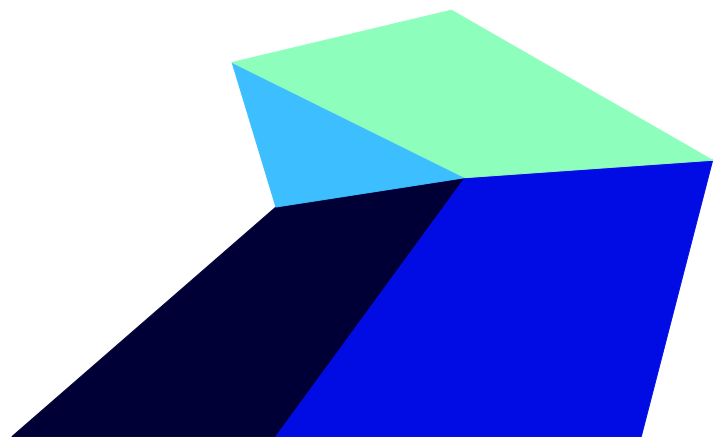


**2016** Oil & Gas Operators  
in EGYPT



Prepared by Osama Kamal  
INTSOK Special Advisor  
December 2016



<b><i>Egypt Natural Gas</i></b> .....	<b>3</b>
<b><i>Eni Egypt</i></b> .....	<b>4</b>
Belayim Petroleum Company (Petrobel) .....	4
AGIBA Petroleum Company .....	4
Areas of upstream operation .....	4
Awarded Concessions and long term Strategy .....	5
Eni plans for 2016/17.....	7
<b><i>Apache</i></b> .....	<b>9</b>
Khalda Petroleum Co.....	9
<b><i>Bapetco (Shell Joint Ventures)</i></b> .....	<b>15</b>
Introduction .....	15
Current Activities .....	15
<b><i>Burullus / Rashpetco (Shell Joint Ventures) (was BG)</i></b> .....	<b>16</b>
Introduction .....	16
Current Activities: .....	16
<b><i>BP (Joint Ventures)</i></b> .....	<b>18</b>
Introduction .....	18
Current Activities .....	18
<b><i>GUPCO</i></b> .....	<b>19</b>
Introduction: .....	19
Current Activities: .....	19
<b><i>GPC</i></b> .....	<b>20</b>
Introduction: .....	20
Current Activities .....	20
GPC Joint Ventures .....	21
<b><i>Trans Globe</i></b> .....	<b>22</b>
Introduction .....	22
Current Activities .....	23
<b><i>Medium &amp; Small Oil Companies</i></b> .....	<b>24</b>
Current Activities .....	25
<b><i>Cyprus signs deal with Egypt for gas transfers via pipeline</i></b> .....	<b>26</b>
<b><i>Aphrodite</i></b> .....	<b>27</b>

## Egypt Natural Gas

Egypt's Oil Minister, Tarek El Molla, said that the country will increase its natural gas production to between 5.5 and 6 bcf/d by the end of 2019, [Reuters](#) reported. Egypt currently produces 3.9 bcf /d of natural gas. The average increase by 1.85bcf/d will aid in bridging the gap between energy consumption (around 300,000 bbl/d) equivalent and production in Egypt.

The minister also added that Egypt currently has 12 ongoing natural gas field development projects that required a total of US\$ 33billion of investments. Three of these 12 projects, which include the mammoth Mediterranean gas field Zohr discovered by Italy's Eni last year, are forecast to collectively bring in 4.6bcf/d, by the beginning of 2019.

## Eni Egypt

Eni started operating in Egypt in 1955 when it acquired shares in the International Egyptian Oil Company (IEOC), over which Eni gained full ownership in 1961. In the same year, Eni discovered Egypt's first offshore field, Belayim Marine, which remains the country's largest oil reserve (373 M BBl at discovery in 1961). In 1967 the company discovered Egypt's first natural gas field, Abu Madi.

Eni is the largest foreign hydrocarbon operator in Egypt, producing 260,000 barrels of oil equivalent per day, including 178,000 barrels per day (bpd) of crude and about 1.0 billion standard cubic feet per day of natural gas, totaling 15 percent of annual hydrocarbon production in the country. Eni's operations are concentrated in a total developed and non-developed area of 15,836 square kilometers.

Eni operates in Egypt through its fully-owned subsidiary International Egyptian Oil Company. IEOC performs exploration directly and coordinates development and production operations through operating companies that are jointly set up with the Egyptian General Petroleum Corporation:

### Belayim Petroleum Company (Petrobel)

PETROBEL is a joint venture between the Egyptian General Petroleum Authority (EGPC) and Eni. PETROBEL main activities are exploration, and development of oil & gas fields and the production of oil, gas and condensates. PETROBEL produces 120,000 barrel/day of oil and condensates, 1000 million standard cubic feet/day of gas.

### AGIBA Petroleum Company

AGIBA is also a joint business enterprise between the Egyptian General Petroleum Authority (EGPC) and Eni. Agiba Petroleum Company has doubled its production over the last three years due research and exploration works in the deeper layers of Western Desert. Its production increased to 58,000 barrels of oil per day from six different areas.

### Areas of upstream operation

Eni's main production operations are located in the Gulf of Suez (GOS), mainly in the Belayim field (of which Eni owns 100 percent), and in the Western Desert, in the Meleha (in which Eni holds a 56 percent share) and Ras Qattara (Eni holds 75 percent) concessions where oil and condensates are produced. Eni is also active in concessions in the Nile Delta at North Port Said (100 percent Eni), El Tamsah (50 percent Eni, of which it is also the operator), Baltim (50 percent Eni as operator) and Ras el Barr (50 percent Eni), which produce mainly gas.

Arm Field, Meleha West Deep 1X's drilling, together with Emery and Rosa North's previous discoveries, confirm Eni's strategy in Egypt with regard to exploration in the deep geological sequences of the GOS and Western Desert. It also shows the significant potential for exploration available in the deep sequence of Meleha's license, increased by new three-dimensional seismic imaging technology. Eni's strategy is to focus on exploration activities which offer high value and rapid development with synergistic asset was confirmed by the short time, to market following the discovery of the field.

## Awarded Concessions and long term Strategy

The Egyptian General Petroleum Corporation (EGPC) awarded ENI full operation of an onshore block located in the Western Desert, covering an area of 2,058 square km, said a statement from EGPC.

In addition, Egyptian Natural Gas Holding Company (EGAS) awarded ENI two deep-water blocks near Cyprus' nautical border in the Mediterranean Sea.

ENI will be fully responsible for operations in the North Leil offshore block, which covers 5,105 square km, at a depth ranging from 2,100 to 2,800 meters.

British Petroleum will be ENI's partner in the second Mediterranean block, Karawan offshore, covering 4,565 square km at a depth ranging from 2,000 to 2,500 meters.

Eni has made a big oil discovery in the Western Desert of Egypt; part of the group's strategy of refocusing exploration activities in the country by targeting deeper plays in the Western Desert region.

Eni will drill 5 exploratory wells in south Meleha deep concession at depth 16000 ft and temperature more than 350 deg F .

Eni has discovered what it says is a “supergiant” gas field off the coast of Egypt, the largest ever found in the Mediterranean Sea and which could provide a much-needed boost for the country’s economy.

Eni, one of Europe’s biggest oil and gas companies, said that the Zohr discovery “could become one of the world’s largest natural-gas finds” and would play a “major” role in meeting Egypt’s natural gas demand for decades once fully developed.

The field held a possible 30 tcf cubic feet of gas, or 5.5bn barrels of oil equivalent, said the company, which has already examined well results and geophysical data from the Zohr 1X NFW well located in 1,450 meters of water in the Shrouk exploration block. It covers an area of 100 square km.

