale oil boom in Canada and the US.



## Qatar Petroleum Invests in Greece

On July 23rd state-owned Qatar Petroleum International (QPI) signed an agreement with the Greek Company GEK TERNA to buy a 25% share in its combined cycle gas turbine Heron II power plant. This is the company's first investment in Greece and its first acquisition of an existing power generation asset, reports the Penin-

sula. "This agreement marks special significance as it kicks off QPI's major efforts in terms of investment in power sector in the next two years," said Mohammed bin Saleh Al Sada, Qatar's Minister of energy and industry. "The move comes as part of QPI's mission to drive Qatar's global diversification, expansion, and investment."

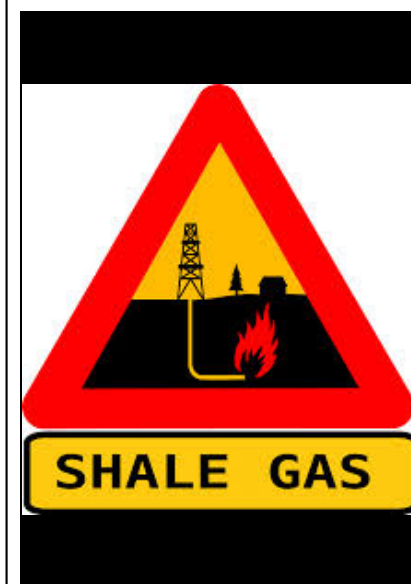
## Investments Boost Abu Dhabi's Oil Output



Abu Dhabi is halfway through a five-year, 40 billion USD investment plan aimed at boosting production of petroleum and petrochemicals. As a result, the country has seen its oil output increasing, reports Bloomberg.

The state-owned energy producer Abu Dhabi National Oil Co. boosted capacity at its largest onshore deposits to about 1.6 million barrels per day from the 1.4 million before expansion, said Fareed Abdulla, Senior Vice President at ADCO, the partnership which operates the fields. By the end of 2017, the capacity will increase to 1.8 million. Other partners in ADCO are ExxonMobil, Royal Dutch Shell, BP, Total and Partex Oil & Gas. Abu Dhabi plans to raise its total crude production to 3.5 million barrels a day by the end of 2017.

## Shale Won't Threaten Gulf Exports



The development of shale gas will not negatively impact the oil exports of Gulf Arab States for at least another two decades. According to a report from Asya Investments, a subsidiary of Kuwait China Investment Company, switching from conventional oil is costly and energy demand is growing rapidly in Asia, which is not likely to develop its own shale resources in the near future. "Asia will play a more central role in the Gulf's exports," said Francisco Quintana, the Asya Investments' senior economist. "However prices will probably be affected, reducing oil revenues in the Gulf and making Asia more competitive due to cheaper inputs," he added.



## South Sudan to Shut off Oil Production

On July 17th South Sudan reduced its oil output by 20% to 160 000 bbd. The move comes amidst broader plans to stop oil supplies from flowing through Southern Sudanese territory. Officials have stated they will close two cross-border oil pipelines within two months unless South Sudan stops supporting rebels, which the latter denies. According to Reuters, South Sudan had called on China, which dominates the oil industry in both countries, to mediate the issue. Sudan is landlocked coun-

try and, as such, needs to export crude supplies through Port Sudan. Supplies were previously shut down in January 2012 due to disputes over oil fees, border security and territory. Sudan accuses South Sudan of supporting the Sudanese Revolutionary Front, South Sudan alleges Sudan of backing rebels in its Jonglei state, where fighting has stalled government plans for exploration in collaboration with France's Total and U.S. ExxonMobil.

## At Least 35 Die in Canada Train Disaster

At least 35 people have died after a 72-car train carrying crude oil exploded in the Canadian town of Lac-Mégantic on 06 July. It is believed that the train's brakes either failed or had not been set properly. When it was parked for the night in the town of Nantes, 12 kilometers from Lac-Mégantic, it rolled down hill. Eventually the train skipped tracks in the center of Lac-Mégantic and exploded into a series of gigantic fireballs. The accident has fueled the debate about the safety of transporting crude by rail. It is widely expected that Canada will change its railway regulations to avoid simi-

lar disasters in the future.



## Iraqi Prime Minister Discusses Oil Project with Lukoil

Iraqi Prime Minister Nuri al-Maliki and Iraqi Oil Minister Abdelkarim al-Luaybi met with Russian oil company Lukoil to discuss the company's progress in the West Qurna 2 field. Iraqi officials stated that Lukoil "was strictly fulfilling all of its obligations." As reported by AFP, the meetings coincided with an informal summit held in Moscow attended by gas exporting countries. Future projects were also discussed. Prime Minister Maliki is also expected to meet with President

Vladimir Putin.



## Battle for Syria's Oilfields

Amidst the chaos of war in Syria, desert tribes have begun claiming control of oil and gas fields. The fields often supply both the government and rebels as tribes appease both sides to avoid attacks. What is left after supplying both sides is then sold in the market. One field can generate as much as GBP 32,000 per day, informs Abu Zayed, who controls a field in the country. Competition for control of these fields causes division and infighting among tribes. Those who control the fields have amassed weapons including anti-aircraft guns to defend their recently acquired

resources from rival groups. The proliferation of heavy weaponry not only threatens those who control the fields but the fields themselves.



## Oil Companies Caught off Guard by Brazil's Oil Bill

The lower house of Brazil's parliament passed a bill on June 26th which sets the government's minimum share of oil from the vast Subsalt Polygon offshore area at 60%, hence changing the rules for a recently announced October auction. The bill, which dedicates the future oil royalties to education and healthcare, was passed amid nationwide street protests that began over increasing bus fares, but developed into a broad attack on politics. The head of the Brazilian oil industry group IBP told reporters

that it caught petroleum companies off guard, reports Reuters. According to the law currently in place, the National Energy Council can, with the approval of Brazil's President, set the minimum level of "profit oil" - which determines the amount of oil that the winners of concessions will have to give to the government - at any level it finds suitable. The winner of an auction for the rights in the Polygon will be the company that offers the government the largest share of "profit oil". "This percentage can't be fixed

by law, the amendment conspires against the idea of an auction", IBP's president João Carlos de Luca told reporters. Even though the bill still needs to pass the upper house of the parliament and get approval from the president Dilma Rousseff whose government opposes the amendment, it has caused serious concern in the oil industry, Luca said.

## Russian Energy Shifts from Europe to Asia

Russia's recent deals with Asian companies mark the beginning of the country's energy shift away from Europe where it is struggling with competition and regulatory pressure. Russia has for decades been Europe's biggest energy supplier. However, last year saw the exports of the Russian state gas company Gazprom fall as European power producers shifted to cheap coal from the US. According to the Financial Times, the US shale gas boom also threatens Gazprom's position in Europe. Additionally, the EU last year launched an investigation into whether Gazprom abused its dominant market position in Central and Eastern Europe. Rus-

sian Deputy Prime Minister Arkady Dvorkovich said that his country will deliver to Europe "as much gas as it needs," but sees greater prospects for increasing sales in Asia. Russian President Vladimir Putin announced on June 21st that the state would for the first time allow companies other than Gazprom to export LNG. Dvorkovich specified that LNG shipments to Asia will obtain permission on a project-by-project basis, but Russia is not considering allowing LNG transports to Europe in order to prevent competition with Gazprom's pipeline deliveries.

Shortly before Putin's announcement, Russian energy companies signed a number of gas-supply

agreements with Asian firms. Russia's second-largest gas producer Novatek concluded a deal to ship gas from its planned Arctic liquefaction plant to China National Petroleum Corp., which owns a 20% stake in the project. The Russian state oil firm Rosneft signed agreements to deliver LNG to Japan and to supply China with 15 million metric tons of crude oil annually for 25 years for about USD 10 billion per year. According to China Daily, Rosneft's deliveries are set to start already in July.

Gazprom has said it hopes to conclude a deal to sell pipeline gas to China by the end of this year. Currently, the two sides are still negotiating on the price. Ac-

cording to some analysts, a deal with China would be the only way to make Russia's ambitious plans of the Power of Siberia - a 4,000 km pipeline to deliver Russia's gas to its new LNG export terminal at the Pacific coast port of Vladivostok - commercially viable. Gazprom hopes to launch the USD 46 billion project in October and finalize it by late 2016. Hopes that a spur pipeline to China will be added are reinforced by a memorandum signed in March that foresees Russia exporting to China 38 billion cm of gas annually for 30 years.

## Drilling Rig in the Gulf of Mexico Catches Fire

A natural gas leak occurring on a Walter Oil & Gas Corp. well in the Gulf of Mexico caused a fire on the rig. According to the US Bureau of Safety and Environmental Enforcement, Walter Oil & Gas lost control of drilling

operations at about 8:45am on July 23rd. At 10:50pm the Hercules 265 rig caught on fire, the cause of ignition remains undetermined. There were no injuries as no one was on the rig at the time of the fire, reports

Bloomberg. Wild Well Control Inc. was hired to bring the blown-out well under control.



## Oil Theft in Nigeria Persists

Oil theft, known as 'bunkering,' in Nigeria's Niger Delta region is steadily increasing. Approximately 200,000 barrels a day are stolen from pipelines across the region. The AP reports that the stolen oil is used to make crude gasoline and kerosene. Analysts believe that the product is sold to international markets by criminal networks. Nigerian politicians and military leaders are suspected of benefiting from this criminal enterprise. Many locals engage in bunkering as it is the only way they can benefit from their countries resources, as widespread corruption limits revenue from reaching communities in oil producing areas.

Since the discovery of economically viable oil in Nigeria in 1965, oil revenues have become a crucial part of the country's economy, accounting for approximately 80% of the government's revenue. Not only does bunkering threaten the country's economy but the practice of bunkering can be disastrous to the local environment as well.

The government introduced an amnesty program in 2009 to end militant attacks on oil facilities in the Delta. Additionally, the military carries out operations to close illegal refineries in the region. Despite these measures, the problem of bunkering will persist so long as politicians and military leaders benefit from the theft, according to Patrick Dele Cole, a former Nigerian ambassador.

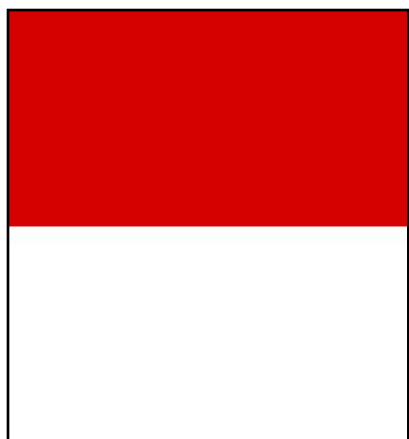
## Shell Announced New CEO



Royal Dutch Shell announced in July that the company's head of refining and marketing operations, Ben van Beurden will replace the retiring Peter Voser as CEO on January 1st 2014. According to the Wall Street Journal, the Dutch chemical engineer Beurden has worked at Shell for about 30 years. Since 2006, Beurden was Shell's executive vice president of chemicals and in January this year, he became the downstream director, reports MarketWatch. Voser, who has been its CEO for about five years will retire at the age of 55. The Fortune magazine announced on July 8th that for the second year in row, Shell tops its Global 500 list, which ranks companies based on their revenue. In 2012, Shell's revenue was about USD 481.7 billion, writes Connecticut Post.



## Lion Energy Seeks Unconventional Oil and Gas in Sumatra



Lion Energy has entered into a joint venture with KRX Energy Pte Ltd and Risco Energy Investments Pte Ltd, securing funding and investors to explore unconventional resources in Sumatra. Risco provided funds and rights to Lion Energy, who will use the funds to provide KRX a loan to meet its obligations for South Block A, located in the North Sumatra basin, reports Proactive Investors Australia.

Sumatra already produces oil and gas but unconventional tight gas, shale gas, and shale oil have not yet been explored. The South Block A is 2,104 square kilometers and is located close to existing production sites. The Simpang Deep Prospect is one of the most promising leads as it is the largest undrilled feature in the North Sumatra Basin. The prospect covers 25 square kilometers and is estimated to hold 324 bcf and 18 mmbbl of condensate.

## Ban on Hydraulic Fracturing in France to Remain: Hollande

French President Francois Hollande told a French TV network that "there will be no exploration for shale gas in France" as long as he is president. The comment was made as the country's constitutional court is due to review an appeal against the government ban on hydraulic fracturing by Schuebach Energy, informs BBC. Schuebach Energy held two shale exploration permits that were re-

voked when the ban was passed in 2011.

