**InReview** 

# Why Is Egypt Importing **Natural Gas?**

**Expert Opinion** 

**Egyptian Concession Agreement Model From a Legal Perspective** 



P.21



February 2013 Issue 74

24 Pages

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**Second Annual Roundtable** 

Cautious Optimism **Honoring Oil and Gas Agreements** 

P.15-20

# **An Excellent Learning Opportunity**

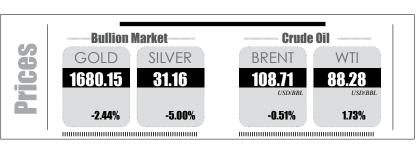
This month Egypt Oil and Gas held its second annual Roundtable Event. The meeting brought together media partners, oil executives, and government officials to dialogue and debate the problems and challenges currently facing the energy sector. The forum was highly educational to say the least. Our publication will make continued efforts to hold similar events in the future.

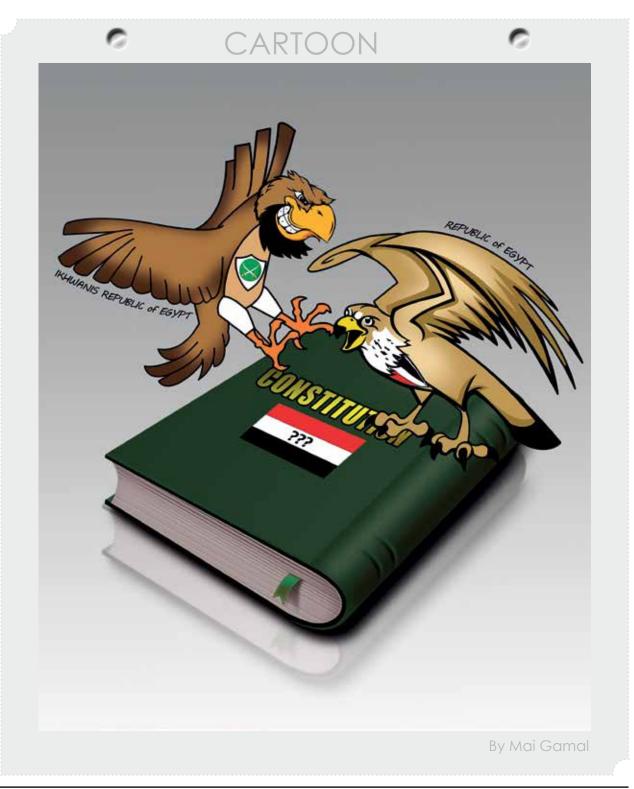
It was extremely interesting to hear various perspectives concerning the future of, not just the energy sector, but Egypt in general. I of anxiety and patience intriguing. Amidst recurrent political and socioeconomic instability representatives

from various international oil companies expressed commitment and measured optimism about the future direction and potential of the Egyptian energy sector.

I was extremely grateful for the opportunity to speak to numerous people from the industry concerning our publication. Suggestions (and complaints) ranged from content to font, look to language, spacing to sources. I would love further suggestions concerning how to improve this publication, as the feedback I received at the Roundtable was extremely useful. found the simultaneous mix Please send any suggestions to JHerrick@Egyptoilgas.com.

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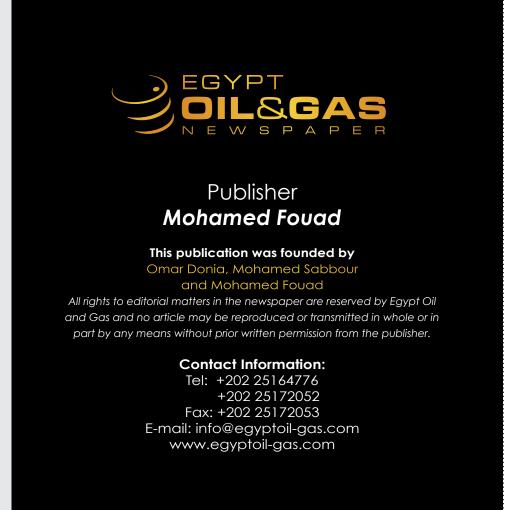
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# Ongoing Negotiations Between BP, EGAS, PETRONAS and EGPC

BP, EGAS, PETRONAS and EGPC are engaged in ongoing negotiations aimed at furthering development projects aimed at increasing gas production in the central Delta Deep Marine (WDDM). The project's expenditures will reach an estimated 1.4 billion USD. The agreement will be under the supervision of the EGPC and EGAS.

According to previous agreements between BP, EGAS, PETRONAS and EGPC gas produced in

the area was to be fully exported. Officials stated that another past agreement stipulated a portion of the gas from WDDM region was to be used in the local market with quantities starting from 600 BCF to 930 BCF.

Previous agreements proved problematic as higher amounts were withdrawn from the contracted volumes and fully converted to the local market usage. Due to this issue, the four entities

BP, EGAS, PETRONAS and EGPC the area was to be fully exported. are in the phase of drafting a new potential settlement in order to response aimed at furthering develop-



# Bapetco Concludes Drilling Exploratory Well

Bapetco Petroleum Company has recently completed the drilling process for a new exploratory well. Bapetco is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Shell Corporation. The drilling operation occurred in the company's concession area in the Western Desert.

The BEB11-F1 oil producing exploratory well was drilled to a total depth of 11,000 feet utilizing the EDC-52 rig. Egypt Oil & Gas has been informed that the volume of new investments on the drilling process reached approximately 2 million USD. The company's production rates of crude oil during the month of December 2012 reached 1,002,516 barrels.

# Agiba Drills a New Developmental Well

Agiba Company drilled a new

developmental well in its concession area in the Western Desert. Agiba company is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Mitsui with 10% shares and IEOC with 40% shares. The company drilled the oil producing well labeled RAML-27. The well reached a total depth of 4,700 feet utilizing the WF-147 rig. Operational investments neared 810,000 USD. The company's production rates of crude oil during the month of December 2012 reached 1,584,156 barrels.

# Dapetco Plugs Explanatory Well

Dapetco recently completed drilling of a new explanatory well. The drilling operation occurred in the company's Western Desert concession. The NSD 7-1-3 gasproducing developmental well was drilled to a depth of 11,123 feet utilizing the EDC-10 rig. Dapetco's production of crude oil and condensates reached 290,431 bpd while natural gas production reached 127,500 barrels equivalent as of the end of December 2012.

# Agiba Plugs a New Developmental Well

Agiba Petroleum Company recently drilled a new developmental well in its Western Desert Concession. Agiba is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Mitsui (10%) and IEOC (40%). The company drilled the oil producing well-labeled NADA W-2 to a total depth of 12,000 feet utilizing the ST-8 rig. Operational investments surrounding the project are estimated at 3.1 million USD. The production of crude oil and condensates reached 1,584,156 bpd while natural gas production reached 56,451 barrels equivalent as of the end of December 2012.

# Petro Amir Completes Drilling in Eastern Desert Concession



PETRO AMIR recently completed drilling of a development well in its Eastern Desert concession. Petro Amir is a joint venture between EGPC and Vegas. The developmental well GEYAD-6 ST-1 was drilled to a depth of 6,350 feet using ST-9 rig. Total investments surrounding the project are estimated at 830,000 USD. Petro Amir's production rates reached 316,569 bpd as of the end of December 2012

# Qarun Drills Developmental Well in Eastern Desert Concession

Qarun completed drilling of a new developmental well in its East Desert concession. Qarun is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Apache. The BS-17 oil producing developmental well was drilled to a depth of 7,500 feet via the EDC-47 rig. Drilling expenditure in the well is estimated at USD 1.3 million Qarun production rates of crude oil during last December 2012 reached 1,582,317 barrels of oil

# Apache Concludes Drilling New Exploratory Well

Within the context of its 2012-2013 drilling plan Apache Petroleum Company has recently completed drilling of a new exploratory well. The drilling operation occurred in Apache's Western Desert concession. The WKAL-H-1X oil producing developmental well was drilled to a depth of 17,160 feet utilizing the EDC-59 rig. The well was abandoned and considered dry. Investments surrounding the project are estimated at 7.9 million USD.

# Petrobel Completes Drilling of Well in Sinai



Petrobel completed drilling of a developmental well in its Sinai concession area. Petrobel is a joint venture company between EGPC and ENI. The well labeled as 112-147 was drilled at a depth of 8,872 feet using ST-1 rig. Total investments surrounding the project are estimated at 2.6 million USD. Petrobel's production of crude oil and condensates reached 3,898,330 bpd while natural gas production reached 8,373,434 barrels equivalent as of the end of December 2012.

# Dana Gas recently discovered two wells in the Nile Delta Basin

Two New Discover-

**Dana Gas Makes** 

two wells in the Nile Delta Basin, specifically in the West El Manzala concession. Dana is the 6th highest gas producer in Egypt. The wells, labeled The Alyam-1 and Balsam-1 are expected to increase commercial reserves between 17 (proved) and 95 (anticipated) million barrels of oil equivalent. Declarations of commerciality as well as development plans have already been submitted for the project. Estimated reserves for the Balsam 1 are between 76 and 436 billion cubic feet of natural gas, and between 2.5 and 9.4 million barrels of condensate (MMBO). The Alyman-1 reserves are estimated between 8 and 66 billion cubic feet of natural gas and between 0.2 and 1.3 million barrels of condensate (MMBO).

# EGAS to Revaluate Natural Gas Prices

Egypt's natural gas holding company (EGAS) has started planning a series of meetings with industry insider to reevaluate natural gas prices used in high consumption factories particularly those producing steel, iron and cement. According to an official from EGAS, these meetings seek to assure members of Egypt's industrial community about the sound nature of new mechanisms and procedures utilized to determine natural gas prices. The official also mentioned that EGAS would soon settle details concerning the importation of natural gas by 13

# PetroSilah Drills New Exploratory Well in Western Desert

PETROSILAH recently drilled an exploratory well in the Western Desert. Petrosilah is a joint venture between EGPC and Merlon International. Total investments associated with the project are estimated at 1.7 million USD. The SAAD-2X oil well was drilled to depths of 7,200 feet using EDC-49. PetroSilah's production reached 120,764 bpd as of December 2012.

### Bapetco Concludes Drilling of Developmental Wells

Badr Petroleum Company (Bapetco) recently completed the drilling process of a new development well. Bapetco is a joint venture between the Egyptian General Petroleum Corporation and Shell Company. The drilling operation occurred in Bapetco's concession area in the Western Desert. The ALMAGD C86-B oil-producing developmental well was drilled to a depth of 12080 feet utilizing the EDC-72 rig. Investment surrounding on the drilling process reached approximately 3.163 million USD.

The second well, the BAHGA SE-B oil-producing developmental well was drilled to a depth of 11241 feet via the EDC-42 rig. Drilling expenditure in the well approximately are estimated at 2 million USD. Bapetco's production of crude oil and condensates reached 1,002,516 bpd while natural gas production reached 1,975,536 barrels equivalent as of the end of December 2012.

# **Choice Words**

We don't want to quit in Egypt as we see potential for new resources."

**Jean Pierre Dolla,** Managing Director Total E&P



We need to join forces and work together for the sake of the country and for the partnerships as well."

Geologist **Mostafa El Bahr,** Agiba Petroleum Company



A certain degree of flexibility to help the IOC's get
things going and getting
the projects running would go a
long way in raising investor confidence in the business environment here."

lan Barden, General Manager Vegas Oil and Gas



Egypt also has a lot of conventional and unconventional gas to be found and minerals as well. This country is very rich in resources and it could be self-sufficient in few years."

**Dr. Hany Sharkawi,** Oil and Gas Consultant



### Dana Gas Shares Hit 14-month High

Investment shares in Dana Gas hit a 14-month high after the company released a statement revealing it generated 8 million USD in sales resulting from a new plant in Egypt. The plant has "processed a combined 12,340 metric tons of propane and butane." Dana expects to double plant revenue in the near future. Dana has 26.4 percent ownership in Egyptian

Bahrain Gas Derivatives Company, a natural gas liquids extraction plant located in Ras Shukheir, Egypt. Plants activities consist of the production and marketing of gas, liquid propane and butane. Primary shareholders in Dana Gas include Arab Petroleum Investments and Egyptian Natural Gas Holding.