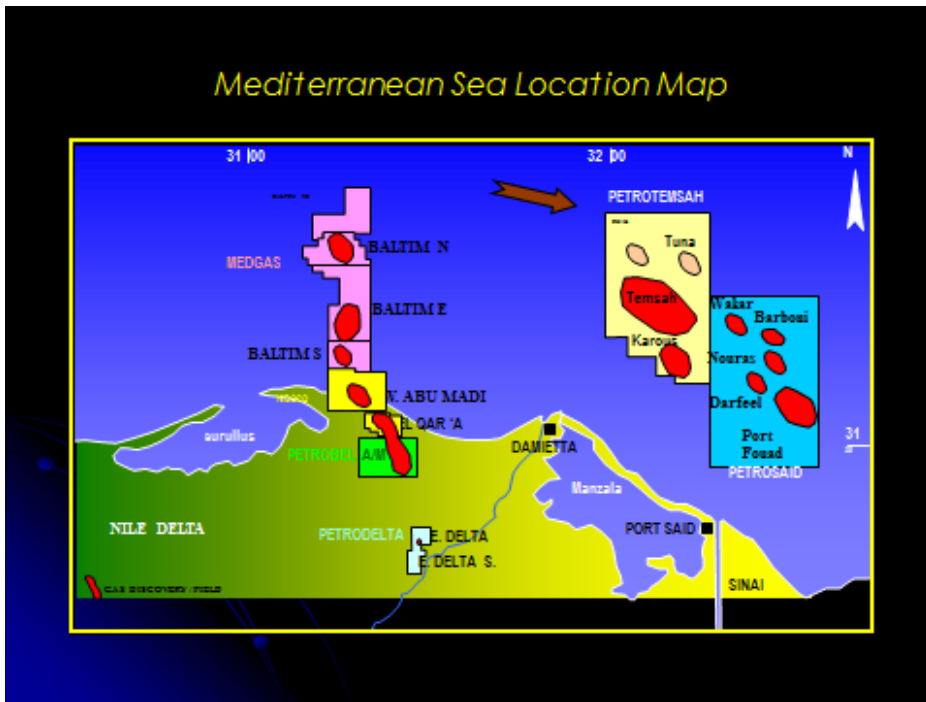
The field, could hold as much as 40tcf cubic feet of gas and oil could yet be found with further exploration:

Eni would immediately appraise the field “with the aim of accelerating a fast-track development” that would use existing infrastructure.

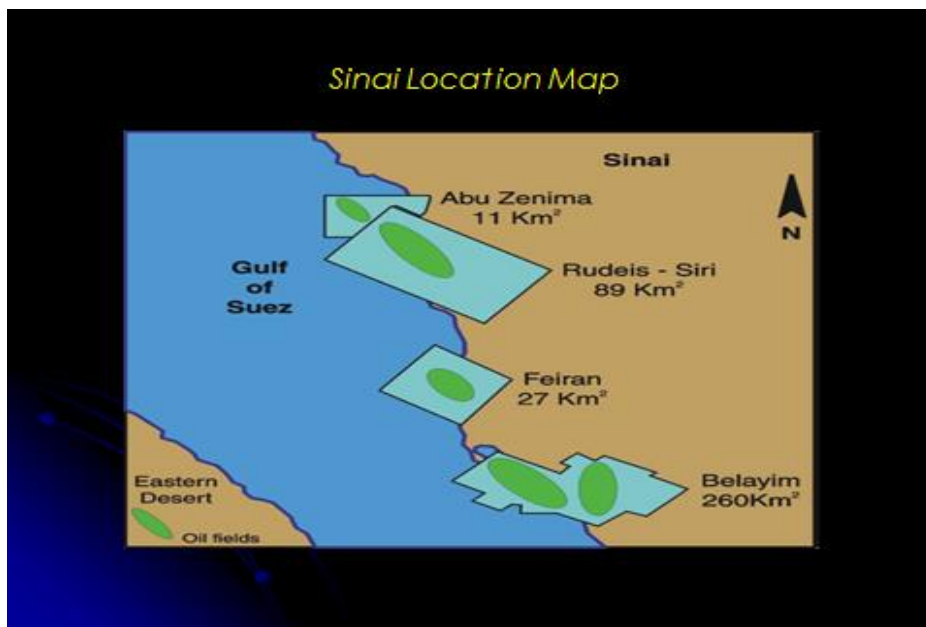
Six wells have been drilled in 2016 and the first production is expected to start late 2017. Peak output could reach 2.5bn to 3bn standard cubic feet a day, or roughly 65 to 80 standard cubic meters a day in the following years.

Such large oil and gas finds have become rare in recent years as companies have had to spend bigger sums on new technology to explore in hard to access deep water areas and other higher cost regions.

# 1- ENI-PETROBEL Concessions Map

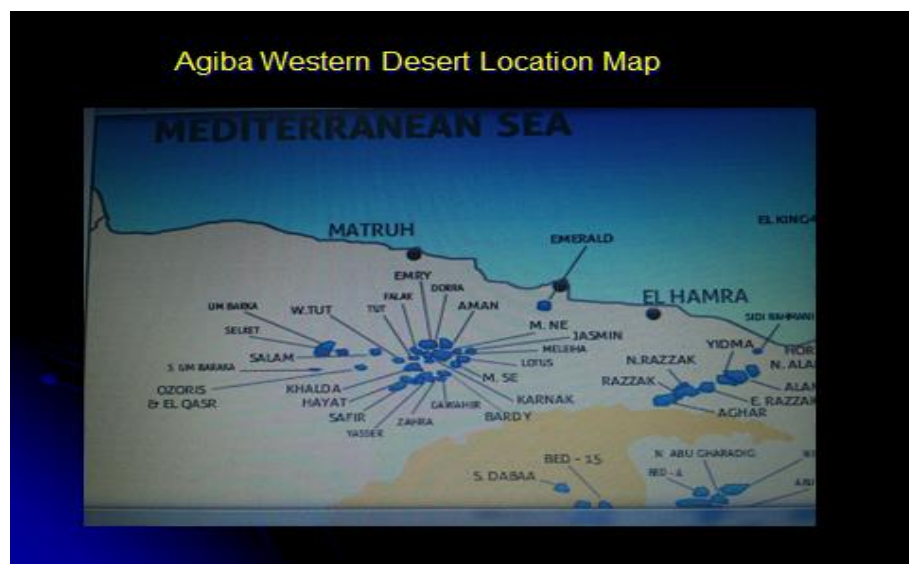


Petrobel will drill and complete 8 wells in Medetiraneam Sea by using two Rigs



Petrobel will drill 34 wells using 6 land rigs and 4 offshore

## 2- Eni-AGIBA Concessions Map



Agiba will drill 55 shallow wells and 15 deep wells using 5 land rigs

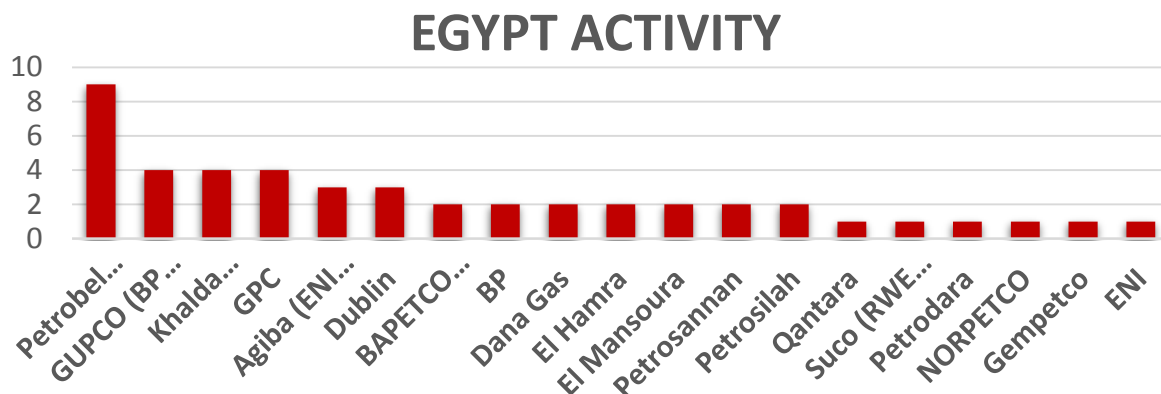
### Eni plans for 2016/17

Eni plans to redirect attention to research and exploration activities in Egypt, which still have great opportunities in areas where productivity and infrastructure are found and:

- Sustain productivity of oil and gas oil and gas by drilling 44 wells utilizing nine drilling rigs in both Sinai and Mediterranean Sea area
- Develop Meleha concession by drilling 55 shallow wells and 15 deep wells
- Focus on Deep water Zohr Gas Discovery by drilling and completing 8 wells year 16/17 using Semi Sub rig Saipem 10K
- Explore and develop ARM field by drilling 15 wells in year 16-17
- Focus on Nours field in Nile Delta concession by drilling 5 exploratory wells and 8 development wells in year 16/17
- Explore and develop Sidri concession in GOS utilizing multi stage Frack campaign

Activity Outlook

## Rig Count chart



Petrobel: 7 drilling land Rigs, 4 offshore rigs, 8 workover rigs

Agiba : 3 drilling land Rigs, 4workover rigs

In 2017, Eni is planning to add 2 onshore rigs in the Western Desert with Agiba. Meanwhile, ENI will focus on Zohr deep water concession development by drilling 8 wells.