French politicians continue to debate shale exploration. The country's Industry Minister Arnaud Montebourg proposed the establishment of a state-backed company to examine shale possibilities in the country. However, the proposal was overruled by Prime Minister Jean-Marc Ayrault.

## Gas in Drinking Water near Hydraulic Fracturing Sites

Researchers have discovered elevated levels of methane and other stray gases in drinking water near the shale gas wells in the Marcellus shale region in the US. Researches of Duke University analyzed 141 drinking water samples from private wells across northeastern Pennsylvania. They found that methane concentrations were six times higher and ethane levels 23 times higher in drinking water within one kilometer of a shale gas well. Propane was discovered in 10 samples, all from wells within one kilometer of drilling, reports NBC News.

"The bottom line is strong evidence for gas leaking into drinking water in some cases", said Robert Jackson, an environmental scientist at Duke University. "We think the likeliest explanation is leaky wells." According to Jackson, the biggest known risk of high methane concentrations in drinking water is an explosion or fire due to

the accumulation of the gas in a confined space such as a basement. "The flip side of that is the Environmental Protection Agency doesn't regulate methane in drinking water, so we really don't know much about the health risks", the scientist added.



## China's Tight Gas Production to triple by 2030

China's tight gas output, which was 30 billion cm in 2012, is expected to increase to 100 billion cm by 2030. Though easier to extract compared to shale, tight gas requires special extraction technology such as horizontal drilling or fracturing to free gas trapped in tiny cavities of rocks. Currently, tight gas accounts for approximately one third of China's gas output, reports Reuters.

"The success that PetroChina has had on tight gas is impressive", said Craig McMahon, the head of Asia upstream research at the energy consultancy Wood Mac-

kenzie. "Back in 2005 when they offered some of the contracts to Shell and Total it perhaps meant they did not have the expertise yet. Eight years on, you can say PetroChina is very comfortable operating Sulige on its own."

"We found our own approach to develop tight gas", explained Hu Wenrui, a former PetroChina vice president. With the new approach, the company managed to cut the drilling time for a typical 3,200-metre vertical well by two-thirds to 15 days and reduce the average cost of a well by 40% over the past eight years.

## Britain's Shale Could Supply the Country for Decades

Britain's shale deposits are much larger than previously estimated and could supply the country for dozens of years. According to a report published by the British Geological Survey on 27 June, an area stretching from Lancashire to Yorkshire and to Lincolnshire could hold at least 1,300 tcf of shale gas, reports the Guardian. The British energy minister Michael Fallon has promised favorable tax treatment for shale development, similar to the kind that had built up the North Sea oil industry.

"We still need to extract it and that is the next trick, but if we only get 10% that will be around 25 years of UK gas supply and by then we need to have worked out how we are going to power the UK in the long term", commented Peter Styles, professor of applied and environmental geophysics at Keele

University.



## Shale Pioneer George Mitchell Dies at 94

George Mitchell died at the age of 94, reports Bloomberg. According to his family, he died on July 26 in his home due to natural causes. Mitchell was the pioneer behind horizontal wells and hydraulic fracturing, the two key technologies that unlocked access to unconventional oil and gas. His work was concentrated in the Fort Worth region of Texas, where he was given the nickname "father of the Barnett Shale."

In 2002, Mitchell sold Mitchell Energy & Development Corp. to Devon Energy Corp.

for an estimated USD 3 billion. Mitchell was ranked the 239th richest American by Forbes magazine in 2012. Mitchell grew up in Texas, working on the oil fields and went on to get a degree in petroleum engineering. Mitchell first drilled in the Barnett Shale in 1981 and went on to develop hydraulic fracturing and horizontal drilling techniques in order access the trapped shale gas. Mitchell is also behind the development of America's largest shale play, the Marcellus Shale, located in Pennsylvania.

## UK Gives Tax Breaks for Shale Industry

The UK government has proposed new tax cuts on companies involved in the shale gas industry. According to the BBC, the taxes would be cut from 62% to 30%. The government said this would make the country the "most generous" to the shale gas industry. It is estimated that the country may hold up to 1,300 tcf of shale gas, most of which is located in the Bowland Basin.

The tax break would only apply to part of the revenue generated from production. It has not yet been decided what portion that will be. It is the government's hope that this tax cut will spur the industry, which has not yet entered the production phase in the UK.

The government also announced plans to provide local communities where shale well sites are located GBP 100,000 per site, in addition to 1% of production revenue.

The benefits to local hosts, is seen as an attempt to quell local opposition to shale production. Many people are concerned over the risks that hydraulic fracturing poses to water supplies. Andrew Pendleton, from Friends of the Earth said, "promising tax hand-outs to polluting energy firms that threaten our communities and environment...is a disgrace."

## Putin Approves Tax Break for Tight Oil

Russian President Vladimir Putin signed a new law that provides a coefficient between 0 and 0.8 to the difficulty of oil extraction, with zero applying to unconventional plays, reports Reuters. This coefficient will factor into the adjustments of mineral taxes, along with other variables including global prices and deposit depletion. Despite this break for tight oil producers, an existing amendment requiring separate metering at each tight oil well, will keep infrastructure prices high.

RusPetro, a Russian company that specializes in tight oil, reported that they would receive 80% tax relief for 97% of its current production under the new law. The legislation is set to begin September 1, 2013. It is expected that the break will encourage investment in hydraulic fracturing technology to increase shale oil production. According to the US EIA, Russia has 75 billion barrels of recoverable shale oil reserves.

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## TAP Pipeline to Connect Europe



The consortium developing Azerbaijan's massive gas reserves announced that it has chosen Trans Adriatic Pipeline (TAP) for transporting gas to Europe. TAP, led by Norway's Statoil, Axpo of Switzerland and the German company E.ON, will run ca 900 kilometers through Turkey, Greece and Albania to Italy. It is expected to bring 6 billion cm of gas annually to Turkey and 10 billion per year to Europe starting from 2019, reports Euronews. The Greek Prime Minister called the approval of TAP the most significant boost to his country's economy in the past decade, saying it will bring to Greece more than USD 2 billion of investments and generate many jobs, writes AP.

The decision for TAP was a major setback to the Nabucco West consortium that planned a similar route, but further north. Nabucco was conceived several years ago as a cornerstone of the EU's plan to reduce its energy dependency on Russia. Nabucco was to

run from Austria to eastern Turkey where it would receive gas via feeder pipelines from Azerbaijan, Turkmenistan, Kazakhstan, Uzbekistan, Iran, Iraq and Egypt. However, in May 2012, the consortium canceled the plans to build the Turkey segment and decided to focus only on the European part, which was to be 1300 km long Nabucco West. Besides, the planned capacity of the pipeline was reduced from 30 billion cm to 10 billion.

TAP might have been preferred to Nabucco West due to its shorter route and smaller number of transit countries. According to Radio Free Europe, some experts have said that Nabucco failed because it was motivated by geopolitical considerations, but was not commercially viable. This is true especially recently as LNG transport competes with pipelines and countries are increasingly switching to renewable energy. Nevertheless, some analysts say that Nabucco may still prove viable.

## US Exports Undercut European Refiners

The growth of US gasoline exports to West Africa undermines European refiners' who have dominated the market. US refiners have expanded exports to Latin America and West Africa, following incentives of renewable ethanol credits (RINs). Europe refiners are let struggling amidst declining domestic demand and growing US and Russian exports, reports Reuters. The completion of new refineries in the Middle East, set to begin later this year will further exacerbate the decline of European refineries.

Thus far European exports to West

Africa have declined approximately 10%. Following the expansion of shale production in the US, European refiners and traders shifted exports from the US to West Africa. However, US exports to West Africa are on the rise, becoming tough competition for European traders. According to oil analyst, Patrick Kulsén, "gasoline from Europe is being diverted to Asia, which is a longer route, and that will be happening more often...that is not so good for European refiners that have to incur more freight costs and as a result lower product prices."

## Zambia Plans to Construct New Oil Refinery

Zambia's Mines and Energy Minister Christopher Yaluma announced that the country plans to construct a USD 410 million oil refinery, reports Bloomberg. The new refinery will replace the state-owned Indeni refinery, which was built in 1973. The Indeni refinery currently operates at half capacity. According to the Energy Regulation Board, Zambia's fuel prices are some of the highest in sub-Saharan Africa. In June, consumer prices skyrocketed when govern-

ment removed fuel subsidies. The government hopes that the new refinery will help lower fuel costs. The government is now seeking the funds to construct the new refinery by selling a 49% stake in the Indeni refinery, informs The Post Zambia. Yaluma said, the government is "looking at all financing models including loans." The new refinery will be constructed near Indeni, which will remain in use until construction is completed.

## Phillips 66 Plans Oil Pipeline Across Yellowstone River

Phillips 66 was granted a permit to construct a pipeline which will run underneath the Yellowstone River in Montana, reports KRTV. The pipeline will be drilled 15 feet downstream from an old pipeline. The new pipeline will be located 40 feet below the riverbed. The new pipeline is expected to reduce environmental risks, according to John Tubbs, director of the Montana Department of Natural Resources and

Conservation.

The state of Montana has requested Phillips 66 to remove the old pipeline. However, the company remains reluctant, claiming they lack time to remove the old line. According to Steve Wade, a consultant for the company, removing the line would be too costly. Montana currently lacks a standard set of procedures of inactive pipelines.

## CNOOC Expresses Interest in Uganda Refinery



The China National Offshore Oil Corporation (CNOOC) announced interest in investing in a refinery, as well as a pipeline in Uganda. The expression of interest came as CNOOC, along with Tullow PLC and Total SA are finalizing their Field Development Plans (FDPs) for oil production in Uganda's Albertine region, reports Down Stream Today.

The government has already agreed to build a 30,000 bpd refinery in the Hoima District. The refinery's capacity will be increased to 120,000 bpd by 2022. The project is expected to cost over USD 6 billion. The refinery is projected to be completed by 2016, the same year production is expected to begin.

## Seychelles Expands Renewable Energy

Seychelles opened a wind farm in June, the first step in a plan to utilize renewable energy sources for at least 15% of the country's power by 2030. The wind farm, funded by Abu Dhabi Fund for Development, has a total capacity of six megawatts, reports AFP. Seychelles is currently "95% dependent on imported oil," according to the Indian Ocean Commission (IOC) and the European Commission. The institutions noted, "IOC countries are highly vulnerable to the effects of soaring oil prices." The coun-

try has many projects underway, including one on the island of La Digue, which is set to be self-reliant for power by 2020 due to solar panels. Despite desires to reduce the dependence on fuel imports, the country currently lacks the financial resources to develop renewable energy, informed Wills Agricole of the country's ministry of environment. Agricole added that foreign investment has assisted in many projects.

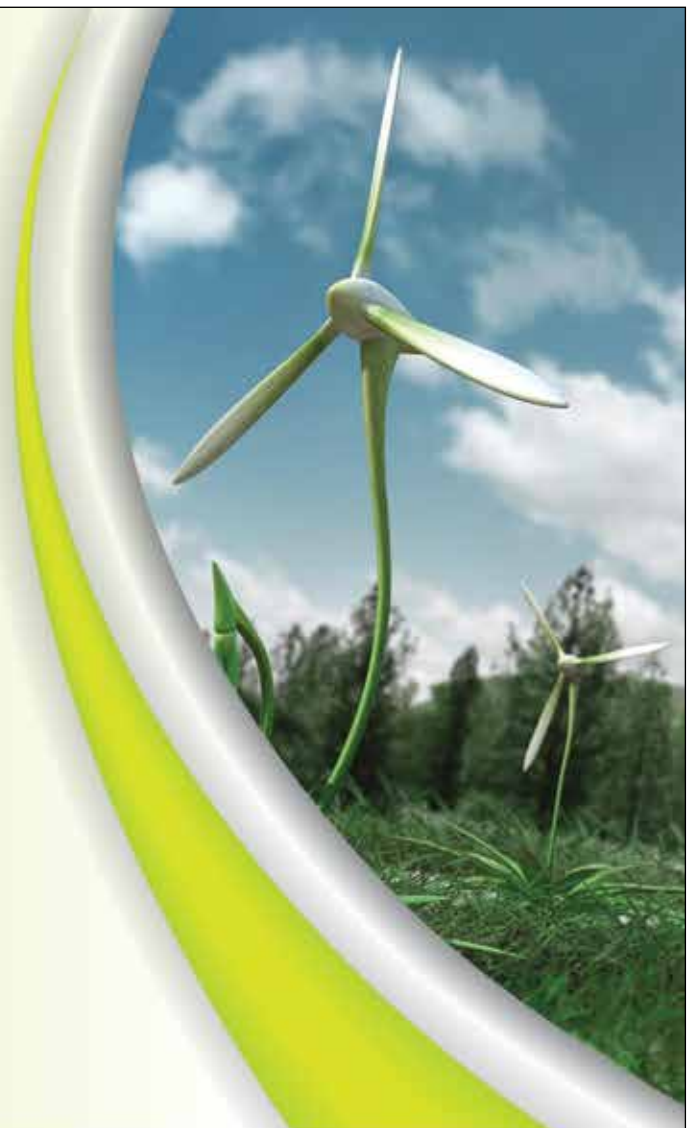
## China to Pilot Carbon Trading Scheme

China launched its first carbon trading scheme as a pilot project on 18 June in the city of Shenzhen. The Shenzhen Carbon Exchange covers 635 industrial and construction companies. Transport firms as well as major companies that consume oil, gas, coal and power are set to be added too, reports BBC.