### **ZETICO Drills New Exploratory Well**

East Zeit Petroleum Company (ZETICO) recently completed drilling of a new exploratory well in its Eastern Desert concession. ZETI-CO is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and DANA Italian Corporation. The E. MATR-4X ST-2 oil producing explanatory well was drilled to a depth of 14969 feet utilizing the TANMIA-1 rig. Investments surrounded the drilling process are estimated at 6 million USD. The pro-

duction of crude oil and condensates reached 245,826 bpd while natural gas production reached 16,002 barrels equivalent as of the end of December 2012.



## **Khalda Completes Activities on Exploratory** Well

Khalda Petroleum Company recently completed drilling activities on two exploratory well in the Western Desert. Khalda is a joint venture between the Eavptian General Petroleum Corporation (EGPC) and Apache. The KAL 5X PALEO oil-producing developmental well was drilled to a depth of 14.350 feet via the EDC-16 ria. Drilling expenditures for the well are estimated at 2 million USD.

Additionally, the UMB-211 oil

producing developmental well was drilled to a depth of 12210 feet utilizing EDC-40 rig. Egypt Oil & Gas has been informed that the volume of new investments on the

drilling process reached approximately 2.246 million USD. The production of crude oil and condensates reached 4,499,260 bpd while natural gas production reached 4,879,464 barrels equivalent as of the end of December 2012.

### **SUCO Finishes Drilling Developmental Well** in the Gulf of Suez

recently concluded drilling of a new developmental well in its Gulf of Suez concession. SUCO is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and the German based RWE Corporation. The RB-A5 ST-1 gas pro-

Suez Oil Company (SUCO) was drilled to a depth of 12196 feet via the ZOSER rig. Drilling expenditures in the well approximately reached 8.3 million USD. The production of crude oil and condensates reached 524,708 bpd while natural gas production reached 47,796 barrels equivalent as of the ducing developmental well end of December 2012.

# **Minister of Planning and International Cooperation to Lift Tourism Subsidies**

The Minister of Planning and International Cooperation, Ashraf al-Araby, has announced that subsidies on diesel fuel sold to the tourism sector will be lifted. The plan to remove subsidies was negotiated with tourism authorities, such as the Tourism Chambers Union and Ministry of Tourism, and is planned to start in May. The Cabinet is working on a plan that will move tourist establishments towards natural aas and away from other types of fuel.

The Cabinet also announced that they will start rationing gasoline to private cars in April. Every 1600cc vehicle will receive only 1800 liters annually.

In 2012 Egypt began importing natural gas for the first time to meet growing domestic demand.



# **New Executives for Apache**

**Apache Corporation named** some new executives to lead international growth initiatives. Thomas E. Voytovich has been appointed the new executive vice-president of international operations. He will oversee all Apache activities outside of the mainland US, excluding the Canadian Kitimat LNG project. Previously he was region vice-president and general manager of Apache's Egypt operations. He joined the company in 1993, before becoming Central Region exploration manager in 2004.

Thomas M. Mayer will replace Voytovich as the new vice-president and general manager of Egypt operations. For the last three years he was the vice-president in Australia. Mayer is not new to Egypt. He served as manager of geology in Egypt from 2002-05 and manager of exploration in Egypt from 2005-10. Prior to Apache, he worked with Cotton Petroleum and Texaco in the Mid-Continent, the Rockies and China.

# **Qarun Completes DrillingWell**

Qarun Petroleum Company recently completed drilling a new development well. The drilling operation occurred in the company's concession area in the Western Desert. Qarun is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Apache. The RAHMA-28 oilproducing developmental well was drilled to a depth of 6900 feet utilizing the EDC-64 rig. Drilling expenditures amounted to \$650,000. The company's production rates of crude oil, during the month of December 2012 reached 1,582,317 barrels.

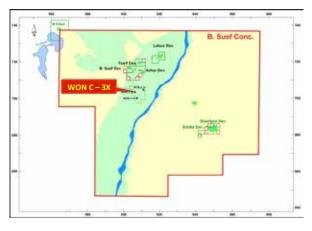


# **New Oil Discovery for Qarun in Beni Suef Concession**

Egypt Oil and Gas exclusively learned that QPC made a recent discovery (WON - C3X) in its Beni Suef concession located 3.3 kilometers northwest of WON-C 1X. The new well was drilled to a total depth of 11,775 ft and preliminary reports indicate plentiful oil and gas prospects located in the Abu-Roash (A/R) G5 sands. Early prospectivity was confirmed by E-Logs and Petro Physical analysis. Proven reserves of WON-C are estimated at + 9.0 MMBO after including about 2.6 MMBO of WON C-3X for the new discovery. The well was test + 500 BOPD (API = 40 degrees) in addition 0.3 MMSCF of gas from the deep horizon.

QPC is planning on drilling two exploratory wells (the WON-C 2X and WON-A 2X) during the next fiscal year to further evaluate the potentiality of the area. Future plans for the area include the drilling of six additional developmental wells.

### **LOCATION MAP**



Story Board



# **Kuwait Energy Concludes Drilling of a New Exploratory Well**



Within the context of its 2012-2013 drilling plan, Kuwait Energy Petroleum Company has recently completed the drilling process for a new exploratory well. The drilling operation occurred in the company's concession area in the Eastern Desert.

The E-SHNW-1X oil producing exploratory well was drilled to a total depth of 4,291 ft utilizing the ECDC-1 rig. Egypt Oil & Gas has been informed that the volume of new investments on the drilling process reached approximately 4.5 million USD.

According to Dr. Mansour Bukhamseen, Chairman of Kuwait Energy, the company's production rates of crude oil reached 20,000 barrels per day. Its worth mentioning that more than 60% of the company's oil production comes from Egypt.

Bukhamseen, in a statement to the newspaper News, added that the company did not stop the exploratory operations in Egypt and Yemen during the Arab Spring. The company also continued its exploratory and developmental activities in all countries. There is a plan to increase the company's investment in Egypt.

In addition, the company has focused in recent years on the Egyptian market and it has developed new techniques and methods of exploration. Since the start of operations in 2008, Kuwait Energy Company in Egypt has made about 19 oil discoveries.

The Kuwaiti company was founded in 2005 as an independent company for the exploration and production of oil and gas in the Middle East and North Africa.

### Khalda Drills New Developmental Well

Within the context of its 2012-2013 drilling plan, Khalda Company has recently began drilling a new exploratory well. Khalda is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Apache American Corporation. The drilling operation occurred in the company's concession area in the Western Desert.

The AG-107 oil-producing developmental well was drilled to a depth of 11,245 ft utilizing the EDC-50 rig. Egypt Oil & Gas has been informed that the volume of new investments on the drilling process reached approximately 1.854 million USD.

# **Dublin Abandons an Exploratory Well in the Eastern Desert**

Within the context of its 2012-2013 drilling plan, Dublin Petroleum Company has recently finished drilling a new exploratory well in its Eastern Desert concession area.

The NWK-1X ST-1 oil-producing exploratory well was drilled to a depth of 6,550 ft via the ZJ-45L rig. Drilling expenditure in the well reached approximately 1.342 million USD. The well was abandoned and is considered dry.





Within the context of its 2012-2013 drilling plan, Vegas Oil and Gas has recently concluded the drilling of a new exploratory well. The drilling operation occurred in the company's concession area in the Western Desert. The well was abandoned and considered dry because it did not have enough crude oil to cover the drilling and

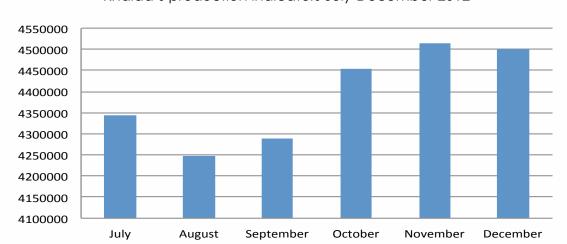
production expenditures.

The W.OBAYED-2X oil-producing exploratory well was drilled to a total depth of 14,200 ft utilizing the ST-11 rig. Egypt Oil & Gas has been informed that the volume of new investments on the drilling process reached approximately 4.633 million USD.



# Khalda Shows Steady Increase Despite Minor Drop

Khalda's production indicators July-December 2012



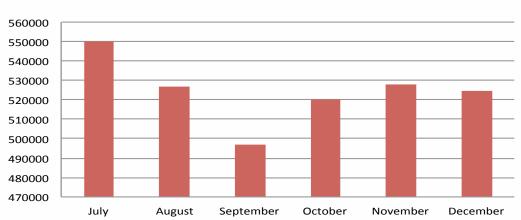
### ■ Barrels of Crude Oil and Condensates

a steady increase over the last six below this number again for the next months. Production in July started at 4,333,561 barrels per month and ended at 4,499,260 barrels per month in December. There was a slight drop in production in August to 4,248,838, but

Khalda Petroleum Company showed Khalda recovered and did not drop six months.

# **SUCO** exhibits Inconsistent production

SUCO's production indicators July-December 2012



Barrels of Crude Oil and Condensates

Suez Oil Company (SUCO) demonstrated a very inconsistent production in the six-month period from July to December. Production started at 549,874 barrels per month in July, but dropped to 526,593 barrels per month in August and 496,962 barrels per month in September. September had the lowest production for the sixmonth time period. In November, production jumped to 528,031 barrels per month, before settling to 524,708 barrels for the month of December.



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# Mediterranean News

# Mediterranean Oil & Gas PLC Expansion



The Board of Mediterranean Oil & Gas Plc (MOG) recently announced operational updates related to the company's activities in Italy. Dr. Bill Higgs, Chief Executive of Mediterranean Oil and Gas noted that the 2012 production performance of offshore and onshore assets in Italy created steady revenues for the company. Higgs noted that revenue stemming from production in 2012 provide a solid financial base for growth and development in 2013. According to the Italian Hydrocarbon Gazette, MOG's subsidiary Medoilgas Civita Ltd ("MCL") was awarded the Aglavizza Concession located onshore in central Italy. MOG will perform its first production test of the Civita 1 well in January 2013.

# New Refinery Closures, and Fuel Shortages Feared in France

Fluxel, a shareholder in France's Southern European Pipeline (SPSE), which supplies oil plants in France, Germany and Switzerland, is warning that the pipeline may not survive. This warning comes after after some of its clients have made the switch to the Transalpine Pipeline (TAL), which supplies Germany, Austria and the Czech Republic. Companies that have made the switch say it is due to TAL's lower shipping fees. SPSE argues that TAL can offer lower tar-

iffs to some companies by charging higher rates on other shipping routes. With many clients moving to TAL, SPSE is threatening that two refineries may have to shut down. These would not be the first two refineries to shut down in Europe. Over the past decade several refineries have been forced to close their doors as consumption declined due to greater fuel efficiency and slow economic growth.

# **Petroceltic Expands to Greece**

Petroceltic (PCI), adding to its operations in Egypt and Eastern Europe, plans to start oil exploration in Greece. PCI has submitted an application in partnership with Edison SpA and Hellenic Petroleum, for offshore and onshore blocks. The partnership will be a consortium with each partner having equal shares. The offshore block is located in Patraikos in the west and the onshore bid is located in the Epirus region in the northwest. In addition to operations in Greece, PCI also recently won approval in develop the Ain Tsila gas

and condensate field in Algeria, which should start production in



# Belgian Company Fluxys Places Bet on Medgaz

Belgian infrastructure Company Fluxys plans to buy a 32% stake in the Algerian gas pipeline Medgaz. Fluxys will pay a reported €233m for Iberdola's 20% stake and Endesa's 12%. Meanwhile, the bigaer partners, Iberdrola and Endesa will keep their control over the gas contracts with the Algerian state oil company Sonatrach. Fluxys' spokesman Rudy Van Beurdan admitted that this investment fits with a medium to long-range plan, and that it is not an investment they expect to profit from immediately noting, "In the future we think there'll be some value there." At current prices, moving gas via pipeline from Algeria to northwest Europe is too expensive. In order for Fluxys to make this purchase profitable, gas demand must increase in Europe and prices must rise higher than Spain's

current cheap gas prices. As crossborder infrastructure is upgraded and more links are built, greater amounts of Spanish gas will flow to the rest of Europe leading to a convergence of oil prices. The €233m investment can be thought of as a bet that Spanish prices will converge with Europe's prices. Only time will tell if they made the right bet.