## Recovery Outlook

Customer comments on oil price expectations

It will be swinging around the same average +/45 USD/bbl. throughout 2016 into 2017.

Customer comments on when they expect to increase activity levels

They expected increase in activity slowly in Q4 2016 throughout the year into 2017.

## Other Operational Trends

Petrobel successfully drilled and completed the first exploratory well Nodoco-NW2 in Nours Concession. After completing and testing the first well Petrobel plan to drill 12 wells in year 2016-217.



## Apache

The Western Desert (WD) is a gas-rich area of about 450,000 sq km, has become the second biggest oil producing part of Egypt next to the GOS. WD's crude oil and condensate output in 2011 rose to about 340,000 b/d, from 210,000 b/d in early 2000 and 117,500 b/d in late 1995. The largest WD oil/condensate producer is Apache at 280,000 b/d.

The WD's proven reserves of natural gas account for 24% of Egypt's 77.5 TCF. The main gas operators in the WD are Shell and Apache.

## Khalda Petroleum Co.

Khalda Petroleum Co. (KPC) is a 50-50 EGPC/Apache JV, produces 70,000 b/d of 35-46 deg. API oils (up from 30,000 b/d in early 1998), 18,000 b/d of condensates and over 800 MCF/d of gas (up from 200 MCF/d in early 2004). KPC's fields were expanded in early 2000. Its fields include Khalda (found in 1982 at 2,570 ft), Salam (1984, with extensions found in 1994/95), Hayat, Safir and Tut (1986), West Tut (1988), Yasser, Aoun and Tareq (1987/88), Kahraman (1991), Shuruq and Shuruq East.

Apache acquired the 20% of Phoenix of the US and raised its KPC equity in February 2001. Apache acquired almost all of Repsol/YPF's Egypt assets including Repsol's 25% share in Khalda, and several other fields found by Repsol. They are all tied to the Salam production system linked to the Meleiha-el-Hamra export pipeline. Apache operates the Umbaraka and South Umbaraka fields, among many other assets which are small and limited value. Apache found oil in South Umbarka as its Phiops-5 tested 8,350 b/d in May 2009.

Apache's operated production in Egypt now provides 280,000 b/d of oil and condensate and almost 1,000 MCF/d of gas, including 40,000 b/d of oil from its Faghur fields. Apache drilled over 870 new wells; acquired more than 4.2m acres of 3-D seismic; designed and built gathering systems and new gas processing trains for the Qasr gas field; installed a major strategic gas pipeline compression project on Egypt's northern gas trunk line; built a third processing train at the Qarun block; implemented 13 water-flood EOREOR - exclusive and completed Phase-I of Kalabsha facilities in the Faghur basin. Apache CEO, G. Steven Farris in late 2011 said Apache's course in Egypt was set in 2003 when the Qasr field was found, adding: "As our success continued and the magnitude of the opportunities in the WD became clear, 2X was conceived to encourage the Egyptian partners to assist Apache in its ramping up activities so they accordingly add the needed resources to expand operations across the Western Desert. The emergence of the Faghur Basin is a key component for Apache's continued growth in Egypt. It enabled the fast-track production through the Kalabsha Facilities Project and Apache could reach the 2X goal within seven months. In 2005, when the 2X campaign began, Apache's production totaled 109,000 b/d of oil and 325 MCF/d of gas. Apache and its partners, including Egyptian General Petroleum Corporation (EGPC), directly employed around 4,500 Egyptians. Farris (The AAPCHE Chairman) said: "Our partnership with EGPC is a win-win. The 2X goal served as a catalyst to encourage co-operation between Apache and its partners. Going forward, with 11m acres to explore and develop, active seismic acquisition and exploration programs, and new infrastructure projects in the pipeline such as the second phase of the Kalabsha facilities, the Egyptian operations will continue to be a key driver in Apache's growth".

Apache's growth was gone more rapid in mid-2010 as it acquired BP assets in the WD as well as in the US and Canada for \$7bn.

Apache in August 2011 reported two new oil finds in its Faghur Basin play. A test of the Jurassic Safa sand in the Faghur Deep-1X flowed at 6,671 b/d of oil and 2.76 MCF/d of gas. Neilos-1X on the Neith South block tested 4,179 b/d of oil and 4.2 MCF/d of gas from the Jurassic Safa Fm.

In 2011, Apache drilled and/or completed 11 exploration wells, resulting in nine finds in the Faghur Basin. Drilling continued on nine exploration wells through the rest of 2011. Apache VP for Egypt Tom Voytovich in August 2011 said: "The Faghur Basin continues to be a successful focus area for Apache, with prolific oil and gas production from the AEB, Safa, and Paleozoic reservoirs that demonstrates the multiple-pay potential of this WD area". In late 2011, Apache drilled exploratory well Hathour 1-X to 16,000 ft.

Apache allocates \$909m for drilling 97 wells in FY 2016/2017: Khalda Petroleum headCompany in discussions with foreign partner to increase investment and review plan in JanuaryThe US company Apache plans to drill just under 100 wells in the Western Desert at a cost of \$908.9m this fiscal year. This project is divided into 74 development wells at a cost of \$552.5m and 23 exploratory wells at a cost of \$346.4m to maximize the daily production to more than 146,000 barrels of oil and 810m cubic feet of gas.Mohamed Abdel Azim, the head of Khalda Petroleum, a joint-venture company between Apache and the Egyptian General Petroleum Corporation (EGPC), told Daily News Egypt that he recently agreed with a foreign partner to increase investments during the current fiscal year.

The plan will be reviewed by Apache in January 2017 to determine the estimated increase in investments for the fiscal year (FY) of 2015/2016, and to set the plan for the next FY.We will allocate three rigs for drilling a number of exploratory wells during the first half of 2017, to work on increasing oil and gas production rates and offset the natural decline of fields' productivity.

The company's total reserves in concession areas in the Western Desert amount to 2.8tn cubic feet of gas.It reached its highest production rates in 2016, at an estimated 122,000 barrels of crude oil per day, 30,000 barrels of condensate, 2,500 barrels of butane gas, and about 840m cubic feet of gas per day.The production of Khalda Petroleum represents 40% of the Western Desert's total production of crude and condensates, which is approximately 25% of Egypt's production.

The company is working on developing the oil fields so as to acquire to the best sustainable production levels in order to support energy and economic development needs in Egypt.

The company's production accounts for 63% of the Western Desert's total production of gas and 15% of locally produced natural gas.

The company works continuously to offset the usual rates of decline in order to remain the largest producer of natural gas in Egypt.

Apache plans to produce gas from limestone layers at Apollonia.

Apache plans to spend \$100m to implement the plan to drill 20 horizontal wells in the Apollonia field in the Western Desert. In the event that the company succeeds in testing the horizontal wells, which are currently implemented for the development of the field, this plan should produce about 40m cubic feet of gas per day from limestone layers.

A budget of \$24m was approved for the implementation of tests at Apollonia field to drill and complete three horizontal wells and to connect them to the production facilities.