By 2014, the test scheme will be expanded to cover: Shenzhen, Beijing, Shanghai, Tianjin, Chongqing, Hubei and Guangdong. If successful, it could spread across the country after 2015. China's government has a goal to reduce the amount of CO<sub>2</sub> emitted per unit of GDP by 40-45% by 2020.

However, carbon trading schemes in some other countries have experienced problems. The world's biggest carbon-trading scheme, launched by the

EU in 2008, nearly collapsed because the price of carbon emission credits fell dramatically as the need for the credits decreased due to economic crisis. The price of the credits that once was USD 40 per ton, recently fell below USD 4. "In Europe there was definitely a lot of speculation around the credits - it was one of the most volatile commodities," said Winnie Tang, director at the investment company Kind Resources. "A lot of traders were speculating that the price will keep going up and up, but then all of a sudden the financial crisis hit and the prices dropped."



# Renewable Energy

By EOG





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# Egypt's Energy Trap

Egypt's energy sector is in profound disarray, at a time when the Egyptian economy would desperately need the proceeds from functioning energy production and trade. Declining reserves and falling production, coupled to surging domestic energy demand have since 2008 turned Egypt into a net importer of oil and oil products. Egypt's economy continues to rely on its hydrocarbon sector for some 8% of GDP, and export receipts – now primarily for natural gas – continue to contribute up to 10% to government revenues. Rising domestic demand for energy, however, and Egypt's rapidly declining gas production raise increasingly pressing questions over the country's long-term status as a gas exporter. Egypt's domestic gas crisis is as much the consequence of historical mal-planning as it is the short-term consequence of the country's past two years of political turmoil. The Egyptian government now faces decisive times, and it is up to policymakers to determine whether Egypt's gas sector will be a contributor to the economy's gradual recovery, or whether it will remain part of the Egypt's wider economic problems.

## Above-ground versus below-ground problems

Egypt's natural gas resources, albeit not of the size of some of the world's largest producers such as Iran, Russia, or Qatar, compare principally favourable to many of its Levantine and Middle Eastern neighbours. In 2012, Egypt's proven natural gas reserves amounted to some 2 trillion cubic metres (tcm), down 0.2 tcm from previous years but significantly more than in the beginning 2000s, when Egypt became a significant North African gas exporter. The US Geological Survey estimates total recoverable gas resources in the Nile Delta at 6.3 tcm, and while these numbers are subject to future exploration work, they indicate that Egypt's gas history need not stop just here. By contrast, Egypt's natural gas production has actually been in decline since 2009, when production peaked at around 62.7 billion cubic metres per year (bcm). We are expecting Egypt in 2013 to produce below 60 bcm, much below what was originally expected by this time.

Egypt's production decline was by no means inevitable. Like many other gas producers, including in North Africa, Egypt faces rapid depletion rates in many of its existing reservoirs, rendering consistent investment in new reserves essential to maintaining and expanding gas production. Many of these new reserves consist in higher-risk, higher-cost areas, particularly the offshore Nile Delta, where access to more sophisticated technology and foreign capital are key contributing factors determining the pace at which new resources enter the Egyptian gas market. The political turmoil following Egypt's 2011 revolution has considerably implicated these offshore developments, directly through temporary shut-downs in production, but more structurally by depriving the Egyptian government from essential fiscal resources to meet various contract commitments towards its international partner companies in charge of developing these resources.

In reality, however, Egypt's post-revolutionary turmoil merely accelerated the severity of existing long-term issues

present in Egypt's wider domestic energy sector for a decade at least. Successive post-Mubarak governments have inherited a gas sector characterised by the conflicting needs of Egypt's surging domestic energy demand and existing export contract commitments to a range of Egyptian gas customers. Accelerated by the country's economic growth, rising population numbers and income rates, as well as rising living standards among the urban upper and middle classes, Egypt faces energy consumption rates growing around 7% per annum over the last ten years. A relict of Mubarak's energy planning, most of Egypt's energy needs are met by oil and natural gas, with a partial contribution of hydropower in electricity production.

A history of exceptionally low domestic energy prices – many multiples below international prices and increasingly below the long-run marginal cost of production for more costly oil and gas production projects – has systematically distorted Egypt's domestic energy market, which suffers from extremely low levels of industrial energy efficiency; and subsequently much wasteful energy consumption, including by energy-intensive industries and high-end energy users. Energy access, by contrast, remains incomplete, with some 3 million Egyptians lacking access to even basic electricity. Surging domestic energy consumption has meant the government has been forced to divert a growing share of its natural gas production to the domestic market, where low domestic, rather than high international prices are paid.

While rational from an immediate political point of view, the choice to divert more gas into the domestic sector is highly problematic from an economic point of view, where the real value of Egyptian gas lies in its export. Egypt's precarious fiscal situation means Egypt needs its natural gas exports to generate income and foreign currency, and this income is unlikely to be generated at home. Egypt's foreign oil and gas companies, too, need exports of Egyptian gas, in order to compensate their project expenditure. The need to divert rising shares of gas to Egypt's domestic market hence further deprives international investors of cash, leading to lacking investment in new phases of existing projects – the reason for a number of project delays over the past months that have led to the fall in Egyptian production. Continued political instability, until recently adjoined by Egypt's Muslim Brotherhood-led government which publically asserted its intent to “squeeze foreign companies” has proven further unhelpful to address the economic causes of weakening investment into the country's upstream sector.

## Policy reconsiderations needed: energy subsidies

While at least part of Egypt's current gas woes are inherited from the previous Mubarak regime, it is the current Egyptian government which will need to resolve the repercussions of more than a decade of poor policy planning. One of the most pressing areas for policy reform is undoubtedly the overdue adjustment of domestic energy pricing structures, which remain an essential part of Egypt's energy sector problems.

If Egypt continues to divert increasing volumes of its own gas production to its domestic market, production companies will need to be compensated on a cost-recovering basis, allowing for some profits, in order to ensure consistent investment in new capacity. Similarly, if Egypt moves ahead with plans to import gas as a stop-gap measure, either by pipeline or more medium-term via LNG, regional or international prices will have to be paid, leaving the Egyptian government to cover the difference between its domestic and import/sales prices.

That the mounting burden of Egypt's energy subsidies is entirely unsustainable already is evident from the current fiscal year: total energy sector subsidies for 2012/2013 are expected to reach EGP 115bn (\$16.8bn), about a fifth of total government expenditure, three times the spending on education and seven times expenditure on health services, and exceeding the country's overall \$9.8bn planned fiscal deficit. By comparison, the IMF loan which Egypt has been in negotiations about for nearly a year, would offer the country merely \$4.8bn, less than a third of the country's energy subsidy bill; while international lenders' and donors' aid packages pledged by the European Union, Saudi Arabia, Qatar, the UAE and Turkey currently amount to some \$14bn – virtually all to be consumed by energy subsidies if Egypt does not manage to reduce its expenditure on energy subsidies considerably.

Reforming domestic energy prices is a delicate task, made no easier by Egypt's current political climate under which any political step perceived to be against the interest of the masses is likely to trigger yet more protest. Credible governance, which couples the reform of domestic prices to an overhaul of Egypt's by all means ailing social welfare system may sound a daunting task for any new government but will likely prove essential to calming down the public in view of rising living costs. Iran's high-profile 2010 domestic energy price reform may serve as an example worth looking to. But the reform of Egypt's domestic energy prices also offers a real opportunity of reforming those elements of the economy which form the backbone of the kind of remedies Egypt's protesters in reality demand: a fairer distribution of incomes and economic rewards, and more universal access of all Egyptians to essential services such as housing, food, health and education, rather than priority access of Egypt's industries to cheap fuel. Egypt has made tentative steps into this direction by revising fuel prices in late 2012 and early 2013, but these reforms remain small steps and have so far been unaccompanied by parallel social safety measures.

## ... and long-term exports

Over the long-term, Egypt will also need to reconsider its priorities for the allocation of its domestic hydrocarbon production. Allocating increasing shares of domestic gas production to the domestic market may be a short-term measure, but over the long-term this policy is likely to further erode the state's income unless domestic prices follow international prices more closely. Questions such as the role of alternative energies, such as renewables and nuclear power, and



Laura El-Katiri, Oxford Institute for Energy Studies

reviews to ensure systematic energy efficiency improvements may help Egypt's economy not only lower demand growth – and hence investment needs and opportunity costs – but also carry along opportunities for new sectoral employment for Egypt's young and highly skilled population. Free Egyptian gas for export, such policies may entail economic benefits along the line, but will require a stable government able to look beyond the immediate needs of Egypt's currently entrapped political system.

Bridging Egypt's short- and medium-term gas shortages will also require a lot more economic pragmatism than is currently the case. Qatari and Russian proposals to supply Egypt's LNG contracts as a stop-gap measure while Egyptian LNG plants fall short of feedstock may be a brief interlude, rendering Egypt much dependent on goodwill and economic rationale elsewhere in the world. This interlude is unlikely to provide the sort of solution Egypt may need for the next few years, however, during which Egypt's production is unlikely to recover and during which domestic energy demand is expected to continue to rise at high rates. For the next one to two years, Egypt may be well advised to look beyond these options, including at the big white elephant in its eastern neighbourhood, Israel. While political objections may yet come in the way of any directional change in this matter, reversing once flowing gas from Egypt to Israel would probably constitute the most economic short-term solution to Egypt's current gas woes.

Egypt's most immediate problems, mostly glaring fuel, gas and electricity shortages require speedy attention, meaning the new administration will need to act, and act quickly, to resolve further exasperation due to declining living standards tied to energy access. Without doubt, this will be no easy task, and will require skilful, firm and transparent governance by whoever will rule Egypt over the next years. However, in view of Egypt's dwindling reserves of both natural gas and oil, letting the country's gas sector drift is no longer an option. Egypt's precarious economic situation stands arguably at the core of the past two years' of political turmoil and the toppling of the Mubarak regime, making genuine, structural economic reform a fundamental prerequisite for any political normalisation within the country. Egypt's energy sector, and its governance, will play a critical role in this, and one that is likely only to increase over the coming years.