# Banker's Cleaned Up More Than 200 Old Wells in Albania in 2012

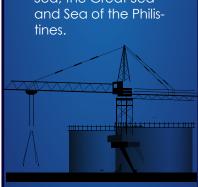
Canadian company Banker's Petroleum Ltd. cleaned up more than 200 old leases that it obtained from Albpetrol in 2012. They also finished extensive soil and groundwater assessments through their water control program to determine the impact of old operations on the environment. The results of the tests showed that the impacts were less than originally thought.

The water control program has shown to reduce the water-cuts in wells and areas affected by water influx issues. They have also finalized the plans for a commercial scale sludge treatment plan to obtain any oil from the sludge at old leases. This is all part of their on-going lease cleanup activities.



### **Mediterranean Fact**

- The Mediterranean
   Sea is almost land
   locked. That is, twenty one countries on all
   sides border it. To wards the north lies
   Europe, to the east lies
   Asia and to the south
   is Africa.
- This sea is also known by various other names like Mesogeiso, Hinder Sea, Western Sea, the Great Sea and Sea of the Philistines



# Gas Natural Fenosa Sues Imposter Over Fake \$1.1 billion LNG deal



The Spanish company Gas Natural Fenosa sued a man who signed an agreement with the country of Ukraine on behalf of the Gas Natural Fenosa for a 1.1 billion USD. Jordi Sarda Bonhevi had been negotiating with Ukrainian officials for two months prior to signing a cooperation agreement to construct a LNG terminal on the Black Sea. The contract was signed in the presence of Ukraine's Prime Minister Mykola Azarov, Energy Minister Yuriy Boyko and the head of Ukraine's state investment agency Viad Kaskiv.

Gas Natural Fenosa has since said that Bonhevi was a fraudster who did not represent the company - adding that they were not even aware of the project. The reasons behind Jordi Sarda Bonhevi, if that is his real name, are unknown, as it appears that he did not make any money on the fake deal.

This scandal comes as a blow to Ukraine, who was advertising this agreement as a way to diversify their oil resources and move away from Russia's Gazprom.



# 

# Production/ Barrel

Ec	quivalent Go		Oil	
December-10	December-11	Decem- ber-12	December-10	Decemb
24333750	25308929	22940179	N/A	N/A
Li	iquefied Ga	Condei		
December-10	December-11	Decem- ber-12	December-10	Decemb
434960	519386	392613	1501816	1419

Mediterranean
Rig Count 2013

Total	Percentage of Total Rigs				
8	7 %				

er-11 December-12

er-11 December-12

sate

N/A

1269135



## **Nigeria Faces Decreasing Exports**

Nigeria is facing drastic reduction in its oil and gas exportation. The Guardian recently reported that OPEC believed that oil and natural gas discoveries in US and India were responsible for the sharp cut in purchases of Nigerian oil. The US importation of Nigerian oil fell to a five year low, from 810,000 barrels to 361,000 barrels for the same period. The Indian government recently announced that it would cut oil imports by half over the next seven years. The

radical decline in exports of Nigerian oil and natural gas resulted in a drop from fifth to sixth place among oil suppliers.



### **Bright Future for East African Oil**

A research study conducted by the Casey Research Team investigates the coming boom in the East African Energy sector. Analysts argue that the epicenter of the energy sector will shift away from the Middle East as a result of declining oil fields and political instability. The report asserts that with the help of Chinese investment East Africa will become major energy producer by 2040.

Recent discoveries of natural resources along the East African coastline have sparked interest amongst international investors resulting in increased competition for exploration rights. Multinationals including ExxonMobil, Total, and Royal Dutch Shell are all currently bidding for new exploration blocks.

Andarko's 2010 Windjammer dis-

covery in Area 1 of the Rovuma Basin offshore Mozambique, in addition to four subsequent discoveries, continued interest in the region. The UK based Tullow Oil also contributed to the investment momentum in the region with two discoveries in Turkana County within the Tertiary Rift Basin

Investors are hoping areas in Kenya, Tanzania and Mozambique will result in productive discoveries as the areas share the same geological formation. The East African Rift System is one of the largest in the world, extending 3500 kilometers from the Red Sea through Somalia, Kenya, Uganda, Rwanda, Burundi, Tanzania and Mozambique. The area is comprised of four sedimentary basins including the Lamu, Anza, Mandera and Tertiary Rift.

# Africa Oil Drills Sabisa Well in South Omo, Ethiopia

Africa Oil Company recently started drilling the Sabisa-1 well located in the South Omo Block in Ethiopia. Africa Oil Corporation is a Canadian oil and gas company with assets in Kenya, Ethiopia and Mali via a 45 percent equity interest in Horn Petroleum Corporation. It will take sixty days to reach planned depth of 2,600 meters. The Omo Block is situated in the northern portion of the Tertiary East African Rift where Africa Oil and their partner, Tullow, made two major discoveries in the Lokichar Basin of Kenya.



# **Exillon Oil Shares Decline Amidst Overhaul of Board**

Exillon Energy shares decreased after changes were implemented to the company's leadership structure. Exillon Energy is an independent oil producer with assets in Northern Russia. Chairman David Herber was let go amidst the appointment of three new directors: Yves Merer, James Dewar and Andrey Kruglykhin. Worldview Capital requested the meeting to appoint new leadership as it holds an eleven percent stake in the energy company. According to PR Newswire the adjustment was the result of "board inexperience" that lead to "ineffective management of assets and communication of a distinctly misleading impression of

production development." Exillion has witnessed a share reduction of nearly two-thirds since March 2011



# Layton Corporation Anticipates Future Oil and Gas Investment in Africa

The Layton Corporation anticipated future investments of 1 billion USD in sub-Saharan Africa over the next few years. Investment in Africa have traditionally perceived as a risky investment concerning lack of infrastructure and a history of corruption, violence and political conflict. Nigeria is trying to tackle corruption and violence in an effort to entice investor and create interest in the Nigerian oil and gas sector. Terence McCulley, U.S. ambassador to Nigeria recently commented on increased efforts aimed at economic diversification and increased transparency, specifically the employment on an independent regulatory agency to supervise the activities of Nigeria's national oil company. The increased efforts on behalf of Nigerian officials are the result of increased competition and momentum in the African oil and natural gas market. Nigeria is facing particular competition from Ghana and Angola.

# **SInternational News**

# Saudi Arabia Decreases Output Following US Production Rise

Western media outlets including Reuters are reporting that Saudi Arabia recently announced plans to decrease oil production to the lowest point in 19 months. OPEC forecasts indicate that a decrease in output this year, by 456,000 barrels, is needed to balance supply and demand. OPEC still plans to exceed demand in the first half of 2013. OPEC is now pumping 30 million bpd with anticipated demand of 29 million bpd. The group also estimated that demand for its crude oil will average 29.5 million barrels a day in the first quarter, which is 1.2 million barrel a day less than was required in November 2012.

### Decrease In Iranian Oil Revenue

Iran's oil and gas revenues have dropped by 45 percent as a result of sanctions imposed by the US and EU over its nuclear development program. The sanctions, the result of Iran's refusal to halt uranium enrichment, have contributed to a 40% in oil exports over the last nine months. The restrictions came into force in July when the EU imposed a complete embargo on oil and gas importation from Iran. The Iranian government is preparing to submit an austerity budget to parliament for the next Iranian calendar year, beginning March 21, which would substantially escalate the income taxes as a way of avoiding a

### **Petroceltic's Investment Plans for 2013**

Petroceltic International released its capital expenditure budget for 2013. The company budgeted 150 million USD for exploration and development activities globally. According to Petroleum Africa News Petroceltic budgeted 48 million USD for development and 10 million USD in exploration activ-

ities. The company is also planning to spend 36 million USD Bulgaria for development and exploration activities. Algeria will see investments of approximately 11 million USD from the company. The remaining 45 million USD will be spent in Italy, Kurdistan, and Romania.



# **OPEC Countries Reach One Trillion in Revenue in 2012**

OPEC recently announced its annual revenue for the year 2012 estimated at one trillion dollars. The figure is 10% over target revenues for the year. The price adjusted for inflation is the highest on record and surpasses former record high periods of 1973-1974 and 1979-1980. The average Brent price for oil during 2012 was 111.50

USD per barrel. Widespread political and economic upheaval in the Middle East is the primary cause of the record prices, but sluggish economic growth in industrialized countries also played a role. Iran's nuclear ambitions and feat of attack on Israel greatly affected market concerning over supply.



# International Energy Agency Makes Prediction for US

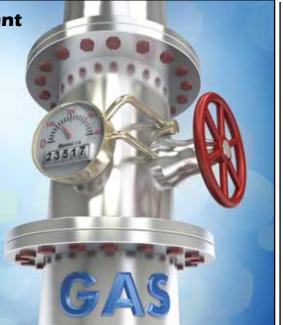
The International Energy Agency (IEA) released an optimistic long-term forecast for the US energy sector. The agency predicted that the United States would overtake Saudi Arabia and Russia as the world's top oil producer by 2017. The US currently imports twenty percent of its energy needs. The prediction is due to the recent rebound in US oil and gas production driven by upstream technologies. The IEA also emphasized that US will be no longer an oil importer and will become energy self-sufficient by 2035. The potentiality of such a prospect could have far reaching implications for US foreign policy in the Middle East and elsewhere.





# **Turkey and Qatar Discuss LNG Plant**

Turkey will discuss building a liquefied natural gas (LNG) terminal with Qatar on its Aegean coast first in an effort to meet domestic needs and, second, to increase Turkey's role as energy supplier to Europe. According to Turkish Energy Minister Taner Yildiz the planned terminal on the Gulf of Saros will have production capability of 5 to 6 cubic meters in order to meet domestic sappy as well as increase regional exports including Bulgaria and Greece. "We think it would be appropriate to build an LNG terminal on the Gulf of Saros to meet the needs of Turkey and the region. Qatar would carry out the feasibility work and evaluate the project," Yildiz told reporters, via Reuters, in Algiers on the first day of a visit to Algeria, Libya and Qatar. Negotiations between Turkey and Qatar have begun. Turkey is also seeking to expand its crude oil suppliers especially after US sanctions have forced a reduction of Iranian imports.



### **Lebanon and Cyprus Reach Natural Gas Agreement**

The Lebanese and Cypriot governments have pledged increased cooperation in an effort to further enhance exploration for offshore oil and natural gas resources. Lebanese President Michel Suleiman met with Cypriot President Demetris Christofias in order to discuss cooperative development of natural resources that may lie offshore. United Press International News published that Beirut will hold an international auction for natural gas tenders on Feb. 1. Forty countries have expressed interest in the bidding. UPI News also reported that Cyprus has an estimated 12 trillion cubic feet and has agreements with Egypt and Israel to examine trans-boundary hydrocarbon deposits. Tangentially, recent border disputes with Israel has prompted Lebanon to call upon the United Nations for assistance determining border concerning the Leviathan natural gas field off Israel's coast.



# **Shell Outgrows Houston Technology Center After Renovation**

According to Dutch Daily News, Royal Dutch Shell has re-launched its Houston Technology Center after extensive modernization and expansion. Nearly sixty percent of the Center is new or under renovation. The Technology Center also boasts green energy with a thirty percent reduction of CO2 emissions. The Houston Technology Center is part of a network of Shell research centers and joins location in Bangalore, India, Amsterdam, and The Netherlands. Shell's research centers seek to further technological research and development for the upstream and downstream sector. The Houston Technology Centers boasts more than one million square feet of laboratory space. Shell Director

of Projects & Technology Matthias Bichsel commented that the Center displays Shell's "commitment to collaboration" in order to facilitate present and future innovation towards energy solutions.



# Bakken Oil to be Transported to New Jersey

U.S. Refiner Phillips 66 signed a fiveyear agreement to deliver crude oil by rail from North Dakota's Bakken to a refinery located in Bayway, New Jersey. Phillips 66 signed a deal with crude transportation company Global Partners to transport 91 million barrels of oil over a five-year period. Global Partners will transport nearly 50,000 barrels of oil per day. The transportation contract is worth an estimated 1 billion USD over a fiveyear period. Production from Bakken has enhanced regional pipeline capacity resulting in an increased need for energy companies to look

to rail for crude oil deliveries.