The second well is to be completed using multistage hydraulic fracturing technology. It is expected to be put into production by next month.

The company drilled two vertical wells at a total cost of \$7m in order to take samples to study the nature of the reservoir, which will help when implementing drilling programs and hydraulic fracturing appropriate for horizontal wells.

Two horizontal wells were drilled in Apollonia at a cost of \$14m. This is besides completing the first well, which became operational in July at a production rate of 6.5m cubic feet of gas per day. The total production rate of the well reached 680m cubic feet by the end of October, using the multistage hydraulic fracturing technology.

Apache and Shell Egypt, in cooperation with the Egyptian General Petroleum Corporation (EGPC), have signed an agreement for research and development of unconventional gas production from the limestone layers at Apollonia field in the Western Desert.

The company has a 70% success rate out of the total exploratory wells drilled annually in its concession areas in the Western Desert. This is the highest rate of successful oil and gas discoveries globally.

The oil and gas concession areas are estimated at 14,000 sq km in the Western Desert. The average cost of well drilling is \$3.5m, according to the rental rate of rigs and other equipment.

Khalda reduced the natural attrition rate of its wells in Western Desert concession areas to 29% annually out of the total output, compared to 41% in the past fiscal year.

The company has succeeded in reducing its financial expenses by about \$22m throughout the past fiscal year, as a result of the 30% discount on services, equipment, and rigs that we receive from other companies.

The value of Khalda's contracts and operations were reduced, including the guided drilling, as we are dealing with three companies in this area: Halliburton, Schlumberger, and Baker.

The company received a special 12% discount on the equipment supplied by Halliburton, equivalent to \$1m annually. The cost of guiding equipment was reduced by 8%, as well as a 30% discount on the cost of equipment to maintain the vertical well from Schlumberger, which saved about \$1.7 m.

The company amended its contracts with Baker and reduced the cost of equipment by 10% and wages for technicians and labor by 13%, equivalent to \$1m annually.

The company succeeded in saving \$3.7m annually through reducing the time required to send and dispatch equipment, which helped in reducing wasted days and expenditure in general.

Khalda Petroleum agreed with the Egyptian Drilling Company and Sino Tharwa Drilling to reduce the daily rental rate for rigs and maintenance and transition equipment by 7-20% based on the decline in oil prices, which saved nearly \$7m.

The company changed the design of drilling wells and using two sizes of pipes rather than three sizes in several concession areas, which led to reducing the length of workdays and costs by \$1m for each well—a total of nearly \$8m. Production from the wells was accelerated as well.

We are working to apply these changes at other wells, in accordance with the drilling plan in concession areas in the Western Desert.

The company has saved nearly \$2m from its annual expenses by using new drilling techniques, such as changing the soil type as well as the digger, thus decreasing the period of drilling wells by more than 30%. The cost of drilling per foot was reduced by 7%.

We reused wells and pipe head equipment instead of buying new ones and assembled 60 wellheads instead of purchasing new equipment, which has saved roughly \$915,000.

In addition to saving roughly \$250,000 to repair wellheads rather than purchasing new ones, the company saved \$450,000 for one of the wells by purchasing well and pipe heads from Apache, Soko, and Qaroon, as compared to the price other companies charge. We saved roughly \$1.6m.

A added new reserves estimated at more than 50m barrels within two years, following exploration success during 2014-2016 during which we combined new concepts for exploration and three-dimensional seismic reprocessing which determined new opportunities. The exploratory successes include Bernice and Ptah fields.

It estimated that the company's production rates for FY 2015/2016 from crude oil and condensates at 55.8m barrels—112% of the production plan. In terms of condensates production, we estimate it at 810,000 barrels—101% from the production plan.

The company's total sold natural gas production amounted to 307bn cubic feet—100% of the production plan.

In addition to reaching a higher annual production rate of crude oil exceeding 43.8m barrels, the highest daily production rate of crude oil and condensates reached 165,900 barrels per day, and the highest daily water injection rate exceeded 225,000 barrels of water per day.

As of September 2016, Khalda has completed 31 years of work in the Egyptian petroleum sector. The company operates 14 concession areas; since its foundation 991m barrels of crude oil and condensates and 4.2tr cubic feet of gas have been produced.

Natural gas production began in 1999 with an average daily production of 5m cubic feet, eventually reaching roughly 830m cubic feet. The company's actual production of condensates began in 2014, bringing the daily production average this year to about 2,300 barrels.

Khalda has assigned project implementation processes to ENPPI and Petrojet companies worth \$536m over the past five years, including the palace compressor station project, which was assigned to them at a cost of \$288m.

Khalda is developing the Hydra field and establishing two 22km lines to connect Hydra and Shams stations. We assigned the implementation works to Petrojet at a total cost of \$18m, and construction projects in the western region, to be implemented by the two companies, at \$230m.

A group of new projects are being implemented, including the second phase of development for the Hydra gas fields. The implementation of the third phase of the compressor plants in Hydra and Tareq regions are underway. The company has updated the central processing unit and the gas compressors in Kalabsha and Aboul Gharadik, and carried out necessary studies for the development of the electricity plant in the latter field.

All production facilities and gas and oil processing plants are working at full capacity, as the highest rates of gas, oil, and condensate production were reached.

According to the agreement between Apache, the foreign partner of Khalda, and Shell, the foreign partner of Badr El-Din, along with the EGPC, an Al-Abyad factory is used to process large amounts of gas—nearly 250m cubic feet per day.

Gas coming from wells is processed through removing the impurities affecting its thermal value, like water and carbon dioxide in addition to mercury and hydrogen sulphide, to increase its efficiency and thermal value. It is processed to achieve its desired specifications before pumping it into the national grid through a group of operations.

Salam Gas Processing Facility is composed of two units. The facility was established in 1999 with a production capacity of 200m cubic feet of gas per day, in addition to 13,000 barrels of condensates per day.

The third and fourth gas processing factories were added and made operational in 2009 with a production capacity of 200m cubic feet of gas per day, and 26,000 barrels of condensates.

Al-Abyad plant, which works at a capacity of 250m cubic gas per day and 14 condensates barrels, was established in 2007. Gas pumping begins from the Qasr area under pressure of the wells estimated at 115 bars, in an 18-inch line, to Shams area, then to Al-Abyad under the pressure of 90 bars.

The plant is composed of five identical production lines; separating water and condensates from gas begins in three-phase separators, followed by the units to separate gas from mercury, and heating gas and condensates after sending them through the lines to the two factories of Al-Abyad Badr El-Din in order to carry out additional processing at a capacity of 410m cubic feet.

The crude oil processing plant in Al-Salam, established in 1986, works at a capacity of 50,000 barrels of gas per day. It processes crude oil produced from wells to clear it from impurities, as well as separate it from water, gases, and salts in order to ship it to Hamraa port.

Despite the challenges facing petroleum companies, the company is committed to protecting the environment and preserving it. Moreover, it pays special attention to developing human resources.

Khalda also gives priority to career learning, training, and development as part of its continual work to develop a new generation of professionals who can lead this large institution towards the future.

The company has recently offered modern medical devices to Matrouh Public Hospital, and opened eight schools in the governorate of Matrouh as part of the company's social participation to improve the status of the Western Sahara and Matrouh residents.

## Bapetco (Shell Joint Ventures)

### Introduction

Shell Egypt, in collaboration with the Badr El Din Petroleum Company (Bapetco) , Shell's JV Company with the Egyptian General Petroleum Company, Bapetco has been one of the main gas producers in Egypt over the past few years and producing close to 140,000 BOE.

Bapetco operates in several concessions around the Western Desert for the development of mature fields and have recently acquired two new concessions "North Matrouh and North West Obayed" which will be explored in late 2015 and 2016.

### Current Activities

Bapetco has been stagnant in terms of operations throughout 2015. Although there has been a reduction in rig counts at the beginning of the year to 4 drilling rigs and 3 work over rigs, Bapetco have been able to sustain high production. Bapetco has been able to maintain this high production rate by drilling through the Karam field over the past several years by drilling 3 major wells (Karam – 5,6 and 7) producing around 150 mscf, in addition to the current concessions production.