Not for circulation or quotation





## Case History

# Kymera Hybrid Bit Reduced Rig Time by 13 Days in Abrasive Egyptian Sandstone Formation

Baker Hughes saved USD 150,000 through increased drilling efficiency

### Benefits

- Reduced rig time by 13 days over comparable offset runs
- Saved operator USD 150,000

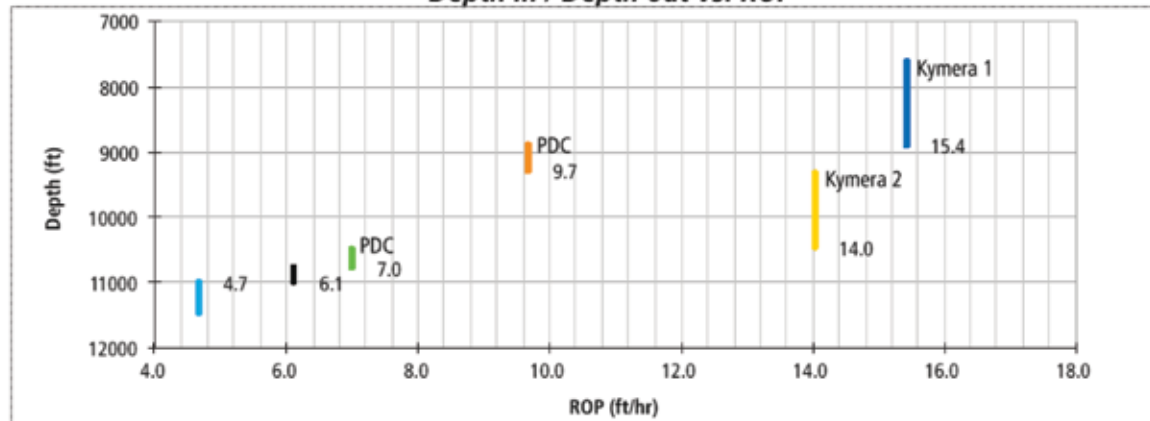
### Background and challenges

- Onshore drilling operation, Western Desert, Egypt
- Hard, abrasive Kaolinitic sandstone formation
- Kick-off from vertical and drill a challenging 12 ¼-in. directional section
- Eliminate potentially harmful vibration

### Baker Hughes solution and results

- 12 ¼-in. Kymera hybrid drill bit with PDM motor
- In two runs, drilled significantly greater distances with higher ROP than comparable offset runs
- Eliminated transitional zone difficulties that had previously hampered directional drilling activities

Depth in / Depth out vs. ROP



A Middle Eastern operator working in Egypt's Western Desert wanted to kick-off from vertical and drill a challenging 121/4-in. high-torque directional well section through a hard, abrasive Kaolinitic sandstone formation.

From previous experience in the area, the operator knew PDC bits could provide high rates of penetration (ROP) but were likely to experience significant damage from potentially excessive levels of vibration. Roller cone bits would require less torque and be easier to steer but with significantly reduced ROP. They would also be likely to require more trips due to bearing failure.

To drill the formation, Baker Hughes recommended the Hughes Christensen Kymera™ hybrid drill bit with a positive displacement mud (PDM) motor. The Kymera bit, which incorporates PDC technology and tungsten carbide inserts with elastomer seal bearing technology, offers the higher ROP associated with PDC bits while delivering the improved steering customary delivered by roller cone bits.



On its first run, the Kymera bit kicked off from vertical and drilled 230% farther than comparable offset runs with a 58% higher ROP and a 48% lower cost per foot (CPF). On its second run, the Kymera bit drilled 193% farther than comparable offset runs while recording a 44% higher ROP and 43% lower CPF.

Overall, that equates to a total savings of 13 rig days with a corresponding reduction in costs of USD 150,000.

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# Uncertainty, Instability and Political Progress?

By Maya Moseley

Egypt's unrest will undoubtedly affect the country's oil and gas sector. The publicly supported military overthrow of former President Morsi left the country in a state of political uncertainty characterized by internal power struggles, civil unrest, and localized violence. The rapid deterioration of political stability in Egypt inevitably flows over into the country's oil and gas sector. Egypt Oil & Gas spoke to experts, analysts, and operators to assess the current and potential future impacts that Egypt's unrest may have on the oil and gas sector.

## Initial Impact

Investors diligently monitor political and security events since the overthrow of former President Hosni Mubarak in 2011, as the country has been in a perpetual state of uncertainty. Geoff Porter, founder of North Africa Risk Consulting Inc. explained, "IOCs were well-prepared for the prospect of instability in Egypt. First, it was never certain that Mohamed Morsi's presidency would be successful or that it would endure. Second, the intentions of the anti-Morsi faction to stage mass protests that would result in Morsi's ousting were broadcast well in advance... IOCs had ample time to prepare for the likelihood of unrest. Companies make plans to evacuate personnel, shut-in operations, and secure their assets until the companies' eventual return."

As violent clashes followed the removal of former President Morsi, oil and gas companies began enacting security measures. BP, BG, Dana Gas, Eni, and Shell evacuated some of their non-essential expatriate staff members. Shell confirmed the temporary relocation of some staff members and dependents, as well as undertaking "appropriate measures to ensure the safety of all in country staff."

The overthrow of Morsi quickly sent shockwaves through the market as the country's future became increasingly uncertain. Surbhi Arora, a PhD candidate at the University of Petroleum and Energy Studies explained, that the instability in Egypt caused the rise in Brent crude to over USD 100 per barrel. While there was "little effect on oil markets as July 4 was a holiday in the US... the next day the crude prices rose when the reports of unrest in the Suez and Sinai regions were reported," Arora said.

Nationally, Egypt's stock market demonstrated gains as Morsi was forced out of office. According to Dr. Gawdat Bahgat of the National Defense University, "the positive reaction... might be explained by expectations of change in economic policy." During the same period, the Egyptian pound strengthened. Despite the positive response in the domestic economy, Arora cautioned that such gains "may be only short-term unless the transitional government takes measures for its stability."

## Threats to Domestic Production

"The current unrest is obviously not something likely to lead to increased oil and gas production in Egypt, but it may not significantly decrease it either," informed Dr. Mark Katz of George Mason University. "The main opposition forces in Egypt all

have an interest in protecting this industry," he noted. Thus far, it does not appear that the unrest has had a significant impact on production. Paul Welch, President and CEO of Seadragon Energy Inc. told Egypt Oil & Gas that "production has not been affected by the current unrest and we do not anticipate that it will be." Welch further noted, "we have doubled our production in the last year even with the unrest so we have been able to manage the situation quite well."

While no significant impact has been identified thus far, smaller impacts may be present. "To the degree that Egypt relies on expatriate personnel to manage production facilities, there may be a slight decrease in production while expatriate personnel are withdrawn from the country," cautioned Porter. However, these gaps maybe filled by "Egyptian counterparts [who] are expected to manage operations in the meantime," explained Arora.

As evacuations are short-term solutions, long-term measures will have to be explored if unrest persists. Such measures "would likely add to security costs for any given IOC operation in Egypt," said Porter. "Security costs would not be so high as to deter FDI entirely, but they do make Egypt a less attractive FDI destination for IOCs," he added.

Stephen Sanders, of the Sanders White & Associates crisis management team, cautioned that further deterioration of security "could present an unacceptable risk to international oil and gas company personnel and even the technical Egyptian workforce... A reduction of available trained personnel, of course, could have a negative impact on production and the development of new fields."

On the other hand, Mena Cammett, a senior risk analyst at XL Group, explained how "oil companies are unique in that they don't have the luxury of shying away from risky countries. They have to go where the resources are." In order to operate in such environments "energy companies should and do dedicate substantial resources to security and political risk analysis in order to meet the challenges," Cammett noted. An important asset for IOCs is political risk insurance (PRI) which can be used "to mitigate the risk of contracting with host country governments... [but also] to insure investors against the loss of their assets due to political violence," informed Cammett.

## Threats to Suez and Sumed

While clashes following the over-throw of Morsi have been primarily localized, unrest in Sinai may present a larger threat to the industry. Just three days after the ousting of Morsi, a pipeline carrying gas to Jordan was bombed.<sup>1</sup> While the perpetrators of the attack remain unknown, the timing coincided with a series of attacks launched by militants. Pipeline attacks in the region are not uncommon, with more than a dozen occurring in the past two years.

Egypt's Suez Canal is a particularly vital transportation route. According to Arora, "the biggest threat [to the oil and gas sector] could be the closure of the Suez Canal and the Sumed pipeline...which could disrupt oil

flows and result in a spike of oil prices. [If] these important routes are closed, around 2.5 million b/d of crude and 1.4 million b/d of petroleum products transported via the Suez Canal would have to be redirect around Africa, which can add around 15 days of transit to shipments destined for Europe and eight to ten days for those destined for the US." Such a closure would impact markets worldwide.

The closure of these routes would also have significant domestic impacts. Sanders explained the necessity in protecting the Suez Canal and pipelines as they "have a direct effect on production and exports, as well as provide utilization fees [that are] critical to the stability of the Egyptian economy and tax base." Recognizing that security in these regions is imperative, the military declared a state of emergency in Sinai and Suez on July 5. Additional troops have been deployed to the canal as a precaution to ensure its security during this period of unrest.<sup>1</sup>

## Existing and Future Investment

"Traditionally, Egypt has provided a friendly foreign investment environment for oil and gas companies. If security, economic, and political uncertainties persist, it is likely that oil and gas companies will re-consider their investments in Egypt. This would have significant impacts on both production and export volumes," said Dr. Bahgat.

According to Dr. Katz, the biggest threat to investment in Egypt's oil and gas sector "is the possibility of prolonged, intensified civil conflict." Porter expressed similar concerns over long-term unrest explaining, "some exploration companies may declare force majeure if the political environment continues to deteriorate and they feel as if they are no longer able to safely operate in the country." The impact of companies declaring, "force majeure ... will slow Egypt's exploration activities and introduce a lag in new production," Porter explained. Restoring security thus becomes key in maintaining the country's oil and gas sector.

Another concern of investors is the recognition of existing contracts. According to Sanders, if existing contracts are not recognized or agreed upon terms are not maintained, "this might motivate international oil and gas companies to curtail their activities in Egypt due to unacceptable risk. This could also result from extensive changes to import or export regulations...having a significant negative impact on the supply chain management systems supporting the industry." A similar threat to the investment climate would be the nationalization of the oil and gas sector. A DC based energy analysis that preferred to remain anonymous cautioned, "if nationalization is a prospect, that will start companies thinking about an exit strategy."

In terms of future investors, "companies that are not already invested in Egypt's hydrocarbons sector have the luxury of waiting to see how the political situation unfolds," informed Porter. "Obviously, there is a gamble here, those that return first will have 'first mover' advantage and those that wait too long maybe frozen out of potential opportunities. The challenge for IOCs is to

correctly time their re-entry...No oil company wants to rush into post-Morsi Egypt only to have Egypt descend into further chaos, but at the same time oil companies do not want to write off Egypt," Porter added.

## Protection Strategies

The recent unrest has given rise to many challenges for Egypt's oil and gas sector. Despite the risks, experts remain cautiously optimistic over the future of the sector as measures to mitigate such threats can be adopted. "Mutual understanding, cooperation and coordination" between IOCs and the transitional government are necessary in ensuring the protection of investments in the country, informed Sanders.

The transitional government must strive to instill confidence in investors. Porter suggested, "it [the government] should make it clear to foreign investors in the hydrocarbons sector that their contracts will be valid...the new government should make it absolutely clear that any revision to hydrocarbon legislation will be the result of an open and transparent debate in order to allow foreign investors the opportunity to share their views and make preparations if they choose to exit the country." Arora similarly emphasized the need for strong incentives "through policies to encourage foreign investment in the oil and gas sector."

In terms of security Cammett recommended the government consider "committing military resources to defend oil and gas operations against sabotage. Some foreign operators in Egypt are already lobbying the state for military protection in country. The use of military to secure private investor assets, thought controversial, in not unprecedented in the global oil industry give the sector's strategic importance," Cammett explained.

## Conclusion

Egypt's political, economic, and security instability following the ousting of Morsi rallied the country's stock market while concerns grew internationally as the price of crude increased. The risk of closure of the Suez Canal represents the greatest threat, as the impact would affect markets worldwide. Domestically, IOCs have been able to adapt to the unrest by implementing evacuations and other short-term strategies. However, if security is not regained in the medium to long term, operational costs will begin to increase and some companies may declare force majeure. Thus it is imperative that security is restored. Additionally, the transitional and future government should strive to ensure the sanctity of existing contracts, as well as legislation that promotes international investment in Egypt's oil and gas sector.

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# The Decline of Morsi



By Maya Moseley

One year after coming to power, Egypt's first democratically elected president, Mohamed Morsi was thrown out of office. Morsi loyalists continue to take to the streets defending the ousted president's legitimacy while the opposition holds demonstrations in Tahrir to show support for Morsi's overthrow. Many outside observers have questioned how this precedent will impact Egypt's future political landscape. While it is impossible to predict what the future holds for the Egypt, hindsight allows us to examine the decisions and failures that lead to his ouster. This article explores the grievances that led up to July 3rd.

## Rise to Power

Following almost a year and a half under the rule of the military's Supreme Council of the Armed Forces (SCAF) Egyptians took to the polls on June 16 and 17 2012 to vote in the presidential run-off election between Freedom and Justice Party (FJP) candidate Mohamed Morsi and Ahmed Shafiq a former Prime Minister under Mubarak during the February 2011 revolution. Morsi won the election with 51.7 percent. Voter turnout for the election was only 51.8 percent.