# **New Tool to Calculate Energy Outputs from Waste Material**

Cranfield University in the UK has developed a tool to calculate potential energy from various waste materials prior to incineration. Previously there were only two ways to determine the renewable content of the waste. The first was to sort it manually, which was time consuming and potentially hazardous to the person sorting it. The second was analyzing the flue gas, which used carbon dating

tools and was very costly. Cranfield's new method uses image analysis tools that determine the composition of the waste and then calculate how much energy can be produced from each element through combustion. This tool should help optimize energy output by finding which combinations of waste materials provide the most renewable energy.

### **German Company to Open Solar Panel Factory in Pakistan**

The German company CAE plans to open the first solar panel manufacturing plant in Pakistan. This will be the first facility of its kind for Pakistan and only the second in Asia. The factory will produce a type of panel that is currently not used in Pakistan. The factory will be opened on land given to them by the University of Agriculture Faisalabad in exchange for 10% share of the company's Pakistani

subsidiary. Additionally, the University plans to start a Masters program in Alternative Energy to help train students to work in the renewable industry. CAE plans to invest €100 million on this project and hopes to make Rs 19.2b (€1.5 billion) in their first year.

### **India to Enhance Solar Capability**

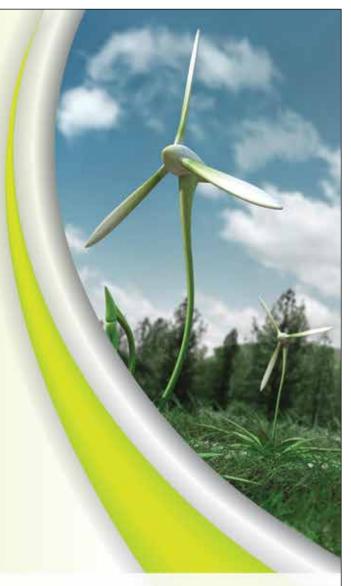
India recently announced plans to aggressively increase its solar power capacities. Solar energy is ideally suited to the area as India boasts 300 sunny days per year and falls near the equator, ideal circumstances for harnessing solar power. According to The New York Times the government announced a five year plan to bring a combined total of 6,150 megawatts of solar power online within five years, with individual state targets ranging

from 350 megawatts in Rajasthan to Tamil Nadu's goal of 3,000 megawatts. The Indian government announced a broader goal of producing 22 gigawatts of solar power by 2022. While initial interest from solar developers was intense some companies had their enthusiasm diminished by vague parameters concerning payments and the poor financial health Tangedco, India's state power dis-

### First Solar Thermal Plan in Chile

Minera El Tesoro, part of the Antofagasta Minerals mining group has just installed South America's first solar Thermal Plant. The 10-megawatt plant was designed and built by the Spanish company Abengoa. The plant contains over one thousand solar thermal collector modules that produce heat 24/7. The panels capture the Chilean sun during the day and store the energy for future use. The panels can then produce heat day and night from the

stored energy. The modules are spread over 6 hectares of land and are expected to provide enough energy to replace 55% of the energy used to power the mine. Most mines in the area currently use diesel fuel in the mining production.



By EOG

**Renewable Energy** 



# WHY IS EGYPT IMPORTING NATURAL GAS?

or the past several years Egypt has been trying to boost its natural gas production.
 Despite having significant natural gas reserves and promising new discoveries Egypt has not been fast or efficient enough to keep up with growing domestic demand.

By Daria Solovieva

A year ago, the Egyptian Natural Gas Holding Company (EGAS) was optimistic about Egypt's gas production and future prospects, citing new exploration projects in the Mediterranean and announcing its first bid round since 2008. "There is normal decline in the reservoir as a result of pressure depletion," said Mostafa El Bahr, then Vice Chairman for Agreements and Exploration at EGAS. "It's a normal decline, but we are adding more production from new fields to maintain production levels." It turned out this was too little, too late.

By the end of last year, Egypt announced plans to import natural gas to meet growing domestic needs as well as external export obligations. Last November, Oil Minister Osama Kamal said that the country would start importing natural gas by May 2013.

"Given the fact it can take several years to bring a large gas field on stream, Egypt has run out of gas supply options and hence import is required," Jeroen Regtien, the Country Chair and Managing Director of Royal Dutch Shell told Daily News Egypt at the time.

On December 17, 2012 the Petroleum Ministry made it official and announced that Egypt became a gas-importing country.

At this point Egypt's industry insiders agree that Egypt now has no choice but to import natural gas, despite the country's vast natural gas reserves.

# How did Egypt get here? Straining to meet expectations

Since late 1970s, Egypt's natural gas reserves were growing as oil resources were depleting. By 2010, 75.8% of Egypt's total proven reserves were natural gas, compared to 16.5% in crude oil according to Observatoire Méditerranéen de l'Energie (OME).

In 2010 alone, Egypt's natural gas production jumped from 646 billion cubic feet (Bcf) in 2000 to 2.2 trillion according to EIA data. The country's total natural gas reserves were at 77.46 tcf at the end of FY2010/11 according to EGAS' annual report released in January 2012, making Egypt's gas reserves the third highest in Africa, after Nigeria and Algeria.

At the end of 2011 Egypt's total proven reserves remained unchanged compared to a year ago, at 2.2 trillion cubic meters according to the BP Statistical Review of World Energy 2012.

But having a high reserves number is not the only factor that counts. Many of the new natural gas discoveries in the Mediterranean region are in harder-to-reach areas that require larger investments and more specialized technology to recover. Researchers at Paris-based Observatoire Méditerranéen de l'Energie (OME) warned Egypt could become a net importer of gas by 2030 if the country's production levels and reserves were not improved dramatically through "major new discoveries, technological breakthroughs and massive capital expenditures."

What they did not account for was the vast political instability unleashed during and after the Arab Spring in Egypt and additional pressures on producers such as increasing labor costs. By 2011, Egypt's natural gas production had already declined by 0.1% to 61.3 billion cubic meters compared to a year ago, according to BP data. Dana Gas and other leading producers cut production targets, citing "ongoing uncertainty around the political situation in Egypt." At the same time, consumption jumped by 10% in 2011 to 49.6 billion cubic meters, the largest annual consumption increase in Africa.

"The decline in the supply needs to be stopped," said Shell's Jeroen Regtien of Egypt's energy needs at the January 16 roundtable, organized by Egypt Oil & Gas newspaper. "Egypt can be self-sufficient."

### Challenges

In October of last year, Egypt was already straining to meet its export obligations. Jordan, which has traditionally relied on Egypt's natural gas supplies for the bulk of its electricity needs, has moved to readjust its energy policy due to the unreliability of Egypt's natural gas deliveries.

The list of obstacles facing natural gas exploration in Egypt is similar to oil exploration in many ways: heavy regulations and government's traditional requirements, ceiling on onshore prices, and lack of certainty.

Addressing these regulations and allowing producers to export a larger portion of recoverable gas at competitive international prices could boost exploration and help remedy the decreasing supply of natural gas resources in Egypt.

Speaking at a roundtable of industry insiders and predominantly international colleagues, Shell's Regtien cited the

government's inclination towards shortterm solutions as an obstacle to long-term planning. He stressed a need for an longterm energy plan that

"breaks down those components to develop a blueprint against which sustainable solutions" can be implemented.

According to Regtien, the EGAS tender for an LNG facility was an example of short-term thinking. Last year EGAS issued a tender to establish the LNG terminal "along the coast of either the Mediterranean or Red Sea, depending on feasibility and evaluation criteria." The priority for issuing the approvals "will be given to the earliest First Delivery Date, starting from May 2013" according to the announcement. The project's capacity is estimated between 1 billion to 1.5 billion cubic meters of natural gas per day.

In November, Citadel Capital announced plans for a joint venture with Qatari investors managed by Qlnvest, which will hold a 51% interest. "The joint venture will import LNG, 'regasify' it at the floating LNG storage and regasification unit, transmit it through the Egyptian national natural gas grid and market the natural gas to local high-volume end-users," according to the Citadel Capital's statement.

"Next summer there will be problems if we do not import," Ahmed Heikal, Citadel Chairman, told the Financial Times.

It remains to be seen how much this deal will help meet Egypt's natural gas imbalance as it will likely still face fuel shortages this year despite the urgent push to import gas.

Regardless, the costs to the Egyptian government of importing gas will jump significantly as it will be importing natural gas at international gas prices, which is at least twice the domestic price level. The cost of importing 1 billion cubic feet a day would be \$3.65 billion a year, according to Bloomberg data. It will undoubtedly put additional pressure on the devaluation of the Egyptian pound and the country's foreign currency reserves.

The government officials also stated that in October, Egypt agreed to import gas from Algeria, which could potentially offer better pricing terms for Egypt. Egypt Independent newspaper reported Egypt had signed an agreement with Algeria at a price of \$11 per million British thermal units with imports due to start in 2013.

According to energy experts, a marketbased pricing model may be the solution to fuel shortages and rising demand for natural gas, diesel and mazut.

The 2011 revolution exacerbated and brought a new set of challenges for the whole energy industry, including political instability and rising labor costs. Most agree on the main points: overregulation, energy subsidies, transparency, and a lack of certainty are straining investor confidence in Egypt's energy sector. "This is the turning point for the country," said Jean-Pierre Dolla, managing director of Total E&P Egypt. "Today we need more incentives to invest in Egypt." In order for these new deep-water wells to be profitable, new incentives are needed, as deepwater drilling carries additional technical challenges and higher costs.

At the same time, more IOCs are growing impatient with the government's acknowledgement of existing problems, and yet lack of steps to address remaining issues. "There has been a lot of patience, but it's coming to be crunch time for the investors in this country – if there is no obvious way they're going to get a return," said Patrick Allman-Ward, general manager of Dana Gas in Egypt. Dana Gas is the sixth largest natural gas producer in Egypt, with total investments over \$1.68 billion.

The fuel shortages issue is also a deeply political one for Egypt, with an added urgency of proper dialogue not just between the government and the industry, but also ensuring these challenges are communicated to the population at large. While most within the industry agree that the era of cheap energy is over, the Egyptian population at large needs more convincing.

Speaking on the sidelines of the roundtable, many international players find the current terms and agreements unsustainable, with no positive signs or progress in terms of accounts receivables from government agencies. If Egypt can't find a way to pay its debts soon, it will have a hard time convincing foreign investors to stay in Egypt and bring natural gas production back up.

For now as Egypt strives to meet existing export obligations and meet growing domestic demand, there are no easy or painless solutions left.



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# Cautious Optimism Honoring Oil and Gas Agreements in Egypt

By: Tatianna Duran - Julie Herrick - Effat Mostafa

Egypt Oil and Gas Newspaper hosted our Second Despite the obvious uncertainty concerning political and Annual Roundtable Discussion on January 16th, 2013 at the Katameya Heights Clubhouse. The event brought together oil executives and ministry officials in order to provide a forum to debate problems and issues within the Egyptian energy sector. The Roundtable agenda sought to address the terms, conditions and shortfalls of agreement models currently utilized for the exploration and production of oil and natural gas in Egypt. The discussion explored many interrelated issues all under the broad paradigm of the future order to shed light on the future of oil and gas agreements direction and potential of the Egyptian energy sector. The in Egypt. idea that "Egypt is in transition" would also be a common disclaimer frequently noted throughout the Roundtable.

socioeconomic unrest in Egypt, twenty-five speakers and roughly fifty delegates offered renewed commitment and relayed constructive criticism during the four-hour session. Discussion topics ranged from issues of cost-recovery, the applicability of current agreement models, and the absence of dialogue amongst government officials and IOC's. In the following sections the editorial team at Egypt Oil and Gas Newspaper address relevant themes of the Roundtable in



# ERound Table



### **Is Egypt Facing an Energy Crisis?**

Roundtable speaker Abdullah Ghorab posed this question early in the discussion and it was recurrently addressed in several contexts. Brian Twaddle of TransGlobal Energy remarked, "As I sit in the dark at home because the lights have gone out, or in the queue for the petrol station, it certainly feels like there's an energy crisis, but I believe it can be a short-term crisis." Maurizio Coratella of Edison International stated that Egypt was not necessarily facing an energy crisis rather a business model crisis, stating, "The business model should let investors feel comfortable." Dr. Hany Sharkawi, an oil and gas consultant believes that Egypt is absolutely facing a crisis, but that it has little to do with production. Rather the real crisis concerns unrelenting domestic consumption. Saleh Hafez, another oil and gas consultant, argued that the Egyptian energy crisis resulted from overregulation and a lack of diversity in the market. Moderator Abdullah Ghorab denied that Egypt is currently facing an energy crisis, instead remarking the crisis cumulatively stemmed from "how we handle our product." Ghorab himself noted that the current system was not sustainable, let alone designed for future growth and development. Ghorab implied, that despite current efforts on behalf of the government, the institutions, processes and mechanisms that currently govern the energy sector need to be recalibrated in light of current socioeconomic challenges. The question concerning an Egyptian energy crisis provided a broad framework for discussion, one inclusive enough to allow speakers to address individual concerns, but broad enough to contend with systemic issues that face the industry as a

# Problems with Current Agreements

The primary topic of the Roundtable discussion concerned the present application and future potential of petroleum agreements in Egypt. Considering this, it is unsurprising that the fiscal elements of these contracts comprised a considerable portion of the debate. The discussion also shifted to include industry wide problems stemming from the current agreement Cost-Recovery, delayed payments, and questions concerning the applicability of existing agreements were recurrently addressed. Issues concerning the implementation, inflexibility and transparency of existing agreement models were also addressed throughout the discussion.