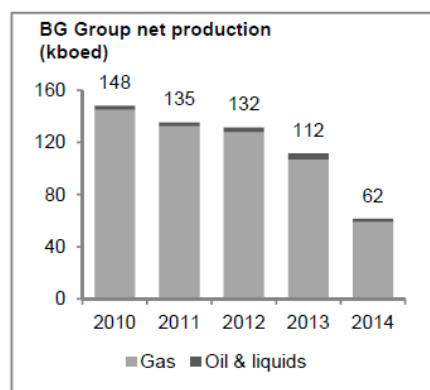
During 2015, Bapetco drilled 34 wells (30 Development and 4 exploration wells). Some of these wells have major projects for Bapetco during the year. In 2016, 17 wells (13 developments plus 4 exploratory) has been drilled. In 2017 the plan is to drill 31 wells (27 developments and 4 exploratory) onshore in the Western Deseret adding one rig to current to be 4 total number of rigs.

## Burullus / Rashpetco (Shell<sup>1</sup> Joint Ventures)

### Introduction

Burullus Gas Company was established on September 7th, 1999, to cover the West Delta Deep Marine (WDDM) Area offshore the Nile Delta. Burullus Gas Company is a joint venture company, formed to undertake exploration and field development operations on behalf of the WDDM Concession holders. BG Group is a leading player in the development of the local natural gas industry with investments spanning the gas chain from exploration through development and production to downstream projects in LNG.

The company is one of the biggest producers of natural gas in the country. Production is delivered through two producing Concessions, West Delta Deep Marine (BG Group 50%, PETRONAS 50%) and Rosetta (BG Group 80%, Edison 20%). BG Egypt is also the operator of two exploration Concessions, El Burg Offshore (BG Group 60%, BP 40%) and North Gamasa Offshore (BG Group 60%, BP 40%). In 2014, BG Egypt celebrated 25 years of energy partnership in the country and will continue to be one of the country's largest gas producers.



Additionally, BG Egypt has contributed to the development of the gas industry in the country, building a comprehensive gas business including an extensive network of subsea infrastructure, onshore gas processing facilities, and a first class LNG plant, Egyptian LNG (BG Group is a shareholder in Train 1 – 35.5% and Train 2 – 38%). With partners, BG has invested over \$14 billion in Egypt to date.

In 2015, Royal Dutch Shell agreed to buy smaller rival BG Group for \$70 billion in the first large oil merger in more than a decade.

### Current Activities:

The latest phase of development, West Delta Deep Marine Phase 9a, was delivered ahead of schedule in July 2014. At investments of \$1.5 billion, The Phase 9a project scope includes the drilling, completion, hook-up and commissioning of nine wells. Eight of the nine wells have come on stream during 2014, while the final well come on stream during 2015.

BG Egypt continues to evaluate options to increase the supply of gas into the country. In November 2014, BG Egypt signed an agreement with GDF Suez Egypt to allow the tie-in of the West El Burullus South fields to the West Delta Deep Marine onshore processing facilities. This will enable the delivery of gas from these fields in 2017, reflecting BG Egypt's deep understanding of the country's need for energy to fuel growth.

---

<sup>1</sup> Used to be BG



Burullus is currently operating one Semi-Sub rig, Scarabio-6, drilling Sapphire DK well and plan to conclude the drilling and completion operation by the end of the year, rig will then move to dock yard for re-certification process (+/- 2 Months), upon approving the budget for the new campaign Phase 9B; plan is to return the rig to start drilling and completing two wells of phase 9B; wells should come on stream before the end of 2016, also add a second Semi-Sub rig (DP 6<sup>th</sup> Generation) by July 2016 to start batch drilling the remaining 6 wells through 2017.

BG extended all drilling contracts to the end of the year; only completion contracts were extended to end of 2016 as it implies long lead items.

Recently Burullus elected to tender most of the drilling services; particularly the ones with high expenditure values (Fluids, Cementing, Well Placement and Hole enlargement)

# BP Joint Ventures

## Introduction

BP Egypt, in collaboration with the Gulf of Suez Petroleum Company, BP's JV Company with the Egyptian General Petroleum Company, has been responsible for the production of almost 40% of Egypt's entire oil production. In addition, BP Egypt and its partners are currently producing close to 35% of the domestic gas demand. BP has interests in thirteen offshore concessions in the Nile Delta, with operatorship of six. The North Alexandria and West Mediterranean Deepwater concessions are located in the Mediterranean, offshore of the city of Alexandria.

## Current Activities

BP Egypt has made a number of discoveries in these concessions including the Giza, Taurus, Libra, Fayoum and Ruby in the Pliocene, and the Raven discovery in the deeper Miocene formations. Back in Nov-2010 BP announced that it has made a significant gas discovery in the Deepwater West Nile Delta area. The Hodoa discovery is located in the West Mediterranean Deepwater, Nile Delta concession, drilled to a depth of 6,350m and was the first Oligocene Deep Water discovery in the West Nile Delta area. Several exploratory and appraisals were also drilled such as Taurus Deep (5,140m), Taurus-N(2,467m), Giza-N(2,040m), Giza-S(2,165m), Libra-N(2,637m), Ravin 1(5,158m) and Ravin 2(4,803m)

BP operates and holds 80% of the West Mediterranean Deepwater concession with DEA holding the remaining 20%. Recently and after many years of false starts and on/off in addition to as a result of the country instability during the uprising, BP now started to move more seriously on the West Nile Delta Deepwater project as they believe that the time is now right for such an important project (21 Deep Water wells). It has been confirmed that the project agreement with the EGAS was amended to meet all parties interest. First gas expected by Q3-2017. During Mid-May 2015 and after successfully completed the drilling its exploratory HTHP well "Atoll-1"; similar to "Salamat", TD 7,205m @ 21 degree Inc, @ 234 days, utilizing Maersk Discoverer rig; almost 60 days ahead of the plan and \$ +/- 40 MM below the AFE (Approved for Expenditure); According to BP statement; "we successfully managed to deliver the best HPHT deep-water well performance in the Nile Delta Egypt. Atoll was the deepest, hottest, most challenging and best performance well that we have ever drilled in BP Egypt". Rig was then moved to drill WND campaign; starting by batch drilling Taurus – Libra 9 wells, BP has set a new record drilling these 9 Pliocene wells in batch drilling technique; completed the drilling phase on Oct-15 with average depth/well of 3,000 m. Rig was then moved to drill three Raven wells to (April-2016), by which the rig will be mobilized back to Taurus-Libra wells to complete them and connect them to production facilities. While BP off-shore plans for WNDDM is moving into execution, BP is working seriously on the planning of the new Nile Delta opportunity, as BP have been awarded recently a new concession at Nile Delta in partnership with Dana Gas, initial plan/commitment is to drill one confirmed well and one optional ultra-deep HTHP well – Mocha / Macchiato (+ 6,200 m), +/- 300 days @ +/- \$ 70 M, expecting to spud by April-2016, a new super land rig (15/20 K HP) will be required to drill such well, and plans are now put together to acquire such rig from abroad.

# GUPCO

## Introduction:

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

GUPCO succeeded in adding 10.6 m barrels of oil to its reserves in 2015 , in addition to the development of 3.8m barrels of oil. The company was able to produce in the last fiscal year about 26.1m barrels of oil, with an average production rate of 75,000 b/d.

## Current Activities:

Gupco has been operating 5 jack-up rigs since 2014, these rigs are mostly assigned to work over activities but since the July 2015 and as Gupco is working on further developing its fields, all rigs were assigned to drilling operations Gupco successfully drilled three wells Hilal B1, Hilal B2 and Hilal B3; in addition to an exploratory well GS277-A5; and two recompletion. Rigs were recently drilling M120-255, OCT-A15, J29-100, these wells are expected to increase annual production by a further 900,000 barrels of oil, boosting the average with an additional 2,500 b/d. as a result of the drop in oil prices Gupco has dropped their rig count to four rigs and planning to release another rig by Q2-2016 and keep three rigs only.