On June 30th Morsi was sworn into office becoming Egypt's first democratically elected president. The political environment at the time of the election was in a state of flux. On June 14, the Constitution Court ruled that elections of one third of the members of parliament (MPs) were unconstitutional. The ruling resulted in the dissolution of the People's Assembly, Egypt's lower house of parliament.

## Institutional Rifts

Morsi's first show of power came in August following attacks on military and police in northern Sinai. Morsi responded to the attacks by reshuffling security officials. On August 12, Morsi issued a decree forcing Mohamed Hussein Tantawi, the head of SCAF and defense minister, as well as Sami Anan the army chief of staff into early retirement. General Abdel-Fattah El-Sisi was chosen to replace Tantawi as defense minister. Morsi reasserted the presidency above the military by reinstating full executive and legislative powers to the president.

The military was not the only political branch Morsi sought to assert himself over. A rift between Morsi and the judicial branch began to form in November when the Judges' Club demanded that they along with the Supreme Council of the Judiciary should be responsible for drafting the judiciary section of the constitution to ensure judicial independence.<sup>1</sup> President Morsi responded on November 22 by issuing a constitutional decree under which presidential decisions could no longer be challenged by judicial review. The decree went on to prevent the dissolution of the Constituent Assembly and the Shura Council by court order. Furthermore, Morsi allotted himself the power to select the country's prosecutor-general and appointed Talaat Ibrahim Abdallah.

The decree was widely viewed as an attempt by Morsi to usurp power. The Judges' Club rejected the declaration and the Court

of Cassation held a general assembly, which voted to go on strike in response to the decree. The country's eight appeals courts, as well as many of the country's primary courts and prosecution offices joined the strike. The opposition also condemned the decree and public protests were staged.

Meanwhile, the Constituent Assembly rushed to complete a draft constitution despite the absence of 26 members of the assembly who abstained. The failure to produce a constitutional draft that all members of the assembly could agree upon was seen as another failure of the Muslim Brotherhood to ensure consensus within the government. Furthermore, the draft included another blow to the judiciary by reducing the number of SCC judges from 18 to 11. A further escalation of the rift between President Morsi and the judiciary came on December 2 when presidential supporters prevented judges from entering the SCC, which was due to review cases on the legitimacy of the Shura Council and the assembly. The lockout prompted the SCC to suspend their work.

Under mounting pressure by the opposition Morsi issued a new decree on December 9th, which permitted judicial oversight on the presidency but maintained measures preventing the dissolution of the Constituent Assembly and Shura Council. The decree also prevented any judicial challenges to constitutional declarations made by the president. On December 15th and 22nd the constitutional referendum was held, resulting in the approval of the controversial constitution. Concerns over growing partisan control increased in January 2013 when Morsi reshuffled the ministry, increasing FJP representation in the cabinet from five members to eight.<sup>2</sup>

## Public Discontent

January witnessed widespread protests on the anniversary of the revolution and unrest following the sentencing of 70 persons in cases related to violence that broke out during a football match in the town of Port Said. An estimated 40 people died during clashes with police forces in Port Said following the announcement of the verdict.<sup>3</sup> The military was deployed to restore stability in the city. In March, Cairo saw further violence as mobs burned down the country's football headquarters over the Port Said riots following the acquittal of the police officers charged with involvement in the Port Said football violence.

Morsi also faced growing discontent over his administration's media crackdown. The Arabic Network for Human Rights Information reported that Morsi's government filled four times as many cases over "insulting the president" during his first 200 days in office compared to Mubarak's 30 years in power.<sup>4</sup> Reporters, editors, journalist, and TV hosts all faced persecution for criticizing Morsi's government. In April, former President Morsi sought to quell discontent over media crackdowns by withdrawing all legal cases against journalist charged with "insulting the president."

In May, Morsi carried out another cabinet reshuffle. However, by appointing additional

members of the Muslim Brotherhood as well as individuals allied with the party it appeared that the former president sought to further insulate himself with loyalist rather than form an inclusive cabinet. The retention of two of the most controversial ministers was a further blow, increasing sentiments over Morsi's disregard for public opinion.<sup>5</sup> The reshuffle further isolated the former president from the opposition as well as the public.

In June, Morsi appointed seven members of the Muslim Brotherhood as governors, resulting in 11 out of 27 provinces being run by affiliates of the Muslim Brotherhood.<sup>6</sup> Following the announcement, protests and clashes occurred in Damietta, Beheira, Monofiya, Tanta, and Dawahliya. The most controversial appointment was that of Adel El-Khayat, a member of the Al-Gamma Al-Islamiya, the group responsible for the 1997 terrorist attack in Luxor that killed 62 persons. The appointment of El-Khayat as governor in Luxor sparked public outrage and widespread protests. Within one week El-Khayat gave into public pressure resigned from the office.

Moving beyond unpopular appointments and decrees, former President Morsi has also been accused of fueling growing sectarian tensions across Egypt. The government faced scrutiny after an attack on the Abbasiyya cathedral in April, as the police and military failed to intervene as the church was attacked and besieged for four hours.<sup>7</sup> While details remain murky, it is known that the group of mourners inside the church during the attack was planning an anti-Morsi protest following the funeral service. This combined with the inaction of police certainly leads to questions over the government's role. According to MERIP, under Morsi there was increasing sentiment "that Islamist now act as if they are accountable to no one."

Egypt's Coptic population was not alone in facing sectarian violence this year. In mid-June, a spokesman for the Muslim Brotherhood claimed that Shias were responsible for all sectarian conflicts.<sup>8</sup> The following day, former President Morsi cut ties with the Syrian regime. Furthering his position on the matter, Morsi attended a Syria Solidarity rally where Salafi clerics presented the Syrian conflict as a sectarian one and urged jihad against Assad's regime. By attending the rally and not refuting such messages, many viewed Morsi's presence as tantamount to accepting and even encouraging sectarianism.<sup>9</sup> Tensions culminated on June 24th when Shias in the village of Zawyat Abu Musalam were attacked in their homes by a mob led by Salafi sheikhs. Four Shias were brutally murdered by the crowd while police made no attempts to intervene.<sup>10</sup> It is impossible to determine the level of influence Morsi had on sectarian violence, however, these cases reveal at the very least the lack of government willingness to intervene, via police or military officers, to stop such attacks.

Beyond the political divisions during the past year the economy has been in a perpetual state of decline, causing many to question Morsi's competency. The loss of revenue from tourism as well as foreign direct

investment resulted in a shortage of foreign currency. For the public, the economic crisis has manifested in rising food prices, fuel and gas shortages, and high levels of unemployment. Unable to turn the economy around after the ousting of Mubarak, Egypt has sought over USD 30 billion from other countries.<sup>11</sup>

## Loss of Legitimacy, Loss of Office

As polarization grew and the economy faltered, the Tamarod movement was founded by the Egyptian Movement for Change in late April.<sup>12</sup> Tamarod launched a campaign calling for Morsi's resignation, circulating a petition for his resignation prior to protests planned for the one-year anniversary of Morsi's presidency. With the support of opposition groups, Tamarod secured over 22 million signatures by June 30. As opposition prepared for protests, the military presented the president with one week to reach a compromise prior to the June 30 protests, however, Morsi remained defiant.<sup>13</sup> Following the expiration of the military's deadline on July 3rd, General Sisi announced the ousting of Morsi.

Ultimately, Morsi failed to meet expectations of inclusiveness. While Morsi was democratically elected, his consolidation of power led many to believe he was not governing democratically thus lost his legitimacy. However, for his supporters, as a democratically elected leader he is the legitimate president of Egypt, regardless of mistakes. Morsi loyalists continue to hold demonstrations calling for his reinstatement. As both sides dig into their positions, tensions remain high and have culminated into violence on multiple occasions. Reconciling this ever-widening societal split remains a monumental task for the transitional leadership, as well as whatever government may follow. It is imperative that Egypt's future leaders learn from the mistakes of their predecessor and strive to create a government inclusive of all sectors of Egyptian society to prevent a viscous cycle of government upheaval.

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# Resolving the Egypt-Ethiopia Nile Dispute: Options for Moving Forward



While Egypt is facing several internal crises, it is also caught in an international dispute over the Nile. The future of the country's water resources is now in question following Ethiopia's construction of the Grand Ethiopian Renaissance Dam. At the time the dam's construction began in 2011, Egypt was preoccupied with the aftermath of January 25 Revolution, but when Ethiopia temporarily diverted the flow of the Nile in May, Egypt responded with a political uproar. As diplomatic relations between the countries become increasingly stained over the dam, Egypt Oil & Gas spoke to leading experts to assess possible solutions to the dispute.

By Laura Raus

## Historical Claims

Egypt's claims to Nile waters are based on two treaties, neither of which directly involved Ethiopia. The first was agreed to in 1929 between Britain, which controlled Egypt at that time, and the British colonial administrations in Sudan, Uganda, Kenya and Tanganyika. The agreement prohibited the upstream colonies from constructing water infrastructure on the Nile without Egypt's consent. The second treaty was signed in 1959 between Egypt and Sudan, dividing the Nile waters between the two countries.

In 1999, Nile basin states launched the Nile Basin Initiative to achieve "equitable utilization" of the river's waters<sup>1</sup>. Under the initiative, negotiations were held for years to establish a Cooperative Framework Agreement over the use of the Nile waters that would replace the previous colonial treaties. In 2010, Ethiopia, Kenya, Uganda, Rwanda and Tanzania signed the agreement despite Egypt's objections. Burundi later signed as well.

## The Grand Ethiopian Renaissance Dam

In March 2011, the Ethiopian government announced plans to construct a hydroelectric dam on the Blue Nile. The Grand Ethiopian Renaissance Dam is expected to generate approximately 6,000 MW of electricity, becoming Africa's largest power plant.<sup>2</sup> The Ethiopian government believes the dam will help meet the needs of its citizens, as much of the population lacks access to electricity and relies on biomass fuel. The dam is expected to generate enough electricity to meet domestic needs with excess available for export to countries in the region. The filling of the dam's reservoir will start at the end of 2014, when it will also begin electricity production. The project is expected to be complete by 2017.

Concerns have been raised over the dam's impact on Egypt. According to some, filling the dam's reservoir may cause Egypt to lose 20% of its Nile waters.<sup>3</sup>

Experts say that such a loss could curtail Egypt's cultivated farmland by up to one-fourth<sup>4</sup>. "The Egyptians already have a deficit in their water supply of about 10 billion kiloliters. If you add just one kiloliter to that, it will be a disaster," claimed Dr Bahaa Alkoussey, the former chairman of Egypt's National Water Research Centre. "Every one billion kiloliter reduction in natural flow to Egypt will cause 200,000 feddans (207,600 acres) of land to go out of production and 500,000 farmers to be out of work, which will affect 2.5 million families," he asserted.

Such predictions contradict the findings of an expert panel that was tasked with assessing the impact of the dam on downstream countries. The 10-member panel was comprised of international experts, including two from Egypt, Ethiopia and Sudan. The panel's report found that the dam will have no significant negative impact on downstream countries, since once the reservoir is filled the waters are free to flow through its turbines.<sup>5</sup> While Sudan accepted the panel's findings, Egypt objected.

## Political Fallout

Tensions over the dam increased in May when Ethiopia temporarily diverted the flow of the Blue Nile as part of the construction process. On June 3rd, Egyptian politicians met with President Morsi to discuss solutions to the crisis. Participants proposed hostile measures, including military action against Ethiopia, unaware that the meeting was being broadcast on live TV. Following the airing of the meeting, Ethiopia summoned the Egyptian ambassador to Addis Ababa to discuss the matter.

Publicly, both governments have firmly made their stances clear. On 10 June, Morsi warned that "all options are open" in dealing with the construction of the dam. "If it [the Nile] loses one drop, our blood is the alternative", he insisted.<sup>6</sup> The Ethiopian Prime Minister Hailemariam Desalegn responded, vowing that "nothing"

and "no one" would stop the dam's construction. In June, the foreign ministers of Egypt and Ethiopia met in Addis Ababa and agreed to hold further talks on the construction of the dam. Given Egypt's current political transition, it remains to be seen how the post-Morsi government will handle the dispute.