Amr Essawi, Vice President and General Manager of Schlumberger noted that the current agreement model, encompassing joint ventures and production-sharing agreements, could still be applied to straightforward cases. Yet in terms of future innovation and complexity "one size doesn't fit all." Several speakers echoed this sentiment. Dr. Hany El Sharkawi commented on the issue stating "These agreements are dynamic...we have to be flexible. I see that the costrecovery should looked at again, the pricing should be looked at again, what worked twenty years ago is not valid anymore...the price of commodities and services has changed tremendously.' Ahmed Rashwan, Director of accounting firm Price Waterhouse Coopers stated that he believed it was "time to revisit the agreements and the contractual models that manage the business." Dr. Shawki Abdeen, General Manger for Pico International, unequivocally stated, "The whole terms of the oil agreements should be reconsidered.'

Some speakers argued that the agreement models were not the primary problem, rather the improper implementation of existing agreements terms. Dr. Hany Sharkawi noted, "The agreements are not the problem, it's the implementation, the execution, it's how to honor the agreement." Numerous speakers remarked that the fundamentals of current agreement could work if contractual parameters were correctly implemented. Currently, agreement models are designed to reflect different time parameters for cost-recovery and different percentage splits in relation to production. These elements shift dependant on the level of investment at varying stages of exploration, development and production. Several parties noted that as the number of wells and rates of production increased over time, there was a distinct failure on behalf of the government to honor increasing percentages related to division of excess oil. The problem of incorrect implementation combined with broader uncertainty surrounding the socioeconomic future of Egypt resulted in a crisis of confidence for investors, not to mention a distinct lack of incentive in regard to future investment in Egypt.

Another problem related to the implementation of agreements concerns their dense and complicated nature. Tarek El-Barktawy the newly appointed First Undersecretary for Agreements, mentioned this issue in his opening remarks by saying that "The agreement doesn't allow you to be flexible when you can read it from both ways. But if it is really clear, and the clauses are explained to others then it makes it easier for both parties

to honor the agreement." Additionally, from the IOC's perspective, confidence is increased from clear agreements that they can "bank on, and plan for when they see all the obligations" stated Jan Muhl, Deputy of Commercial, Legal and Business Development Manager for RWE Dea Egypt.

A significant amount of diplomacy framed the inevitable topic of arrears and delayed payments. Jean-Pierre Dolla, Managing Director of Total E&P noted, "Before the future can be discussed we must sort out the current problems." The three to six month lag between delivery to EGPC and payment to IOC's is a major problem within current system, one that can have disastrous consequences when contextualized with broader economic concerns such as rising inflation and the absence of foreign currency in Egypt. In regards to delayed payments and EGPC's lack of liquidity, Mohamed Mahboub, Vice President for Business Support at Kuwait Energy Egypt commented "The collection issue is a headache for everyone ...we need to keep partners in the loop concerning how we are going to solve collection issues because at the end of the day its business. We need to sit down and figure out how the partners are going to get their collections

We have started in the direction of getting more competitive with the terms and conditions, this is good news.

### Geol. Abou Bakr Ibrahim

Vice Chairman for Agreements at Ganope

and receivables." Moderator Abdullah Ghorab attempted to soften the issue noting that delayed payments and arrears were at the forefront of industry talks and that EGPC and the Ministry of Petroleum were working to resolve the issue.

Speakers communicated that broader uncertainty surrounding the political and socioeconomic trajectory of Egypt was exacerbated by an overall lack of transparency amongst the institutions that govern the Egyptian energy sector. Oxford Business Group (OBG) recently commented on the lack of transparency, citing lack of reporting as evidence. OBG noted that the last annual report posted by EGAS was for 2007/2008. Numerous speakers noted that the absence of transparency combined with broader systemic problems would only increase reluctance of investors to further invest in Egypt. Several speakers implied that the absence of a concrete figure concerning the actual amount of arrears currently owed to IOC's was disconcerting. Western media outlets, particularly the New York Times estimated arrears between seven and nine billion USD. Local sources estimate the figure in the range of five billion USD. EGPC refuses to disclose the actual figure. It was overwhelmingly communicated that the attitude displayed by government institutions concerning transparency could only further damage investor confidence not only harming existing

Even the basics of the oil and gas industry are a mystery to people... at the end of the day you need to have the support of the public.

# Dr. Hany Sharkawi

Oil and Gas Consultant



The price should be unlocked to facilitate riskier investments. We should explore how the new pricing system can be sustainable along with the reforms. The time is crucial for this.

### **Maurizio Coratella**

General Manager, Edison International

The government role as I see it is creating the direct and proper environment for the foreign contractor to come in with the right technology and the foreign investment to capitalize on the potential that is readily available.

# **Mr. Tony Anton**

President and COO of Sea Dragon Energy Inc.



I believe we have very good potential in Egypt. We listened to the IOC's as our partners, we thought this would improve the model agreement, we tried to reevaluate this and we tried to introduce some of the results of the evaluation.

### **Geol. Mostafa El Bahr**

Chairman. Agiba Petroleum Company

investments in the Egyptian energy sector, but inhibiting future investments as well

Similarly, it was also noted that the inflexibility of current agreement models also inhibited future investment and innovation. Ian Barden, Country Manager of Vegas Oil and Gas stated that in consideration of "challenges in the field, amongst the local population, and challenges with the institutions, a certain degree of flexibility [within the agreement models would] get things going and get projects running." Efforts towards increased model flexibility "would go a long way in raising investor confidence in the business environment here."

Amidst widespread criticism of the agreement models and government institutions that govern the sector, some speakers called for increased austerity from IOC's as cost-recovery expenditures were exorbitant. Under the productionsharing agreement expenditures deemed as cost-recovery are recovered first and certain expenditures can be recovered annum. As such, according to OBG "The higher the costs the smaller the share of oil produced for Egypt." Several speakers alluded to categorization issues that also contributed to cost-recovery

The problem is using former business plans and that put a huge risk on the future invstments.

## lan Barden

General Manager Vegas Oil and Gas

problems.

Tarek El Barktawy asserted that despite shifting contexts and problems, the fundamentals of the productionsharing model were still applicable to Egypt. He did concede that the model could be changed and adapted to contend with rising costs and better compensate for increased investor risk. Barktawy noted that the Ministry would welcome feedback concerning the cost-recovery phases and mechanisms. He encouraged dialogue with the IOC executives to better improve the agreement model. However, Barktawy asserted that, fundamentally, the partnerships embodied by the current model were mutually beneficial and still

# **Deep Water Targets and Unconventional Potential**

Moderator Abdullah Ghorab contextualized the widespread criticism of existing agreements within a broader discussion framework concerning the future of oil and gas in Egypt. Do current challenges within the system and agreements signify the end of energy potential in Egypt? Ghorab expressed optimism, yet noted that a new phase had begun, as deep-water targets and unconventional gas were the future of



the Egyptian energy sector.

Several speakers discussed the end of 'easy oil' in Egypt as surface resources are nearing depletion. OBG recently quantified the issue documenting the number of years remaining for currently producing wells. By examining Egypt's reserve to production ratio it is estimated that Egypt has approximately 16.7 remaining years for existing oil resources and 36 remaining years for existing gas resources. Ian Barden of Vegas Oil and Gas noted that mature fields required "increased geologic and engineering precision" as oil fields would become increasing challenging, resulting in greater cost and risk. In light of primary and secondary depletion, and the increasing prevalence of deep-water representatives numerous questioned the applicability of current agreement models initially designed to contend with conventional exploration.

Data from the sector supports the validity of the question. OBG recently estimated that two-thirds of Egypt's potential is comprised of natural gas in deep-water deposits located in the Mediterranean Sea. Deep-water exploration and recent expansions into ultra deep-water targets (drilling in excess of 1,524 meters) are increasingly referred to as the future of oil and gas, not just in Egypt but and globally. Morgan Stanley recently estimated that offshore deepwater exploration would increase 18 percent from 2011, with targets in South America, East Africa and Southeast Asia.

The costs and risks associated with deep-water exploration are more substantial than conventional onshore Deep-water exploration necessitates increasingly sophisticated forms of technology, equipment and expertise at all stages ranging from geological assessment to drilling. Given the substantial difference in cost and risk for offshore deep-water targets numerous parties argued that the current agreement model was outdated and in need of revision. Brian Twaddle of TransGlobe Energy remarked on the topic, "We have deep-water, high pressure, high temperature wells that cost 200 million dollars [these wells] require a different approach." Peripheral to increased costs for required infrastructure and technology, deep-water targets also come with increased risk and liability as related to potential environment disasters. One needn't look further than the 2010 Deepwater Horizon spill in the Gulf of Mexico as evidence of this point.

An additional topic that emerged in relation to outdated agreement models concerned the emerging market

and potential for unconventional gas in Egypt. The term 'unconventional' generally refers to low permeability rock that does not allow for sufficient fluid flow to a well. In Egypt, the unconventional method of choice is shale gas. Shale gas refers to gas that is found 5km beneath the surface in a layer of black colored shale rock. Not surprisingly, extracting shale gas is more complicated than its conventional counterpart. It requires high number of wells spread over larger areas. Instead of simply drilling straight down, wells are drilled down to the shale layer then shifted and drilled horizontally. Once the well is drilled, a mix of water, sand, and chemicals are pumped down the well. The pressure that builds up at the bottom of this 5 km column of water fractures the shale rock and releases the gas. This method of hydraulic fracturing, known more simply as fracking, is very expensive and can account for more than a quarter of the total cost for the well. Mostafa El Bahr Chairman of Agiba Petroleum and former Vice President for Agreements and Exploration at EGAS expressed enthusiasm for the potential of unconventional gas in Egypt. However he noted that investors were reluctant to forge into the market, as current agreement models were ill equipped to contend with the difference in cost associated with the exploration and development of unconventional gas. El Bahr succinctly noted, "Unconventional gas requires unconventional agreements."

# Over-Regulation, Bureaucratic Delays and EGPC

A substantial portion of the debate addressed broader industry issues such as over-regulation, an intractable bureaucracy, and EGPC's overextended role in the industry.

Many speakers agreed that overregulation is stifling innovation and hindering growth and development. Tony Anton, President and COO of Sea Dragon Energy charged that overregulation, specifically when it applies to imports, could have negative effects on the industry. "Interfering in the selection of a service can hurt the foreign contractor and the government. Foreign contractors need to be able to bring in foreign investment and equipment." Dr. Shawki Abdeen, General Manager of Pico International, believes that foreign technology, such as rigs and barges need to be easily accessible to IOC's. Bureaucratic regulations complicating the importation of essential technology and equipment serves as a disincentive to IOC's and greatly contributes to project delays and reduced productivity.