Amongst the increasing activities of Gupco, the Drilling team managed to plan and execute of several wells. Amongst them is Edfu A-7, which is a development well targeting the Nezzazate and Nubia formations with an initial production of 1,500 b/d, and estimated reserves about 2m barrels of oil.

Adding 3.2m barrel of oil resources is Hilal B-1, a development well targeting the Kareem and Nukhul formations; in addition to Pre-Miocen Nezzazat and Nubia formations. The initial production of this well was 1,000 b/d from the Nubia and Nezzazat formations. The development well Hilal B-2, targeting the Kareem, Rudies, and Matulla/Nubia formations adding 1.8m barrels of oil in resources. The initial production of this well was 700 b/d from the upper Rudies formation.

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

The cumulative result of these operations was an increase in annual output of 0.9 million barrels of oil at an average daily production rate of about 2,500 b/d, on average throughout the year.

# GPC

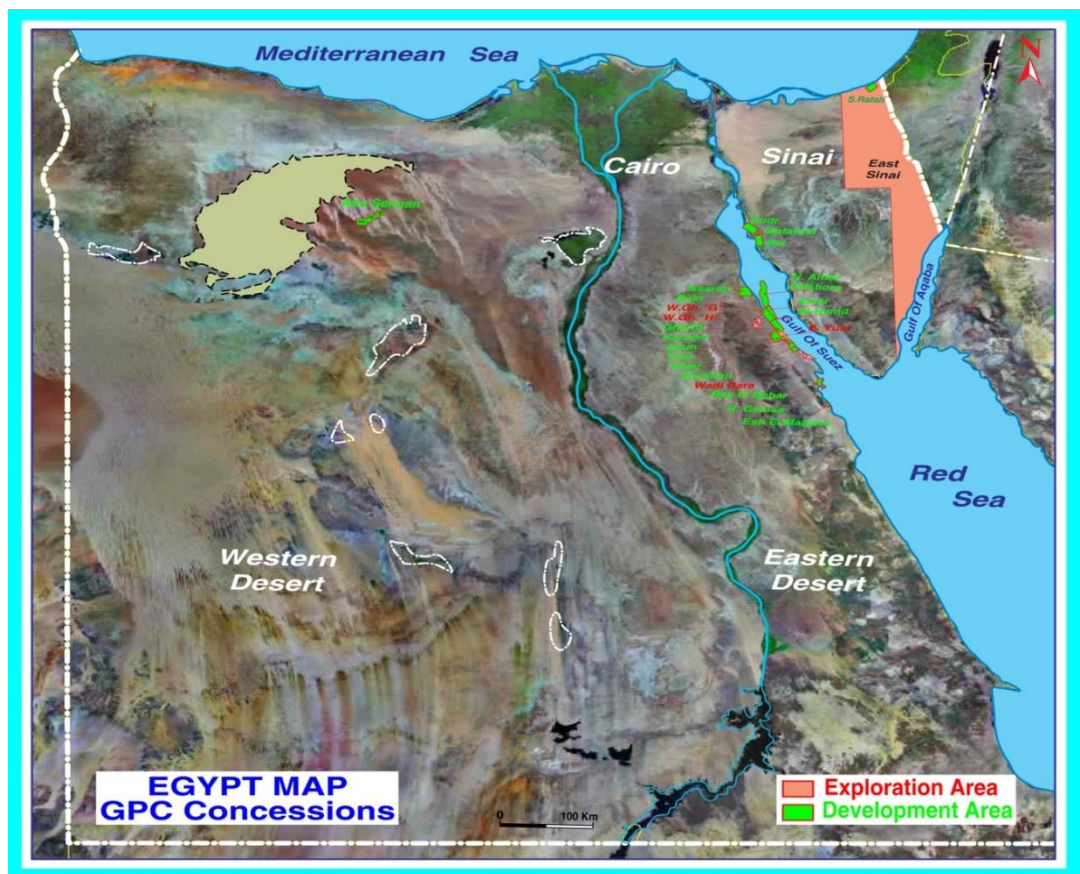
## Introduction:

General Petroleum Company (GPC) was established in 1957 under the Republican Decree No. 730 with a capital of one million Egyptian pounds to undertake upstream and downstream activities. GPC is the first national oil company in Egypt, Middle East and Africa.

GPC Production has started in 1960 with an average of 4.4 MBOPD. Later on, finds followed and now GPC owns 25 productive fields in the Eastern Desert, Western Desert and Sinai. Production increased to reach 41.6 MBOPD crude oil and condensates, natural gas 18.7 MM SCFD (Total Production 45.4 MBOEPD).

## Current Activities

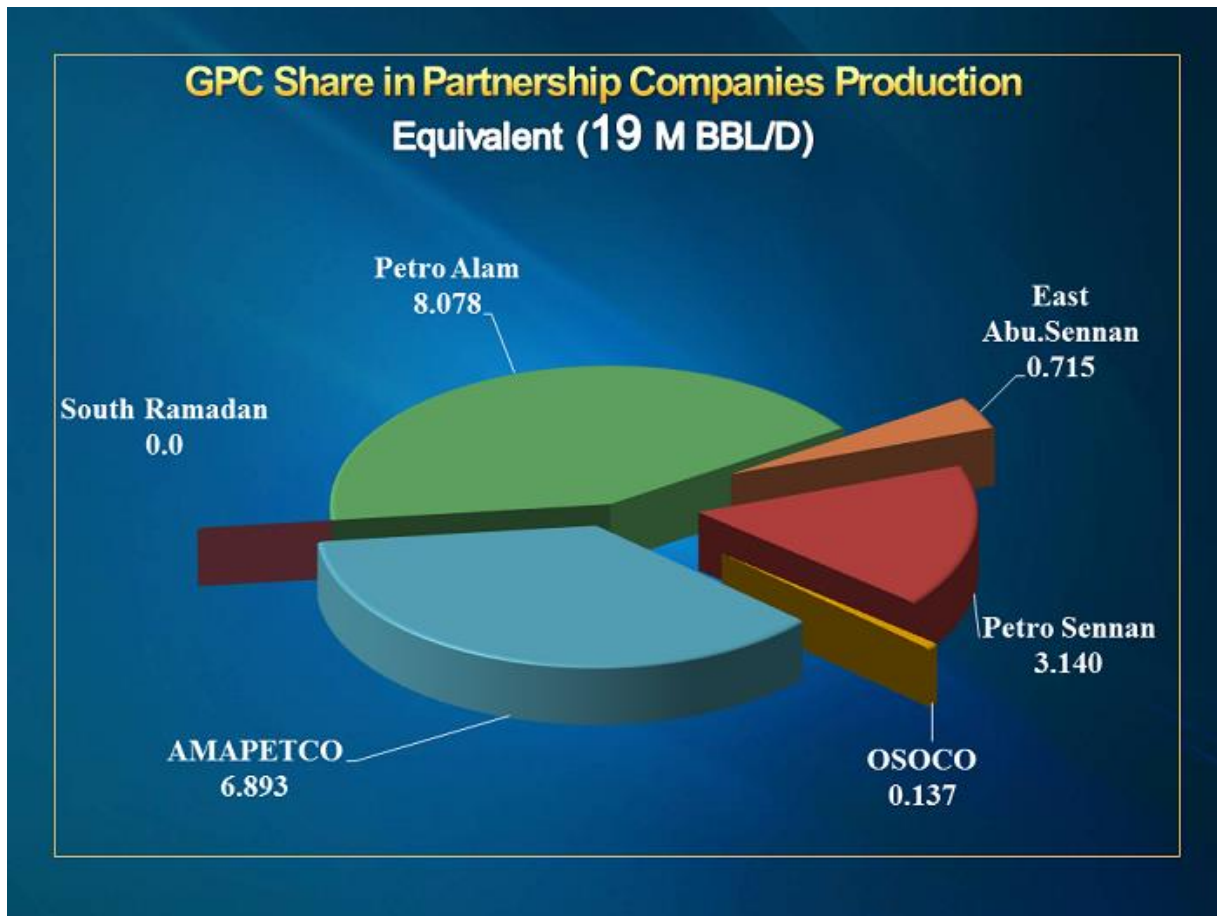
GPC owns 25 oil and gas producing fields in the Eastern Desert, Gulf of Suez, Sinai and Western Desert have been discovered. Currently they have two offshore rigs drilling in GOS plus 2 land rigs in the Western desert.