## Arbitration vs. Negotiation

Finding a compromise to the conflict is complicated by the fact that there is no way to fully know what the impact of the dam will be, informed Lori Pottinger, head of the Africa program at International Rivers. "First, there is no way to predict the long-term impacts of climate change on the Nile flow. Second, it is not at all certain how long it will take to fill the huge reservoir, which can store a year's worth of the Nile flow. Third, there is not good data for the Blue Nile's flows," Pottinger explained. With these uncertainties in mind, Pottinger recommended a more transparent assessment of the dam's impact. She added that according to some experts, the design of the dam is "inefficient" and a number of smaller dams would have been a wiser choice. But in order to solve the current dispute, "some form of international arbitration is clearly needed," Pottinger believes.

"Egypt can certainly try to halt construction of the dam through arbitration or other dispute resolution mechanisms, maybe even through the International Court of Justice", said Gabriel Eckstein, professor of law at Texas Wesleyan University, director of the International Water Law Project and a counsel with the law firm of Sullivan & Worcester. While reaching a verdict might take years, Egypt would be within its rights to demand that, during the arbitral or judicial proceedings, Ethiopia does not resume any construction that has adverse effect on the flow volume to Egypt, Eckstein informed.

It is impossible to predict what the result of international arbitration would be,

especially since such disputes have never been presented to a tribunal, Eckstein admitted. He said that the historical use argument would not be an overriding factor for an international court. "The two chief principles of international water law are the rule of equitable and reasonable utilization and the rule of no significant harm," Eckstein explained. "The problem with this argument, though, is to determine what constitutes 'significant' for purposes of establishing that the harm is illegal. Additionally, while a tribunal could seek an equitable outcome, one which may be acceptable to both parties, it can just as easily rule entirely in favor of only one of the parties," he added. "Accordingly, the best option for both Egypt and Ethiopia would be a negotiated settlement," Eckstein recommended.

Richard Paisley, a professor of law and the director of the Global Transboundary International Waters Research Initiative, also cautioned against international arbitration since it is costly and can further aggravate diplomatic relations. If Egypt and Ethiopia opt for negotiating a bilateral agreement, Paisley recommended they seek assistance from the UN Standby Team of Mediation Experts, which could send a small-scale mission to help forge compromise behind the scenes. However, the expert thinks that it would be the best to deal with the conflict in the frames of the Nile Basin Cooperative Framework Agreement which he also helped design. Whereas sharing water rights is a zero-sum game, the countries could cooperate to increase the total benefits from the water and share those benefits instead, Paisley explained.

Also Dr. Ana Elisa Cascão, a program manager at the Stockholm International Water Institute whose main research topic is the hydropolitics in the Nile River Basin, recommends Egypt to sign the Cooperative Framework Agreement. "This negotiated agreement clearly states that any development upstream



should not 'cause significant harm' to the downstream riparians. Once the agreement is signed and ratified, the Egyptian position will be protected by an international agreement," she explained. Cascão also pointed out that the Ethiopian government has promised Egypt and Sudan to slow down filling the reservoir in case of lower than average rainfall. "It is important to note that it is not certain if the rainfall will be below average, nor that Egypt or Sudan will suffer from lower water volumes during this time," she added.

"Without full access to the report from the international panel of experts, we cannot yet draw final conclusions," Cascão responded to the question whether the benefits of the dam outweigh the risks, referring to the fact that the report has been classified at the request of the Egyptian authorities. However, she believes that the dam can bring several benefits to Egypt, including increased reliability of water-flood control, reduced evaporation loss, salinity control, and enhanced navigation. Cascão added that the overall benefits of the dam would increase if it became a regional project with joint management and ownership.

Léna Salamé, program specialist at the UNESCO division of water sciences, believes that the best solution is the countries sitting at the negotiating table and finding a mutually acceptable way forward. She thinks that it may not be realistic to expect halting the building of the dam. "From Ethiopia's perspective, the dam's construction is becoming urgent as it is the only way to allow the country to develop, and in turn alleviate poverty and suffering.

From the perspective of downstream countries, this new development will change the usual and historical use of water from the Nile, which will in turn have a negative impact on their own development. Their perspectives are not exclusive. The needs of both, upstream and downstream countries should co-exist and should be met. No one's needs for water should be ignored. No one's need for life can be ignored," she emphasized. Salamé added that a solution should be found to improve the lives of the people in Ethiopia without harming the people downstream.

"Ideally, all the Nile basin countries would sit together and evaluate the situation in order to decide how the advantages of the dam can benefit the upstream and downstream states, in order to compensate for disadvantages that would occur downstream," Salamé stressed. As possible benefits to be distributed, she named hydropower, but also any industrial or agricultural products that can be produced thanks to the activities that would become possible through the new infrastructure. The specialist added that the benefits to be allocated to the downstream countries as compensation would not necessarily need to be related to the dam. "Compensation can come from outside of the 'water' or the 'dam' box," she explained.

"The countries are at a very sensitive point now and their relation should hopefully evolve positively. If a negative spiral is started, all the people of the region will suffer. If each country digs into its own position, dialogue will be difficult," Salamé concluded, adding that the UN can help the countries reach a positive

solution through various means. It can provide a forum for discussion and a platform for accessing donors' funds. It can also help building capacities in the basin or offer neutral third-party support if the states themselves request such kind of assistance.

#### Conclusion

The Grand Ethiopian Renaissance Dam has potential to bring benefits to the region, but these benefits must be weighed against the risks to the downstream countries. The dam's full impact on water security is impossible to forecast with absolute certainty. While it is unlikely that Ethiopia halts construction of the dam, the two states should continue to seek a mutually beneficial agreement through negotiations. If negotiations fail, the countries are left with the options of international arbitration or war, which neither side can afford.

1. Nile Basin Initiative, "About the NBI."
2. Hammond, M. "The Grand Ethiopian Renaissance Dam and the Blue Nile: Implications for Transboundary Water Governance." February 18, 2013.
3. Al Jazeera, "Egypt Warns Ethiopia over Nile Dam." June 11, 2013.
4. The Guardian, "Ethiopia Rejects Egyptian Protests over Nile Dam." June 11, 2013.
5. Sudan Tribune, "Ethiopia, Egypt Ease Tensions Over Nile Dam, Agree to Hold Tripartite Talks Including Sudan." June 18, 2013.
6. The Guardian, "Ethiopia Rejects Egyptian Protests over Nile Dam." June 11, 2013.

## Guest Column

### Ratification of the Petroleum Concession Agreements

The Egyptian constitution, adopted in 2012, stipulated that exploitation rights of "state properties or public facilities" shall be granted by a law. On July 3rd the Egyptian army declared the immediate suspension of Egypt's constitution. Given this, questions emerge regarding petroleum agreements in Egypt. Is it possible to formalize petroleum concession agreements in the absence of the legislature or People's Assembly? Considering exploration and exploitation rights are to be issued only by a law, are parliamentary elections necessary for new petroleum agreements to be completed?

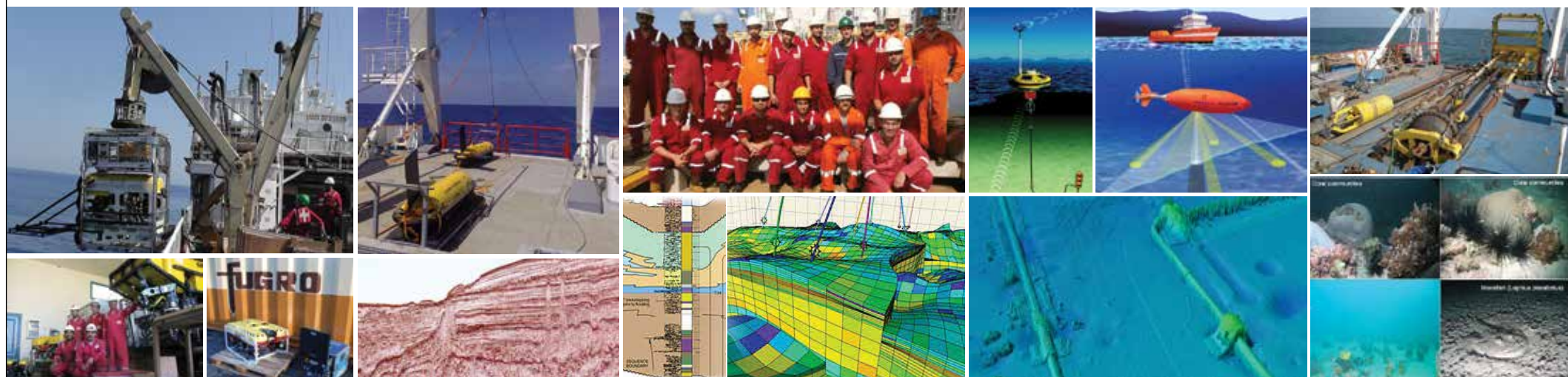
Law no. 15 of 1967 provides the legal framework to formalize new petroleum agreements. The aforementioned law authorizes the president, during exceptional circumstances, to issue decrees that have the force of law in all matters related to the security of the state. Matters related to national economy, the mobilization of human and material resources, and the support of military initiatives all fall under the heading of national security. Undoubtedly recent political circumstances would qualify as exceptional circumstances.

Since the Egyptian petroleum sector is a vital component of the Egyptian economy, not to mention the necessity of increased oil and gas production, it is likely that concession agreements for exploration and exploitation will likely continue uninterrupted despite the absence of the legislative body.

Essam Taha

Attorney at Law and Petroleum Agreements Expert

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# 'Shortages'

## manifest in extreme gas lines

## in weeks leading up to

## June 30<sup>th</sup>.

Extreme gas lines crippled Cairo in the days leading up June 30<sup>th</sup>. Queues at gas stations reached several hundred meters, worsening Cairo's already congested roadways. Drivers were forced to wait in lines for six to eight hours to refuel.

By Salma Selim - Reporting by Wael Serhag

Government officials stated that the shortages were caused by excess consumption in anticipation of protests planned for June 30<sup>th</sup>. As the broader political events unfolded gas lines disappeared and shortages ceased. Some questioned how a problem severe enough to cripple the entire city could be resolved so rapidly amidst the political crisis. Egypt Oil and Gas explores the causality and speculation surrounding the fuel shortages that crippled Cairo in the days prior to June 30<sup>th</sup>.

### Public Reactions

The presence of hundreds of cars waiting to refuel clogged Cairo traffic in the days prior to June 30<sup>th</sup>, exacerbating tensions throughout the city. Yoursi Abd El Aziz Al Sakhawey, owner of a Caltex gas station in Maadi explained, "The supply car comes only once a day to fill in our storage and when we run out of gasoline, the customers just need to wait until the next day." Adding, "people have to wait and by the time their turn comes, they have become angry."

Opinions over the cause of the shortages varied. Some individuals speculated that panic was responsible for the lines and shortages. "June 30<sup>th</sup> is the cause of the crisis," stated Ibrahim Abd El Al a student waiting in a Maadi gas line. "The deficit is artificial because it cannot happen so suddenly... this was fabricated ahead of June 30<sup>th</sup>," El Al explained. Others argued that Morsi's government had intentionally exaggerated shortages in an effort to "prevent people from getting to

demonstrations" as stated by engineer Mohamed Mokhtar after he endured a six hour wait for gas. Conversely, it was argued that government officials seeking Morsi's removal had manipulated supplies to heighten anxiety and prompt political action.

### Government Response

Government officials rejected claims that fuel supplies were manipulated for political means. Former President Morsi stated the shortages were caused by media speculation and rumors surrounding impending supply cuts. Former Minister of Petroleum Sherif Hadara told state television on June 26<sup>th</sup> "what has been said about the shortage of oil, diesel, and other mineral materials is not true." Hadara noted that the government was pumping "additional amounts of petrol and diesel to meet the higher than average demand." EGPC Chairman Tarek el-Barkatawy acknowledged a "market shortage of petroleum materials" but asserted that a "20 to 30 percent" spike in consumption was responsible for the lengthy gas lines.

According to a report released by the office of former President Morsi, broader economic challenges contributed to shortages. The report cites, issues of liquidity, including delayed payments, and the absence of foreign currency greatly complicated daily operations. The black market also contributed substantially to shortages, as the government seized roughly 380 million liters of smuggled diesel and 52.1 million liters of smuggled petrol during the month prior. The report also cited distribution problems caused by domestic unrest, as supply routes were disrupted over security concerns. The report also attributed shortages to stifled domestic production as a result of obsolete wells.

### Sudden Improvement

As political events unfolded, fuel shortages and gas lines swiftly disappeared. After the ousting of President Morsi, on July 7<sup>th</sup> Magdy Wasfy, the General Director of Subsidy Affairs at the Supply and Internal Trade Ministry stated, that the gasoline crisis has been "90 percent resolved" reporting shortages in 20 out of 300 gas stations.