Stipulations within the agreements that force companies to buy the cheapest services are also viewed as problematic. Frequently, when companies are forced to buy the cheapest parts or equipment, they can end up spending more money in the long run. Salah Hafez, an oil and gas consultant gave the example that when he was Chairman at Pedzed they were forced to buy the cheapest pump. As a result they were continuously averaging six days a month where the pump was not functioning properly, which in the longterm, resulted in higher costs relative to the "expensive" pump in the beginning. More often than not, quality is sacrificed for price, and money wasted in the long run. Ahmed Abu Zeid, Country General Manager for Weatherford, made the point that "quality costs money" and that the cheapest option is not always the best

Worse than money wasted, many speakers voiced their opinions that over-regulation is limiting innovation. Amr Essawi, Vice President & General Manager for Schlumberger, stated that the oil and gas industry is a field that requires innovation and risk taking, and government regulation is hindering innovation, and as a result, long-term potential. He stated "The private sector is the one enabled to take risk and innovation beyond all measures taken by government and if we try to impose government rules and regulation in every single aspect of their business we are putting a huge limit on technological innovation." Miguel Vargas, General Manager of Sipetrol, believes that overregulation is contradictory to flexibility and innovation, factors essential to the growth and development of the sector. Saleh Hafez noted that "the system is overregulated, professionalism is phasing out [as] the agreements are not favorable...companies are very reluctant despite the potential that exists in the

Bureaucratic time delays were also discussed at length. Many speakers mentioned encountering considerable time delays due to required government approval at various stages. BP's Samir Abdel Moaty stated, "The decision making process takes a very long time...production is delayed by governmental approval." Speakers recurrently noted that time delays drastically affected productivity and timely project implementation. Time spent on decision-making and delays in obtaining permits is discouraging to many companies. As Vargas put it, "delay is time, and time is money, and money is confidence in the industry."

Brian Twaddle, Country Manager &

Director of TransGlobe Energy noted that in the last five years he had "failed to spend his full capital budget. [He] had not been able to invest as much as [his] company wanted to invest. And that's principally been because of the speed of decision making." In an industry like oil and gas, there is a significant time lag from when decisions are made to when you can see them on the ground. It generally takes five to seven years for wells to be drilled, agreements to be made, and for facilities to be constructed. Many speakers made the point that if Egypt can't streamline this process today, down the road there will be a loss of production.

The role of EGPC was recurrently addressed. Numerous speakers commented that EGPC was unclear and overextended. EGPC was initially conceived as a "one stop shop" for government matters related to the energy sector. EGPC is a joint venture partner, regulator, licenser, marketer, and refiner. Many speakers questioned the effectiveness of this arrangement as the numerous obligation beset before EGPC represented a conflict of interest. Samir El Moaty stated, "we need to split the whole of EGPC." The overextended nature of EGPC prompted many questions on behalf of speakers. If EGPC regulates the industry, how can this be in the interest of the other partners, and more importantly, if EGPC is the regulator of the industry, who regulates EGPC? Jean-Pierre Dolla, Managing Director for Total E&P confronted the issue stating, "Today EGPC plays a roll that needs to be clarified. They are partners, suppliers and regulators. These three words should be separated for clarity. This is something the government should consider seriously.' Samir Moaty offered the suggestion that the government should open service companies that are separate from EGPC in an effort to clarify and streamline EGPC role in the energy sector.

## Political Ambiguity and the Absence of an Energy Master Plan

While all speakers at the Roundtable expressed their commitment to the Egyptian energy sector it was clear that many harbored concerns about the current political situation. Specifically, that current agreement models needed revision to better balance risk and reward given the current political and socioeconomic unrest, and the variety of challenges facing the industry.

The energy sector escaped relatively unscathed after the Jan 25th Revolution. However, production has yet to return to pre-revolution levels and broader socioeconomic issues threaten the future potential of the sector. The absence of governing body is a key element of

this concern. In Egypt, oil agreements are law, and without approval from the People's Assembly (Parliament) they cannot be finalized. In June 2012, Egypt's Supreme Constitutional Court ruled that the parliamentary elections held in March (and the first democratic elections Egypt had seen in more than six decades) were unconstitutional, and thus dissolved Parliament. It is rumored that the next round of Parliamentary elections will be held this April, however this date has yet to be confirmed as the Parliamentary Election Law is still being examined by the Shura Council (the upper house of Parliament). Once the Shura Council approves it, it will be sent to the High Constitutional Court before being passed to President Morsi, who will set the exact date for the elections.

The delay caused by a lack of Parliament negatively affects the future of the industry. EGPC successfully completed their first post-revolution bid round at the end of last year. Surprisingly, it was one of their most successful bid rounds in the last decade. Eleven out of fifteen offered blocks were rewarded to nine different companies. This bodes well for current and potential future investment in the sector, however, without the approval of Parliament these contracts go nowhere.

If it's tangible from the IOC's, that whatever we have in the agreement we can bank on, we can plan for, we can see the rights and obligations. That's giving a lot of confidence.

# Jan Muhl

RWE Dea Egypt - Deputy of the Commercial, Legal and Business Development Manager

If elections are held in April, it will have been over two years from when the bid round first opened.

The lack of industry-specific knowledge and experience on behalf of government officials was also noted as a key problem. Tony Anton expressed the need for knowledgeable decisionmakers in key positions that directly affect the energy sector, as a basic understanding of industry fundamentals was essential for current resolution and future progress. The petroleum sector is technical and comprised of many complicated interrelated aspects. Jan Muhl, Deputy of Commercial, Legal and Business Development at RWE Dea Egypt expressed a need "for the right people [to sign] the right agreements." Jereon Regtien, Shell Vice President Upstream International, relayed a sobering experience related to the absence of qualified decision makers. Last year Shell took the initiative to meet with most political parties to talk about the industry. Regtien relayed shock at the absence of knowledge in the meetings, stating that numerous party officials were completely unaware of industry fundamentals. The absence of qualified decision makers is disconcerting in any context, but especially problematic considering oil agreements become Egyptian law. He stated, "Its not just sufficient for us in the industry to come up with proposals. We need to sit across from the table with experts... there needs to be a level playing

We need to split the role of EGPC to clearly define when they will be the partner, when they will be the regulator, when they will be a service provider

# **Mr. Samir Abdel Moaty**

Exploration and Agreement Consultant for BP Egypt



I still believe the production sharing contract is valid, there may be a problem with the implementation and interpretation the answer to that is more regular meetings and more transparency and catch any issue before the critical time.

# **Geol. Mahfouz El Bouny**

EGAS Vice Chairman for Agreements



Is Egypt finished in the energy industry? Absolutely not.

**Dr. Patrick Allman** General Manager of Dana Gas



I do see a tendency from the government side to ask for quick piecemeal solutions... what we need is a more comprehensive approach.

# **Jeroen Regtien**

Shell Upstream International, Vice President Egypt

field." Regtien conveyed the need for the government to build up expertise concerning industry fundamentals and appoint qualified individuals to key positions. Informed decision-making on behalf of government officials will help guide the energy sector toward efficiency, growth the development. Regtien noted that EGPC could be helpful in this aspect and that they should make an effort to share knowledge with elected government officials.

Another innovative suggestion that came out of the Roundtable discussions concerned the creation of an "Energy Master Plan" for Egypt. Jeroen Regtien noted the need for a more comprehensive approach "that brings together all the various components of the energy sector. Including upstream, downstream, power, petrochemical industry, domestic use, subsidies [and] infrastructure to develop a blue print in which sustainable solutions can be formulated." Other speakers also voiced their concerns over a lack of an overarching business plan for "Egypt Inc." as coined by Ian Barden, Country Manager for Vegas Oil and Gas. Investors contended they assumed a higher degree of risk when operating in a country that lacks a business plan. If there is no clear industry framework for

What we are missing is a single word: action. We are here and we are willing to help. It is time to implement the dialogue into action... when will we see action after we talk?

# **Miguele Vargas**

General Manager of Sipetrol

the country, it is harder to see where they are doing business and the future of their business in that country. Investors look for stability, and in a time when the political situation in Egypt is ever-changing, investors need assurances, like an energy master plan, to build confidence. Even if investors "do not like the business plan, they can a least see the plan and then build their own business models" around it, stated Ian Barden.

# **Consumption, Awareness and Renewable Energy**

The topic of domestic consumption was recurrently addressed throughout the Roundtable, as any adjustment to the agreement models and institutions that govern the energy sector would be ineffective without reduced domestic consumption.

Egypt demonstrates an unrelenting need for energy resources. Natural gas consumption increased 10 percent from 2010 to 2011, and according to OBG, as of early 2012 approximately 54 percent of extracted gas was utilized to produce electricity for domestic supply. Shell estimates that Egypt's domestic consumption will double by 2025. According to the American Chamber of Commerce in Egypt, domestic consumption of cooking gas has doubled

in the last decade. These sobering statistics present ample evidence for increased efforts toward conservation of energy products.

Subsidies factor substantially into consumption as they do little to encourage conservation as excess consumption has little monetary consequence. According to the Ministry of Finance for 2011/2012 energy subsidies accounted for 71 percent of the total (22 billion USD) amount allocated for subsidies. Since 2005/2006 subsidies have accounted for 8 percent to 13 percent of GDP. The current government plans to reduce subsidies, a move which may have political consequences, but will inevitably reduce consumption

Numerous speakers called for increased efforts to balance domestic consumption and production. Hany El-Sharkawi emphasized that the government needed to "cooperate more with IOC's to raise awareness" concerning conservation efforts. Former Minister Abdullah Ghorab echoed this sentiment noting that the government must facilitate a proper dialogue with the public to increase awareness and implement plans to reduce domestic consumption.

Along with increased efforts aimed at conservation and awareness, numerous speakers noted that Egypt would benefit from diversifying energy sources beyond conventional hydrocarbons. The Aswan High Damn is a notable precedent, but according to Dr. Magdi Nasrallah, Chair of the Petroleum and Energy Engineering Department at The American University in Cairo, Egypt has immense potential for renewable energy. He noted that the geographic environment of Egypt is ideal for harnessing wind and solar energy. Egyptian efforts in this regard would be part of an increasing trend in the region. Recently the U.A.E invested in infrastructure for long-term generation and utilization of solar power. The Shams 1 Solar Project in Abu Dhabi will be the world's largest single unit solar panel plant with projected electrical generation of 100 megawatts. Developers recently commented that the existing plant is part of a long-term strategy to meet domestic energy needs in an effort to increase oil and natural gas exports to regional and international markets. Plans for the Shams 2 and 3 are already in development. Egypt could gain immense environmental and economic benefits by mirroring such strategies and investing in renewable energy.

# **Industry Perception**

Dr. Patrick Allman spoke fervently concerning the accomplishments of the energy sector. He expressed pride in participating in an industry that contributed to "wealth creation on a global scale unprecedented in human history." The General Manager of Dana Gas emphasized that communication was an industry problem, stating, "We are appallingly bad at communicating ine achievements we have made in this industry." Allman's statements segued to an additional point concerning broader perception of the energy sector within the domestic population. His point is particularly valid in consideration of the highly politicized domestic environment. Other speakers conveyed similar sentiments. Jean Pierre Dolla Managing Director of Total E&P noted, "We need to explain that the oil and gas industry [provides] benefits for the population, without it Egypt would be suffering from a serious energy shortage. So let's be proud and tell the



truth to people." The point resonated as the importance of the energy sector to the Egyptian economy is considerable in light of the substantial decline in tourism revenue and a general stagnation in key economic sectors. Concerning this point, Tony Anton of Sea Dragon noted, "Its those individuals within the public domain that are elected to be politicians. They are the ones who will go to parliament and approve or disapprove your application to do business." Cumulatively the speakers expressed that they felt the domestic perception of the energy sector could be improved and better communicated.

Several speakers expressed further concern at negative international perceptions of Egypt as a potential investment venue, as it could be harmful in the long-term. Dr. Allman cautioned that the industry needed to be more mindful of outward perceptions. "As a company, as investors in a company, we can see the future, we can see the opportunity. Institutional and private investors that invest in our company and international markets, they watch CNN."

Cumulatively all suggestions concerning the domestic and international perception of Egypt's energy were given in a constructive light, which bodes well for the future potential of the sector.