## GPC Joint Ventures

GPC acts as EGPC in some firms and joint ventures which are West Bakr, South Ramadan, Osoco, Amapetco at E.D.D and Petro-Allam, Petro-Sennan, East Abou-Sennan at W.D.D, GPC's share of their production is approximately 70.6 million Equivalent barrels.

Average production of GPC's share now is approximately 19 Thousand Equivalent barrels per day.



As the only National Oil Company in the country, GPC is targeting to keep same level of activity drilling with 4-5 rigs in 2016 in order to increase the country production.

The Government is supporting EGP in its plans with a good budget.

GPC is tendering all major services currently in order to grant best prices of services during the market downturn.

It has been clearly observed that the new tenders Scopes of work are full of new technology and new products on the contrary of EGPC work profiles since long working years.

# Trans Globe

## Introduction

TransGlobe's initial entry into Egypt occurred in July 2004 when the Company entered into a farm-out agreement and earned a 50% interest in the Nuqra Concession in the Eastern Desert of Egypt.

Subsequently, TransGlobe's interest in the property had increased to 71.43% (July 2008). The Nuqra concession was relinquished in July of 2012.

In September 2007, TransGlobe significantly expanded its Egyptian operations with the acquisition of approximately 55% and operatorship of the West Gharib Concession; this was followed by the acquisition of an additional 30% in February 2008, and the final 15% in August 2008, to give the Company 100% of the West Gharib concession.

In December 2011, TransGlobe acquired a 100% working interest in the West Bakr concession.

In November 2013, TransGlobe acquired a 100% working interest in the NW Gharib, SW Gharib, SE Gharib and South Ghazalat concessions. These new concessions add approximately 800,000 net acres to TransGlobe's Land holdings in Egypt and brings the total number of TransGlobe Egyptian PSCs to eight (seven are operated).

In June 2012, TransGlobe acquired companies with a 50% non-operated interest in the South Alamein concession.

In July 2012, TransGlobe acquired a company with the remaining 50% operated working interest in the South Alamein concession in the Western Desert. The Company now holds a 100% working interest in the South Alamein concession.

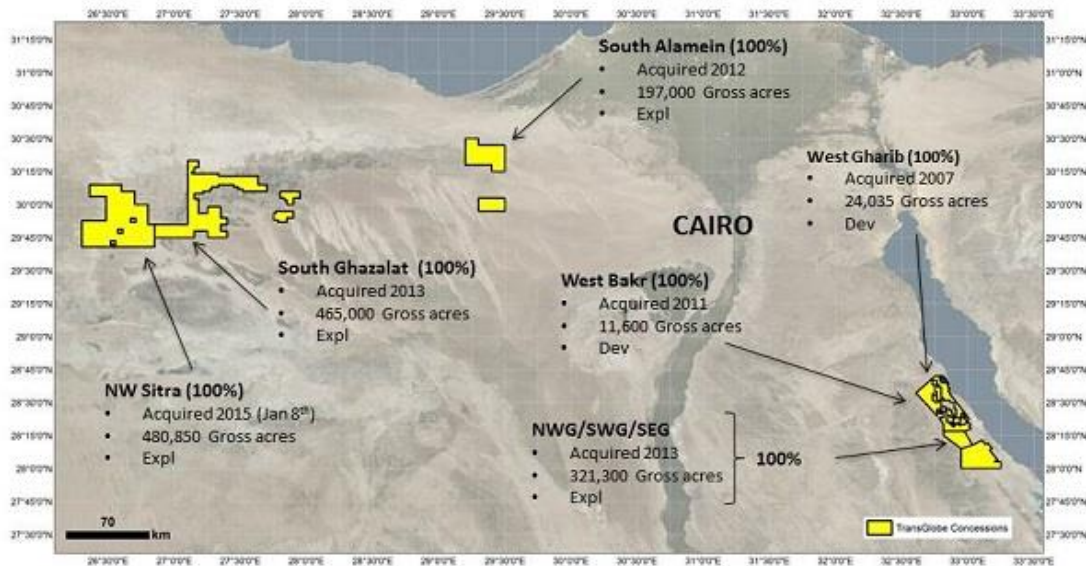
In November 2013, TransGlobe acquired a 100% working interest in the South Ghazalat concession and in January 2015, TransGlobe acquired a 100% working interest in the North West Sitra concession. TransGlobe has approximately 1,142,850 net acres in the Western desert over three operated concessions.

Production rate of Petro Dara is 8,825 bbl, while West Bakr produces 5,303 bbls

## Current Activities

Trans Globe Egypt Energy Corporation owns seven live concessions in both the Eastern & Western Deserts of Egypt; West Ghareb, NW Gharib, SW Gharib, SE Ghareb, West Bakr, South Ghazalat, South Alamein & New Sitra.

Currently; Transglobe has started a drilling campaign on early 2016 to drill 18-21 wells in NW Gharib in addition to a minimum of three wells in West Bakr Western Desert concession.



The Company's growth strategy is built on Acquire/maintain high working interests and operatorship. Transglobe is being competing aggressively in acquiring more concessions in every EGPC Bid Round.

TransGlobe operates the majority of its properties in Egypt, providing control of the drilling pace and choice of locations.

Company is currently tendering all major services in a form of Jointed-Tenders where the winner of any contract will cover the total operations of Transglobe Explorations wells, Petrodara & West Bakr drilling activities.

## Medium & Small Oil Companies

As EGPC grants licenses to International Oil Companies in addition to local investing firms for exploration only. Once they have struck oil, they must apply for a development lease, and the find will normally be exploited as a Joint Venture between the discoverer and EGPC. EGPC also owns a subsidiary, General Petroleum Company, which carries out explorations on its own account.

The below long list is for the active accounts who can be described as Medium & Small companies, a part of them is the Exploration firms and the other part is the JV 's.

	<b>Company</b>	<b>Nature &amp; Activities</b>
1	<b>ABU QIR</b>	A JV of Edison, active off shore in Medt. Sea
2	<b>ALAMEIN</b>	A JV of IPR active in Western Desert
3	<b>AMAPETCO (AMAL)</b>	A JV of Pico active offshore Gulf Of Suez
4	<b>BURG EL ARAB ( BURPETCO)</b>	A JV of Kuwait Energy in Western Desert
5	<b>DAPETCO</b>	A JV of HBS in Western Desert
6	<b>OSOCO</b>	100% EGPC on shore, Eastern Desert
7	<b>EL HAMRA OIL</b>	A JV of IPR active in Western Desert
8	<b>FANPETCO (Fanar)</b>	A JV of IPR active in Western Desert
9	<b>GEMPTCO(GEMSA)</b>	A JV of Pico active offshore Gulf Of Suez
10	<b>GPC</b>	100% National, active on shore
11	<b>KUWAIT ENERGY</b>	International Oil Co with activities on shore, WDE
12	<b>MAGAPETCO(Magawish)</b>	A JV of Trident active onshore E.D.
13	<b>Trans Globe</b>	An Int'l Oil Co with 2 JV companies in both Eastern & Western Desert s
14	<b>Wepco/Badr</b>	A Government oil Co with activities in Western Desert
15	<b>MANSOURA</b>	A JV of Petro Celtic active in on shore in Nile Delta
16	<b>MARINA</b>	A JV of Ena Int'l with activities in north WD
17	<b>PETRODARA</b>	A JV of Trans Globe active Onshore in both E.D & W. D
18	<b>PETROGULF MISR</b>	A JV of Pico active offshore Gulf Of Suez
19	<b>PETROSANAN</b>	A JV of Nafta Gas active in W.D
20	<b>PETROSILAH</b>	A JV of Merlon with good activities in Fayoum (W.D)
21	<b>PETROSINAI</b>	A JV of SAK Oil in Sainai
22	<b>PETROZEIT</b>	A JV of VEGA in ED
23	<b>PMS</b>	An EGPC marine Services co.
24	<b>East Abu sannan</b>	A JV of Kuwait Energy with good activity in Abu Sannan, WD.
25	<b>VEGA</b>	An Int'l Oil Co with 1 JV company (PetroZeit) in both Eastern Desert
26	<b>Tharwa</b>	An EGPC owned company with concession in WD
27	<b>Sino Tharwa</b>	An EGPC owned co with drilling activities utilizing its own rigs
28	<b>WASPETCO</b>	A JV of Masawa Oil with activities in Hurgada, E.D.
29	<b>WEST BAKR</b>	A JV of Transglobe with activities in Eastern Desert
30	<b>ZEITCO</b>	A JV of Dana Petroleum with drilling activities on shore, Nile Delta