The rapid disappearance of gas lines likely strengthened conspiracy theories on both sides. For those that believe Morsi's administration created the shortages, the resolution of the shortages can be seen as proof that he was responsible. For the other side, who believe opposition forces orchestrated the shortages, the rapid improvement following the overthrow of Morsi may be seen as evidence that the opposition was behind the shortages and returned supplies to normal following the success of their plan.

### Conclusion

Conspiracy or not, it is a fact that Egypt's fuel supplies are undermined by the scarcity of foreign currency, obsolete refineries, smuggling and unsustainable subsidy system. While the government is in negotiations for oil importation, such measures will only provide short-term reprieve. Unless decisive measures are taken for curbing energy subsidies and for improving Egypt's economy, public finances and rule of law in general, fuel deficits can paralyze the country again in the months to come.





# Oil Prices, Unrest and Aid

By: Sherif Ali Elhelwa

Second chances are rare in this world. Still, over the course of the last month, Egyptians have possibly created just that. However, the long-term consequences of this "revolutionary repeat" remain unknown.

Economically speaking, in the short-term the political situation in Egypt will potentially manifest in greater price fluctuations for crude oil. Nonetheless, the degree to which recent events in Egypt will ultimately influence oil prices is unknown. Several experts highlight the complexity of oil price fluctuations. El Moiz Abunara of the Center for Oil Research and Development notes that, "Oil prices increased according to expectations, and the supply / demand relationship. However, econometric models can't show the whole picture."

On June 23rd, the price of oil began to rise from below 100 USD/bbl to reach 106 USD/bbl on July 3rd, the day Morsi was removed from power. After two weeks of continuous protests between pro and anti Morsi supporters the price of crude oil continues to rise. As of this writing the Brent Price for crude oil was 109 USD/bbl.

While Egypt is not a major producer or exporter, domestic unrest in Egypt will factor into the global cost of oil given the strategic importance of the Suez Canal. According to data compiled by Platts, nearly one third of world's crude oil transits this vital water passage. Kate Dourian, an independent energy analyst, stated that the sudden hike in crude oil prices "is partly because of the trouble in Egypt, but not totally because of it. It has nothing to do with Morsi stepping down, but fear over supplies passing through Suez."

In the period following the removal of Mohamed Morsi, Sinai has become a battlefield with increasingly violent attacks on military forces as well as military targeting

of the gas pipeline. Morsi supporters have blocked key roads and combatively engaged with the Egyptian army placing the entire Suez region on high alert. A recent report produced by The Washington Institute documents that "since Morsi's ouster, militants loyal to the former president have made at least one attempt to fire missiles toward oil installations in the city of Suez, located at the canal's southern entrance. They have also assaulted customs offices in the Port Said free zone at its northern entrance." The Egyptian Ministry of Interior recently announced the arrest of 25 individuals for allegedly plotting terrorist attacks on ships crossing the Suez Canal. The ministry claims that the militants are linked to Al Qaeda.

Commenting on the heightened security in the Sinai, El Moiz Abunara, Consultant at the Center for Oil Research and Development in Africa and the Middle East stated that, "At this moment, the changes in Egypt and its impact on oil prices are more dominant than any other conflict in the region including Syria and Lebanon." In response to increased threats, the Egyptian army has implemented measures to increase security in Sinai. Reuters reported on July 11th that US Navy vessels were patrolling the area from the Red Sea to the Hormuz Strait and up to the Suez Canal in order to add an additional element of security to the waterway.

While concerns over the Suez Canal are justified and likely reflected in slightly higher present oil prices, many argue that political unrest in the region has become the norm after the Arab Spring and that element of risk is already embedded in market prices. Mohamed Darwazah, Senior Economic & Risk Analyst for Medly Global Advisors stated that, "instability in the MENA region always adds a

risk premium to oil prices...I believe the turmoil in Egypt is one of several factors that are keeping prices high."

According to energy analyst Kate Dourian, oil traders are unlikely to take note of the political instability in Egypt until there is a significant threat of the turmoil spreading and destabilizing major GCC oil exporters, especially Saudi Arabia. However, perhaps not surprisingly in geopolitical terms, GCC countries have expressed overwhelming support for both the Egyptian military and the interim government. Saudi Arabia, UAE and Kuwait pledged aid packages (consisting of cash, energy products, and interest free loans) amounting to 12 billion USD in the wake of Morsi's removal. On July 21st Egypt's Central Bank announced the arrival of 3 billion USD from UAE, and the imminent arrival of funds from Saudi Arabia.

Altruism is not a likely explanation as numerous solicitations for economic aid from the Morsi government were recurrently stalled. The sudden generosity from the Gulf States is obviously an effort to contain the political unrest in Egypt and avoid regional spillover culminating in Arab Spring 2.0. Moreover, by providing economic aid to Egypt's interim government the Gulf states seek to contain the Islamist influence of the Muslim Brotherhood and ensure the survival of their Gulf monarchies. Mohamed Darwazah echoed this point stating, "Look how quickly the UAE, Saudi Arabia and Kuwait stepped forward to send aid to the interim government." It is clear that "they recognized the Brotherhood as a threat to their ruling families." Political Islam is NOT their friend.

Of course, the sudden outpouring of support from the Gulf countries can also be attributed to the broader market perception of the

military as a stabilizing mechanism in Egypt's political and economic landscape. It is also likely a good time to invest in Egypt as the pound has likely hit a bottom in its recent fear induced spiral. Movement in the Egyptian stock market also largely supports this assertion. The Egyptian Stock Exchange witnessed a 22 billion dollars increase on July 3rd, the day after Morsi was forced to step down. The jump was the highest ever recorded. Several analysts attribute market performance to an emotional response on the behalf of buyers. Concerning the jump in the stock market, Economic Analyst Mostafa Bahnassy stated that, "It was a euphoric feeling that took over the Egyptian stock market. Investors and traders gained confidence with the new government, hoping that increased investor confidence would translate to more money and more shares."

The influx of Gulf aid and the stabilizing presence of the military have granted Egypt a brief economic reprieve. In fact, it would appear that Morsi's removal has proved to be economically beneficial for Egypt. However, experts warn of long-term consequences that will result from recent events. Economic Analyst Moustafa recently stated, "the fundamentals of the economy are still crippled especially that there is no clear economic plan announced by the government, and no parliament is in session." It is important for several regional actors to keep in mind that they are subject to set of rules similar to those that governed the last year in Egypt's history. The Gulf States, the Egyptian military, Tamarod, and secular liberals should recall that the rising expectations of the Egyptian people are not to be trifled with. The consequences of a failure to perform can be immediate, violent, and have a distant economic and political reach.



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AUGUST 2013 ISSUE 80



# EPEX Explores Unconventional Resources in Egypt



The Egyptian Petroleum Society (EPEX), headed by Dr. Ahmed A. Fattah, recently devoted a monthly session to the topic of unconventional resources in Egypt. Held on June 24th at the Sofitel in Maadi, the session brought together government officials, academics and industry professionals to discuss the potential of unconventional exploration in Egypt.

Dr. Ahmed A. El Fattah, the Deputy CEO for Exploration at EGPC conducted a presentation titled "Unconventional Resources in Egypt (Where we are?)". The presentation outlined a variety of technical issues implicit in the exploration of unconventional hydrocarbons, particularly shale gas.

Dr. Fattah highlighted the dynamic nature of shale gas, noting that shale can migrate, or become trapped in unknown or unexplored areas. Most commonly, the gas is preserved in-situ as the tightness and sealing

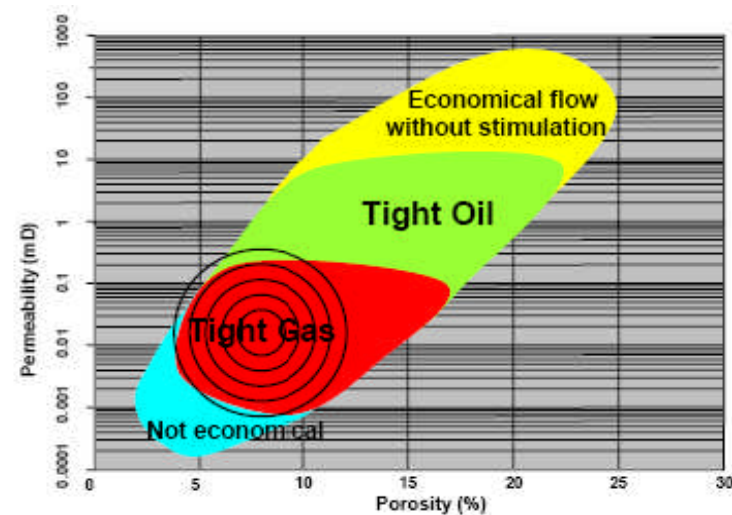
of the source rock does not allow for migration from source rock to reservoir rock, leaving the shale gas near its source formation in the sandstone reservoir.

Dr. Fattah further discussed the exploration and production of shale gas, drawing from case studies on the Barnett Shale Formation located in the US. Dr. Fattah emphasized the importance of learning from the Barnett experience and applying such knowledge to the exploration and evaluation of shale resources in Egypt.

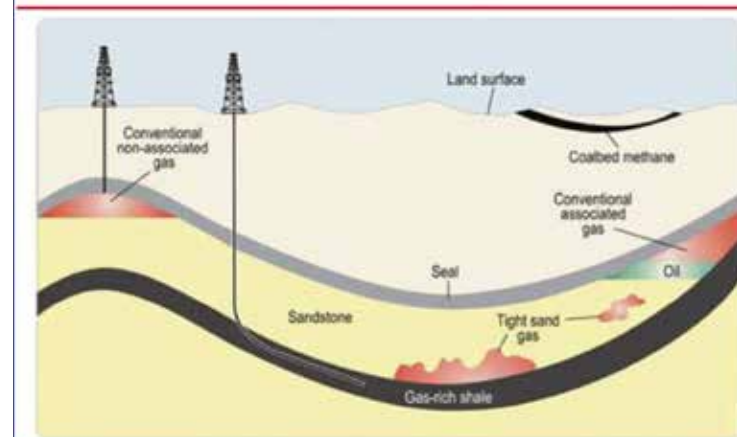
Dr. Fattah established a research committee comprised of individuals from various joint ventures in order to evaluate key basins in the Western Desert and identify those basins likely to contain shale gas formations. Dr. Fattah conveyed that he believes Egypt's unconventional resources are vast, not only in the Western Desert but throughout all the geological provinces in Egypt.

Dr. Esam A. Abd El-Gawad, Department Chair and Professor of the Department of Petroleum Geology and Geochemistry at Al-Azhar University also spoke at the event. His presentation analyzed the geological and geochemical elements of gas shale in Egypt. Dr. Gawad, a Fulbright fellow, noted that each shale play displays four characteristics: the maturity of the organic matter, the type of gas generated and stored in the reservoir, the total organic carbon content of the strata, and the permeability of the reservoir. These characteristics determine the suitability for different completion technologies.

Cumulatively, the presentations provided a comprehensive overview concerning the potential of unconventional hydrocarbon in Egypt. The productive session provided a technical roadmap for initiating unconventional exploration in Egypt.



Simplified Vertical Profile Showing Unconventional Gas Reservoirs



SOURCE: US Energy Information Administration (EIA).

## Halliburton Hosts Conference on Unconventional Resources



Halliburton recently hosted the 2013 Technology Forum at the Cairo JW Marriott. Titled "Shale Plays: Discovering the Opportunities in Egypt," the event brought governmental officials and industry executives together in order to discuss the potential of shale exploration in Egypt. The event, organized by Halliburton, was held in collaboration with the Ministry of Petroleum and EGPC.

During the opening session, Eng. Hesham Ismail, VP of North Africa Halliburton, gave the opening talk where he welcomed the attendees and emphasized the importance of the collaboration and the support of the Ministry and EGPC. Eng. Tarek El Barkatawy, Chairman of EGPC, emphasized in his talk the importance of embracing new technologies to increase domestic production in Egypt and the importance of shale plays to close the gap.

Dr. Moustafa Oraby's talk highlighted how estimates of shale gas reserves in Egypt went from being considered "negligible" to reaching "more than 500 TCF." Dr. Oraby discussed in his talk why some consulting firms mistakenly concluded that Egypt has no potential in shale gas plays. Dr. Oraby explained that Egypt has tremendous potential of such reserves. He supported his talk with data from Egypt's fields and the most recent report by the Energy Information Administration (EIA) published on May 17th 2013.