### **Future Potential**

In regard to the future direction of the Egyptian energy sector, Moderator Abdullah Ghorab and numerous other speakers responded positively to the assertion that Egypt is nearing the end of its oil and gas era. "Is Egypt finished in the energy industry?" asked Dr. Allman, "Absolutely not." He noted that over the last five years Dana Gas had invested nearly two billion dollars in Egypt. He





continued, "The challenges change, the environment changes, but the industry has shown incredible resilience and ability to reinvent itself and to come up with new technologies and meet those challenges." Tony Anton President stated "Sea Dragon came back to Egypt because we saw potential." Despite budget reductions for 2011 and 2012 TransGlobal Energy allocated its biggest budget ever for 2013. Brain Twaddle of TransGlobal noted that the increased budget was an indication of the companies' commitment and faith in Egypt's potential, expressing, "we don't want to quit in Egypt as we see potential for new resources." Maurizio Coratella, General Manager of Edison International added his support by saying, "We have several billion dollars [invested in Egypt] since 2009. We are very committed to the country." While the problems that plague the Egyptian energy sector were confronted at length, and political and socioeconomic instability was considered, it was clear that IOCs are still committed to Egypt and see potential for a bright future.

# **Increased Communication via Committee**

Numerous speakers expressed gratitude to Mohamed Fouad, publisher of Egypt Oil and Gas Newspaper for the organizing the forum, as several speakers noted, it was a nearly impossible to get numerous IOC representatives and government officials in the same room. Tony Anton, President and COO of Sea Dragon Energy quipped "We are lousy communicators; we might as well admit it." However amusing this point reflected the perspective of several speakers and government representatives in regards to the absence of unified

dialogue between IOC's and government officials. Numerous speakers and government representatives noted they had engaged in collaborative efforts aimed at dialogue, albeit on a smaller scale. Dr. Allman of Dana Gas mentioned he attends a monthly forum for general managers in an effort to collaboratively discuss the current challenges facing the petroleum sector. He advocated a similar approach on a larger scale stating "we would welcome the opportunity to put together some kind of industry forum [in order to] debate and discuss issues in a more coherent manner."

Numerous speakers emphasized the need for a formal committee in order to address the problems and challenges currently facing the industry. Many speakers noted that the timing was crucial and it was becoming necessary to have clear engagement with government partners. Dr. Hany El Sharkawi stated "There needs to be a formal committee between the government and the industry...to make sure all the issue are tackled. I strongly support a formal committee to resolve these issues." Egypt Oil and Gas publisher Mohammed Fouad pledged renewed commitment to organizing such a committee in an effort to further facilitate dialogue amongst government officials and IOC executives.

### **Conclusion**

Speakers and government representatives offered several interrelated points at the Roundtable discussion. First, the processes and mechanisms that govern the Egyptian energy sector need to be recalibrated. Current methods result in substantial economic loss for Egypt and reduced production revenue for IOC's. Egypt currently imports natural gas only to sell it domestically at subsidized prices

and to meet existing export obligations. Government institutions lack the efficiency and infrastructure to correctly implement existing agreements in a manner that facilitates innovation and development. Unfortunately, the current system has resulted in nearly seven billion dollars in arrears owed to international oil companies. Delayed payments inevitably trickle downstream affecting local manufacturers, producers and distributors. It is only a matter of time before broader economic and political instability serve as a disincentive to foreign investment. Considering that Egypt is in a period of transition, the timing is apt for a systemic overhaul including subsidy reduction, decreased regulation and increased transparency.

Second, the agreement model needs to be reassessed and negotiated in order to better reflect risks and rewards in an environment of rising technological costs, depletion of mature wells, and deep-water and unconventional targets. Agreements can and should be revised and renegotiated to strike a more appropriate balance between IOC profitability and Egypt's efficient and productive use of its natural resources.

Third, it has been noted that communication is key. Government institutions and IOC's need to engage in consistent dialogue in an effort to constructively develop mutually beneficial solutions to common obstacles. The formation of an industry committee to further this objective is imperative.

Egypt is simultaneously facing economic challenges that can only be exacerbated by marginalizing the problems of the energy sector. While industry specific efforts aimed at improving the energy sector wont eliminate all of Egypt's economic problems, it is a start.



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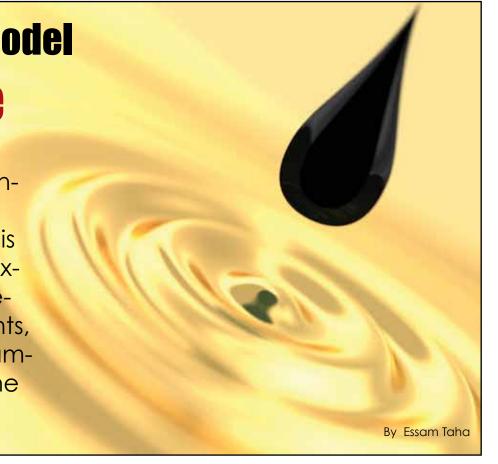
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# **Expert Opinion**

**Egyptian Concession agreement Model** 

From a Legal Perspective

he following is a comprehensive, yet not exhaustive, analysis concerning the current concession agreement model utilized within the Egyptian oil and natural gas sectors. The model is primarily utilized for petroleum exploration and exploitation. Given that I have gained extensive legal insight working with these types of agreements, I respectively offer this analysis in an effort to examine the current model and constructively examine problems within the current agreements.



There are several problematic legal issues that must be examined. The concession agreements in Egypt are issued by governmental entities within the petroleum sector (EGPC, EGAS and Ganope). These entities utilize different provisions and varying elements that are not directly related to the geographical area or nature of their activities. Why is this? From a legal perspective the agreement model should be identical for the three entities in an effort to achieve standardization and efficiency for future development and progress. Standardization across the three entities can be achieved in two ways: first, the formulation of a high committee amongst the three entities to review the varying models and unify them into one model. Second, establish a Central Contracts Department in the Ministry of Petroleum to specialize in the standardization of all agreements and contracts utilized within the petroleum sector, provided that such a department will include and consider all areas of specialization related to petroleum activities. A Central Contracts Department may also be responsible for the contracts to be concluded by Egyptian Mineral Resources

An additional issue within the current agreements model concerns the need to obtain government permission throughout a variety of project stages. After awarding an area, and signing the relevant concession agreement the contractor is often prohibited from actively working in the concession area due to required government authorization. This causes project delays. In order to avoid penalties outlined within the concession agreement the contractor might claim for Force Majeure. To avoid such problems the Ministry of Petroleum must obtain all necessary governmental permission for any area, and announce these elements during the Bid Round process.

Another issue concerns the matter of cost recovery. According to the concession agreement, contractors shall first recover all sunk costs and expenditures related to achieving production. However, and without a legal base, contractors face problems related to cost recovery because of categorization issues. Meaning debts have been incurred related to achieving production but excluded by the Financial Control Department. A Ministerial Decree attached as an annex to the concession agreement would solve such problems. Such a decree would avert categorization problems related to cost recovery as the maximum value to be recovered for each item would be determined and stipulated in the annex to the Concession agreement. Provided that such an annex would be reviewed and amended each year in accordance with market rates and inflation.

Several other issues emerge from a legal perspective concerning the model concession agreements. The first point concerns the fact that the name of the Egyptian concession agreement is not compatible with the legal nature of the agreement itself. There are three main types of Petroleum Exploration and Production Agreements in the world. The first type is a Production Sharing Agreement in which the state retains ownership of all natural resources, in the case of Egypt oil and natural gas. The contractor shall recover all expenses and expenditures upon achieving commercial production. The production shall be divided between the state and contractor in accordance with the percentages stipulated in the agreement. Mining rights are retained by the state or granted to its national company while the contractor shall have no mining rights. The most important issue concerns taxes and royalties. Tangentially, it should be noted that from a legal perspective royalties are not a form of tax, rather a sum to be paid to the state for using and extracting mineral resources. The national company shall bear and pay from its share of production the royalty and contractor's income tax. The second form of agreement is the concession agreement. In such an agreement the contractor shall have the right of mining and own all petroleum whether underground or resulting from production. This form of agreement does not employ cost recovery mechanisms and the contractor is obligated to pay royalties and applicable income tax and other taxes applied by the state. The state share in such a system is comprised of royalties and taxes paid by the contractor. The third type of agreement is the Service Contract also known as Risk Service Contract in which the contractor shall provide the service of exploration and production for a fixed fee to be paid in cash without any right to the petroleum. In some countries the contractor fees are paid in volume of produced petroleum corresponding to the contractor fees.

The above definition highlights disparity amongst the term usage and legal connotation. It is clear that there is a difference between the name of the Egyptian Model and its legal nature. This may result in confusion and disparate legal application where legal meaning and application should be identical to avoid confusion. An additional example, subject to Article XXVII of the Egyptian Model the English and Arabic versions of the model shall have equal force in the case of arbitration. However, the Arabic version refers to "OBLIGATIONS" whereas the English version refers to "CONCESSION". Efforts should be made to ensure consistent and identical usage of terms in both English and Arabic to ensure legal clarity.

In addition to inconsistent term usage discussed above, an additional problem emerges concerning the current agreement model utilized in the Egyptian petroleum sector. The problem concerns royalty and income tax. In the Egyptian Model the national company (EGPC, EGAS or Ganope) pays, from its share of production, state royalties of 10 percent of total production and the contractor's income tax of 40.55 percent to the state. This model was employed as a means to attract international petroleum companies to work and invest in Egypt. The system is still utilized today. The system results in heavy losses within the petroleum sector as the state bears and pays a great subsidization to the sector every year.

In many countries such as Pakistan, Guinea, Brunei, China, and Nigeria contractors are obligated to pay royalties to the state ranging from 5 percent up to 18.5 percent. In general, within a Production Sharing system the contractor usually pays income tax in addition to other taxes applied by the state. Such systems are applied in Indonesia, India, Guinea, Pakistan, Oman, Angola, Brunei and Jordan. In such cases taxes range from 25 to 55 percent.

Under the current royalty and income tax system utilized in Egypt, the petroleum sector paid the sum of 6.2 billion USD for 2011 production. By applying alternative models the sector will save money and reduce subsidization. If royalties are deducted from the total production quantity, before any distribution, the petroleum sector will save about 3 billion USD. If the contractor's income tax is reduced to 20 percent, equal to all other types of companies in Egypt, the petroleum sector will save about 4.2 billion USD.

An additional area that is problematic under the current model concerns various types of wells. Under the current model (Article IV specifically) the difference between an exploratory well and an appraisal well is not clearly defined. Without clearly defining the difference and utility of each well, petroleum companies have the opportunity to count the appraisal well within the obligated exploratory wells to be drilled according to the work program. This will impact the number of exploratory wells and consequently affect contractor obligations under the agreement.

The issue of unitization is also a problem under the current model agreement. The unitization provision (Article IV) of the Egyptian Model contends with reservoirs extending to adjacent areas held by the same contractor. Neither the agreement model nor Law 66 of 1953 (as amended) can deal with alternative cases of unitization. Meaning, neither the law nor the agreement model is equipped to contend with the instance of a reservoir extending to an adjacent area which is not granted to any contractor (free area), or an adjacent area located beyond the state boundaries in another state. The problem concerns how the petroleum sector will deal with such cases when provisions are absent.

The issue of well abandonment is also a concern as related to the current agreement model. Neither the current agreement model nor Law 66 of 1953 (as amended) includes any provision regulating the abandonment of wells. This is a problem as the lack of abandonment guidelines can contribute to circumstances where wells may not have been plugged appropriately. Meaning, well needs to be plugged in a manner that isolates the fresh water zones thereby permitting saltwater intrusion. Inappropriately abandoned wells could lead to disaster and could potentially blow up without warning as leaking gas combined with the oil could create an extreme fire hazard. Firm regulations need to be included in the current agreement model in order to prevent environmental hazards.