<b>31 EDISON</b>	Int'l Oil Co owns Abu Qir and other concessions in WD
<b>32 HBS</b>	An active Int'l company active in acquiring concessions from EGPC and has its own drilling activities plans.
<b>33 INA</b>	Oil Co owns Marin JV
<b>34 IPR</b>	Int'l Oil Co owns El Hamara, Alamien & Norpetco
<b>35 MERLON</b>	Int'l Oil Co. owns PetroSilah
<b>36 Petroceltic</b>	Int'l Oil Co. owns Mansoura
<b>37 NAFTOGAZ</b>	Int'l Oil Co. owns PetroSannan
<b>38 OASIS (OAPCO)</b>	A JV of Sahara Oil Co.
<b>39 OIL SEARCH</b>	Int'l co with activities in ED
<b>40 DANAGAS</b>	Int'l Oil Co owns Wasco JV
<b>41 IEOC</b>	Eni Exploration Co.
<b>42 WASCO(WASTANI)</b>	A JV of Dana Gas active in Nile Delta
<b>43 Dublin</b>	A Canadian Co with activities in ED
<b>44 NORPETCO</b>	A JV of Sahara Oil Co.
<b>45 NOSPCO</b>	A JV of TriOcean Co.
<b>46 PETROSHAHD</b>	A JV of Sipetrol active in WD
<b>47 Petrozenema</b>	A JV of NPC in Eastern Desert
<b>48 SCIMITAR</b>	A JV of NPC in Eastern Desert
<b>49 Petro Amir</b>	A JV of NPIC in WD (Chineses)
<b>50 Eshpetco</b>	A JV of Luck Oil in Eastern desert
<b>51 Vegas</b>	Int'l oil co in Eastern Desert

Because Oil & Gas are very vital to the Egyptian economy, and Oil export is a major source of foreign currency, in addition to the huge usage of oil & gas domestically; EGPC pushes hard its JV's to keep developing and maintaining their wells to increase production rates. They always present to EGPC a drilling and workover plans on annual bases and grant the funds for executions.

## Current Activities

During the current down turn the drilling activities of these accounts have been affected and the plans were diminished but not cancelled for most of the accounts. On the other hand, work-over activities has been kept at satisfactory standards in order to satisfy the country needs.

## Cyprus signs deal with Egypt for gas transfers via pipeline

Cyprus and Egypt signed an agreement on August 31, 2016, paving the way for the supply of gas to the Arab nation via an undersea pipeline that officials hope will create a regional energy hub.

Cypriot Energy Minister Yiorgos Lakkotrypis and Egypt's Petroleum Minister Tarek el-Molla said the deal sets the political framework for additional commercial agreements that will determine the details of how, where and when the gas will reach Egypt.

"This is part of the development of the east Mediterranean gas as a whole and I think our strategy optimally is to position ourselves as an energy hub in the region," el-Molla said after signing the agreement.

The two officials said that talks with companies involved in developing Cyprus' offshore fields will determine whether the gas will be used for Egypt's domestic needs or be liquefied at Egypt's processing plants for export to other markets.

El-Molla said Egypt's large population and growing industry will need more energy sources, adding that gas "is the energy of the future" and will replace other hydrocarbons, like coal, now being used.

Lakkotrypis said the first gas through the new pipeline should reach Egypt sometime between 2020 and 2022, but officials will try to speed up the timetable.

El-Molla noted that low prices on the international gas markets have forced energy companies to slash costs and pull back on investments. But he said that companies including Italy's Eni and Britain's BP have committed to developing the large new gas fields inside Egyptian waters.

Eni's discovery of Egypt's Zohr field last year has been touted as the largest ever gas find in the Mediterranean sea and has lifted hopes that more deposits could be found in Cypriot waters.

A field off Cyprus' southern coast is estimated to contain over four trillion cubic feet of gas. Companies including Texas-based Noble Energy, Eni, France's Total and South Korea's Kogas are already licensed to drill inside Cypriot waters.

Last month, ExxonMobil, Qatar Petroleum and Capricorn Oil were among eight companies that applied for a license to conduct exploratory drilling off Cyprus.

Cyprus, Egypt and Greece are already in talks to expand energy cooperation. Cyprus and Greece are in separate talks on strengthening energy ties with Israel.

## Aphrodite

The Aphrodite gas field is an offshore gas field off the southern coast of Cyprus located at the exploratory drilling block 12 in the country's maritime Exclusive Economic Zone. Located 34 kilometers (21 mi) west of Israel's Leviathan gas field, block 12 is believed to hold 3.6 to 6 trillion cubic feet ( $100 \times 10^9$  to  $170 \times 10^9$  m<sup>3</sup>) of natural gas.

Noble Energy received the concession to explore block 12 in October 2008. In August 2011, Noble entered into a production-sharing agreement with the Cypriot government regarding the block's commercial development. Sources in Cyprus indicated in mid-September that Noble had commenced exploratory drilling of the block.

Cyprus demarcated its maritime border with Egypt in 2003, and with Lebanon in 2007. Cyprus and Israel demarcated their maritime border in 2010. Turkey, which does not recognize the border agreements of Cyprus with its neighbors, threatened to mobilize its naval forces should Cyprus proceed with plans to begin drilling at Block 12. Cyprus's drilling efforts have the support of the United States, European Union, Russia and United Nations, and on September 19, 2011 drilling in Block 12 began without any incidents being reported.[13] The development of oil and gas resources in the Cypriot Exclusive Economic Zone (EEZ) abides to the UN Convention of the Law of the Seas (UNCLOS) which the Republic of Cyprus ratified in 1988. The United Kingdom also has a claim on the area resulting from its sovereignty over two base areas in Cyprus. The treaty establishing the Republic of Cyprus (Annex I, Section III) specifically excluded any Cypriot claim to the two areas adjacent to the bases.

For the Cyprus population the Aphrodite gas field can boost the local economy to counter rising unemployment. According to Noble Energy, a total gross un-risked deep oil potential is 3.7 billion barrels ( $590 \times 10^6$  m<sup>3</sup>). The field has a gross mean average of 7 trillion cubic feet (200 billion cubic meters) of natural gas with an estimated gross resource range of 5–8 trillion cubic feet ( $140 \times 10^9$ – $230 \times 10^9$  m<sup>3</sup>).

# PROMOTING NORWEGIAN OIL AND GAS CAPABILITIES IN INTERNATIONAL MARKETS



## **INTSOK, Oslo**

Hoffsveien 23

P.O. Box 631 Skøyen

NO-0214 Oslo

Norway

Phone: +47 22 06 14 80

## **INTSOK, Stavanger**

Prof. Olav Hanssens vei 7a

P.O. Box 8034

NO-4068 Stavanger

Norway

Phone: +47 51 87 48 80

## **INTSOK, Bergen**

Visiting Address:

Godvikveien 58

NO-5179 Godvik

Norway

Phone: +47 90 56 03 35

---

[intsok@intsok.com](mailto:intsok@intsok.com)

[www.intsok.com](http://www.intsok.com)

# **INTSOK**

Norwegian Oil and Gas  
Partners