Dr. Ahmed Fattah, Deputy CEO for Exploration at EGPC also spoke, comprehensively summarizing Egypt's current position on the development of shale prospects.

The conference comes amidst increased efforts on behalf of the Ministry of Petroleum to assess the viability of unconventional resources in Egypt. The ministry recently formed a committee on unconventional resources comprised of experts from the Ministry, EGPC and Halliburton. This committee sought Halliburton's expertise to conduct preliminary research in an effort to evaluate the potential of shale gas in Egypt.

Halliburton's expertise in the realm of unconventional resources, particularly shale gas, was prominently displayed throughout the event. While unconventional oil and gas resources are a relatively new concept in Egypt, the global market for unconventional

resources started to gain momentum nearly a decade ago. It became clear early in the 2013 Technology Forum that Halliburton has invested considerably over the last decade to develop technologies designed to contend with various aspects of unconventional exploration, and particularly technologies related to shale gas. In addition to its technological prowess, Halliburton boasts a wealth of unconventional and shale experience with successful endeavors around the world. Throughout the conference numerous speakers relayed Halliburton's experience, technology, and customized service portfolio to explore the potential of shale gas in Egypt.

In the following sessions, Dr. Moustafa Oraby, North African Technology Manager for Halliburton, discussed the various methods of identifying shale gas plays. He expressed optimism for the potential of shale gas in North Africa strongly noting that the geology of the region is conducive to the discovery of shale gas. Dr. Oraby highlighted the dynamic nature of shale plays, empathizing that the unique composition and challenging location of shale gas often adds to the complexity of discovery.

Dr. Larry Chorn also spoke concerning the economic and investment aspects surrounding shale gas. Dr. Chorn emphasized the necessity of strategic decision-making given the technical and economic complexity, as well as the uncertainty involved in shale plays. Dr. Chorn relayed a variety of specific optimization strategies for productive exploration, extraction, and development.

The forum contained a heavy technical component with presentations from several Halliburton experts. Mr. Ron Dirksen, Global Well Placement Solution Champion, explored the complexity of drilling for shale gas and presented a variety of technical strategies to best locate shale plays. Mr. Marcello Venturino also conducted a presentation highlighting the unique challenge of cementing shale gas wells.

The conference provided a unique opportunity for both government officials and corporate executives to comprehensively engage in a dialogue concerning the variety of economic and technical issues surrounding the exploration of shale gas in Egypt.



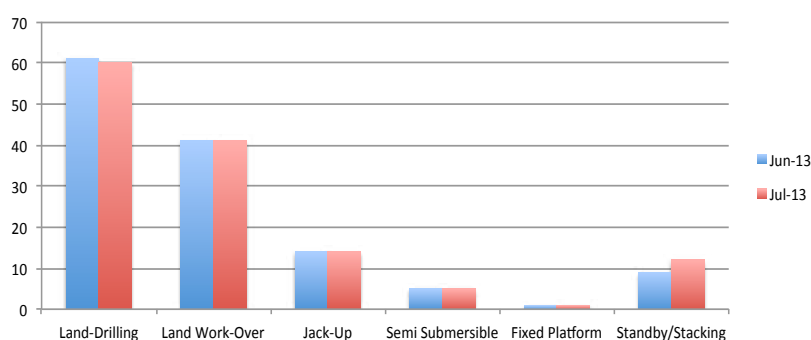
## Egypt Statistics



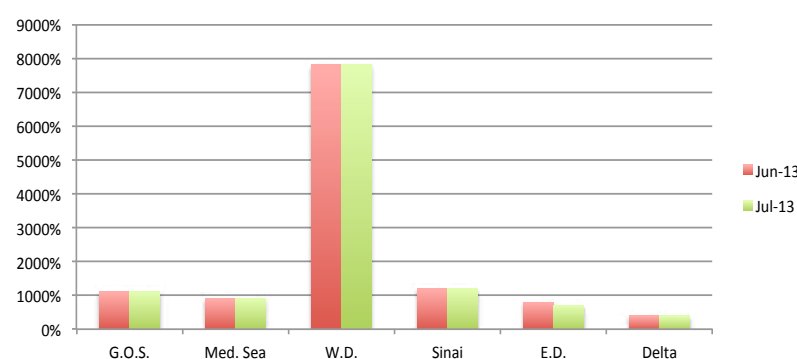
**Table 1 Egypt Rig Count per Area – July 2013**

RIG COUNT			
Area		Total	Percentage of Total Rigs
Gulf of Suez		11	9 %
Offshore	11		
Land			
Mediterranean Sea		9	7 %
Offshore	9		
Land			
Western Desert		78	64 %
Offshore			
Land	78		
Sinai		12	10 %
Offshore			
Land	12		
Eastern Desert		7	7 %
Offshore			
Land	7		
Delta		4	3 %
Offshore			
Land	4		
Total		121	100%

**Rigs per Specification June - July 2013**

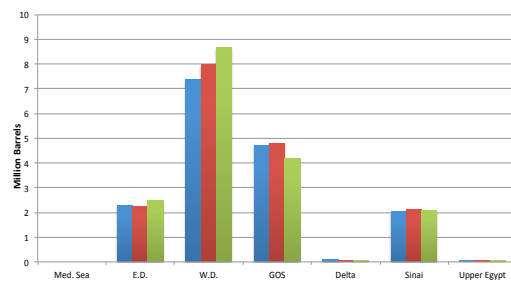


**Rigs per Area June - July 2013**

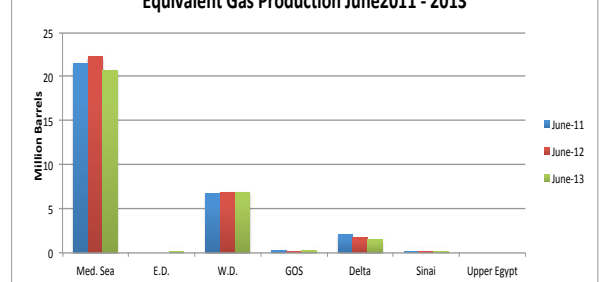


	Oil			Equivalent Gas			Condensate			Liquefied Gas		
	Barrel			Barrel			Barrel			Barrel		
	June-11	June-12	June-13	June-11	June-12	June-13	June-11	June-12	June-13	June-11	June-12	June-13
Med. Sea				21462321	22262143	20739286	1319093	1155228	1369767	382981	388952	393756
E.D.	2266796	2249288	2470486			62679			3311			7778
W.D.	7392233	7974360	8661378	6706429	6810714	6867500	1791524	1628776	1341087	568790	587726	653736
GOS	4708710	4797720	4166636	296964	202321	291786	72044	59170	58938	171035	166915	184232
Delta	101008	50291	59049	2056250	1712679	1570357	172548	138614	148982	96656	92701	104217
Sinai	2043447	2111138	2062142	25893	1786	1250	30663	34602	32398	57695	8 8344	85921
Upper Egypt	19996	14272	16559									
Total	16532190	17197069	17436250	30547857	30989643	29532858	3385872	3016390	2954483	1277157	1324638	1429640

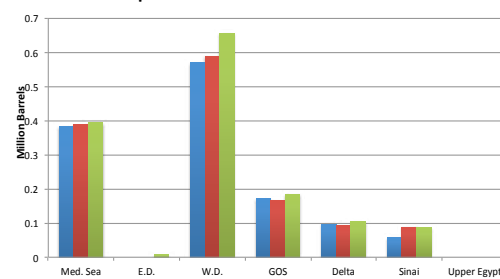
**Oil Production June 2011 - 2013**



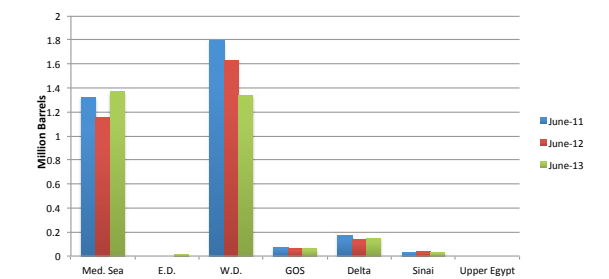
**Equivalent Gas Production June 2011 - 2013**



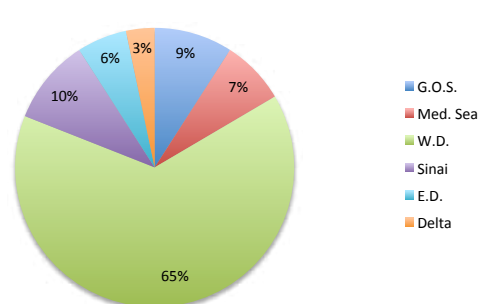
**Liquefied Gas Production June 2011 - 2013**



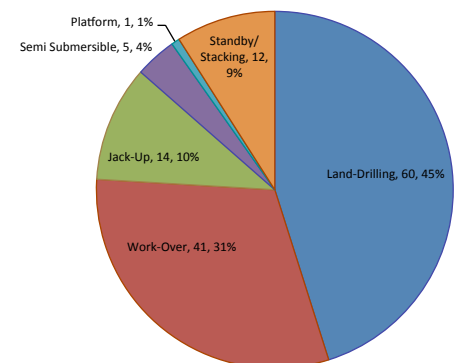
**Condensates Production June 2011 - 2013**



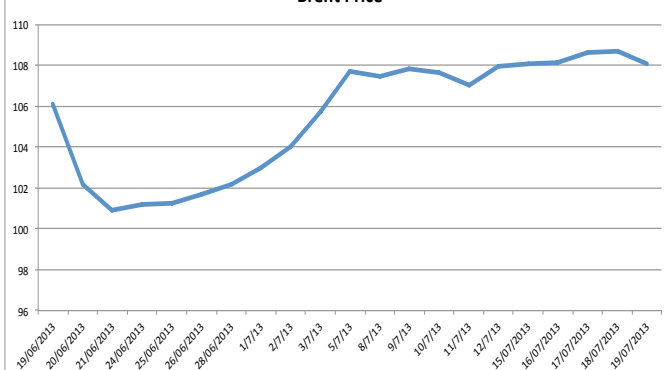
**Rigs per Area July 2013  
(Total of 121 Working Rigs)**



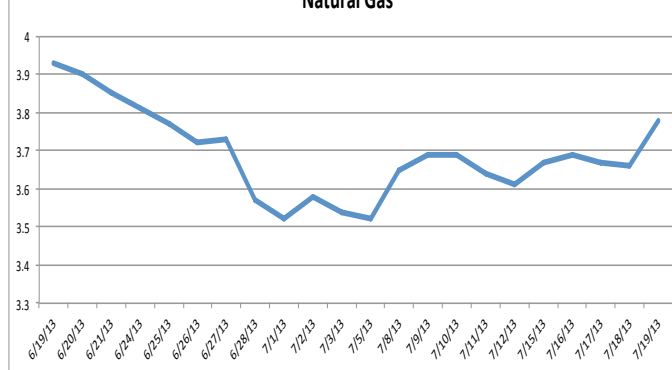
**Rigs per Specification July 2013**



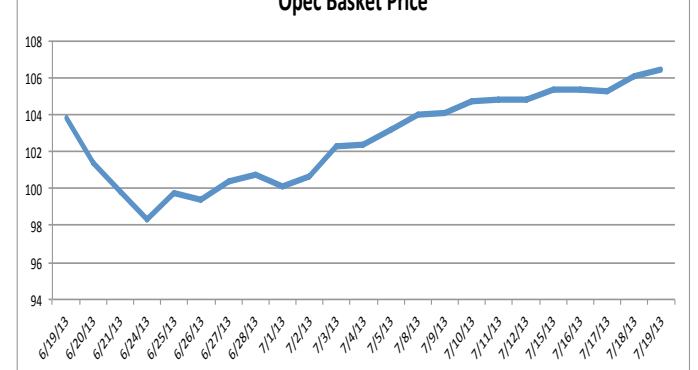
**Brent Price**



**Natural Gas**



**Opec Basket Price**





In collaboration with EGPC and Halliburton



# The Future of **UNCONVENTIONAL**

## Oil & Gas in Egypt Roundtable

Moderated By  
**Eng. Tarek El Barkatawy**  
Chairman of Egyptian General Petroleum Corporation

MONDAY 16TH OF SEPTEMBER - 2013

[INFO@EGYPTOIL-GAS.COM](mailto:INFO@EGYPTOIL-GAS.COM)

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