The last point that warrants mention concerns the issue of expert assessment. Disputable issues as related to the agreement model are often referred to an external expert in an effort to achieve resolution. However, the model does not include provisions that clearly define the role and legal parameters of the expert. The agreement model needs to clearly contend with the appointment of experts, how to interpret and apply decisions of expert and how to calculate relevant expert fees. In the case that disagreements arise concerning the appropriate sell price for crude oil (Article VII) either party may enlist an arbitrator to determine the appropriate market sell price. Conflict may arise due to the absence of regulation regarding the expert. Meaning, considering the lack of expert regulation parties might enlist an expert that demonstrates a lack of impartiality stemming from experience or connections within the industry. Legally speaking only evidence submitted by the parties should be under consideration during arbitration. Yet, when an expert is employed, inevitably evidence submitted by the parties will be considered, however other peripheral evidence and experience may come into play, and the expert may retain evidence from other outside experts. This is a slippery slope. To ensure impartiality the current agreement model needs to contain guideline regulating the usage of experts as a means of conflict resolution.

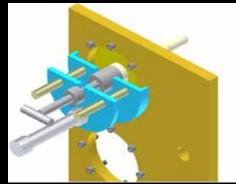
The abovementioned is a brief overview of legal points that need to be addressed in the model agreements utilized in Egypt petroleum sector. In conclusion, I believe that the petroleum sector needs to change the production-sharing model to the service contract model particularly in the realm of development leases that will be relinquished upon the expiration of the current agreements. This will ensure full development and production of such areas. The concession agreement model in regard to deep-water exploration should be changed to reflect an income tax over the current rate in addition to the continued payment of applicable royalties.

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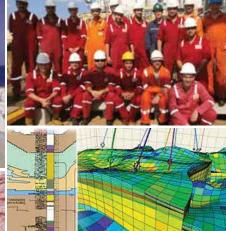
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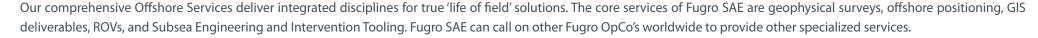












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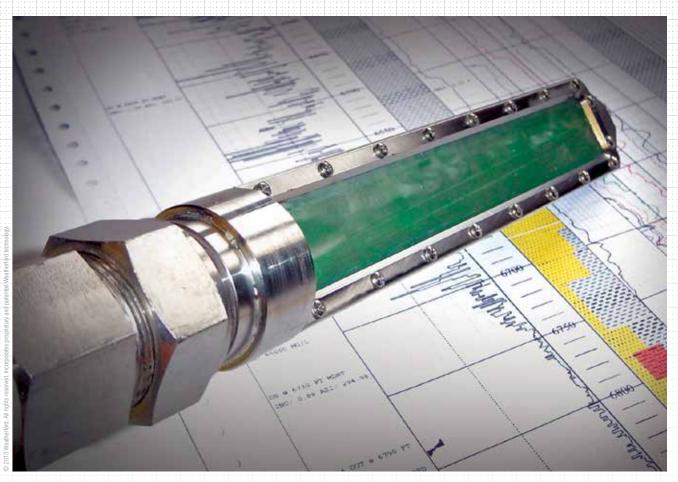
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# **EGPC Has a Successful 2011 Bid Round**

n the midst of political turmoil and economic instability the Egyptian General Petroleum Corporation has successfully completed their first post-revolution bid round. Surprisingly, it was one of their most successful bid rounds in the last decade. Eleven out of fifteen offered blocks were rewarded by EGCP to nine different companies.

By Tatianna Duran

EGPC bid round were mostly onshore sites located in the Gulf of Suez and Western Desert. 25 different companies placed bids by the March 29th 2011 deadline, which had previously been extended from January 30th to allow more companies to make bids.

Canada's TransGlobe Energy picked up the most blocks with four concessions. Royal Dutch Shell followed with three blocks. While Apache, Dana Petroleum, Petroceltic, Beach Petroleum, RWE Dea, Dove Energy, and Vegas Oil and Gas split the remaining four. Dove Energy was the only new bidder to receive a concession. The concessions are expected to be ratified by the People's Assembly (Parliament) in late 2013.

This bid round was seen as a low risk opportunity for companies to show their support of Egypt and to add to their already developed acreage. Most of the blocks are oil prone and close to previously rewarded concessions.

TransGlobe Energy won three Eastern Desert blocks and one Western Desert block. The three Eastern Desert blocks, including the second largest block up for bid, are adjacent to blocks it already operates on at West Bakr and West Gharib. TransGlobe was considered the winner of this bid session due to the number of blocks it gained and their proximity to their present assets.

Shell gained three Western near its Obaiyed gas field. Its third

The blocks up for bid in the 2011 Alam El Shawish West producing

Apache was awarded a single block in the Gulf of Suez. This block is adjacent to its East Ras Budran field, making it the major acreage holder in the area.

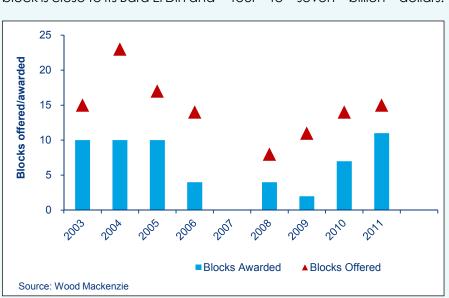
Vegas Oil and Gas won the largest block up for bid in this round. The 3000 km<sup>2</sup> field located in the Sinai, is close to other heavily producing fields.

RWE Dea/Dove Energy were awarded a water block in the Gulf of Suez. This block is close to RWE Dea's mature Ras Budran field. Dove Energy, the only new company in the bid round, acquired 20% interest in this block.

Dana Petroleum/PetroCeltic/ Beach Petroleum are sharing the third largest block (1800 km<sup>2</sup>) on the east bank of the Gulf of Suez, located near Dana Petroleum's current assets in the El Qa'a Plain.

This first pre-revolution bid round was seen as a major success. Its eleven out of fifteen awards was not only the highest number of blocks rewarded in the last decade, but it was the highest ratio of awards to blocks offered since 2005. In a country that is going through political and economic turmoil the success of this bid round shines bright.

While drilling and production were largely unchanged by the January 25 Revolution, Egypt has been late to make payments to International Oil Companies. Desert blocks, two of which are It is rumored that the delayed payments are in the range of block is close to its Bard El Din and four to seven billion dollars.

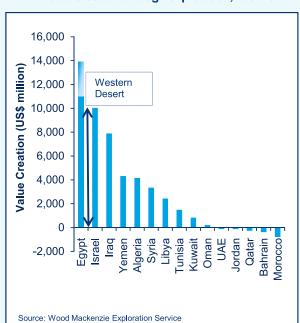


Additionally, before IOC's can start work on these blocks the concessions must be ratified by The People's Assembly, which at this moment has been dissolved.

EGPC plans to return to bid rounds every 18 months. In order for these to be successful, investors must see signs of increased stability and exploration success. A quick ratification process

and timely payments by the Egyptian government will go far in stabilizing IOC's

### MENA value creation through exploration, 20022011-

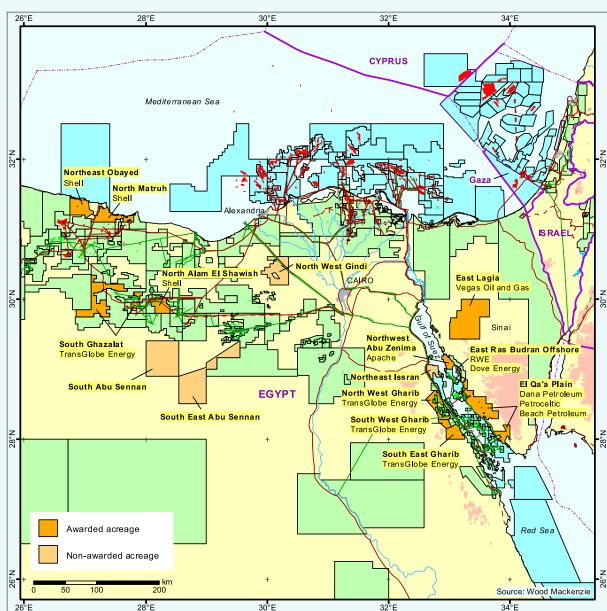


Excludes Iran, Saudi Arabia and Qatar

# 2,000 12,000 Apache Remaining value (US\$million) US\$7,077 9,000 32.384 km2 6,000 3,000 💆 s Oil and Internation

Onshore Egypt oil remaining value by company

Source: Wood Mackenzie PathFinder Discounted at 10% from 1 January 2013



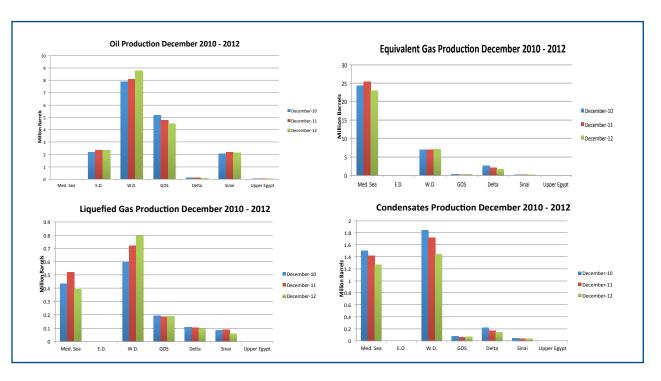
# **Egypt Statistics**

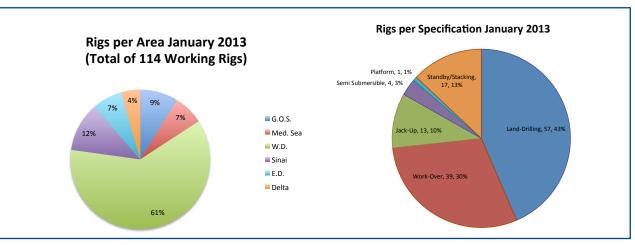


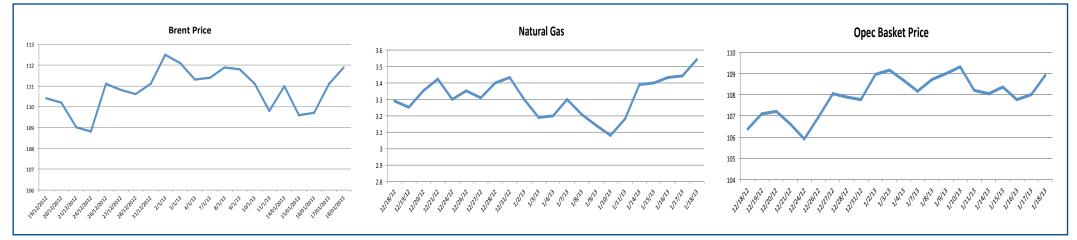
1	Table 1 Egypt	Rig Co	ount per Are	ea January 2013			
RIG COUNT							
Area		Total		Percentage of Total Rigs			
	Gulf of Suez		10	9 %			
Land	Offshore	10					
Mediterranean Sea			8	7 %			
Offshore		8					
Land	Western Desert		70	61 %			
	Offshore		70	0170			
Land	Sinai	70	13	12 %			
	Offshore		10	1 <b>2</b> 70			
Land		13					
	Eastern Desert		8	7 %			
	Offshore						
Land		8					
Delta			5	4 %			
Offshore							
Land		5					
	Total		114	100%			

# Rigs per Specification December 2012 - January 2013 50 Dec-12 30 Land Work-Over Jack-Up Semi Submersible Fixed Platform Standby/Stacking Rigs per Area December 2012 - January 2013 8000% 7000% 6000% 5000% Dec-12 4000% 3000% 2000% 1000%

	Oil		Equivalent Gas		Condensate			Liquefied Gas				
	Barrel		Barrel		Barrel			Barrel				
	Decem- ber-10	Decem- ber-11	Decem- ber-12									
Med. Sea				24333750	25308929	22940179	1501816	1419609	1269135	434960	519386	392613
E.D.	2165383	2322670	2344063									
W.D.	7881325	8071871	8757285	6991429	6938036	7017679	1838973	1713774	1438379	596836	720935	792884
GOS	5158145	4777355	4468263	242143	187321	240714	75020	61754	67739	192136	187057	187374
Delta	107141	102651	84336	2592500	1989643	1644821	217342	167371	143639	104568	103522	96235
Sinai	2054667	2159965	2119665	28393	2143	3036	39777	33557	29945	84813	89112	56671
Upper Egypt	18174	16476	10341									
Total	17384835	17450988	17783953	34188215	34426072	31846429	3672928	3396065	2948837	1413313	1620012	1525777





















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# Egypt Oil & Gas Agreements Report

2013

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