

Due to Dana Gas's acquisition of Centurion Petroleum Corporation,

the interview with

**Dr. Hany El-Sharkawi,**  
President and General Manager  
of Centurion,

has been postponed to next month's issue in order to include recent accomplishments. We apologize for any inconvenience this might have caused our readers.

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20 pages

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# GUPCO Renovates, Gulf of Suez Generates



**Renovations made to GUPCO sites will add more production to reserves. What scientists predicted to be the production rate of petroleum in the Gulf of Suez in the 1960s has proved to be much more.**

By Osama Ahmed

THE Gulf of Suez Petroleum Company (GUPCO) is a 50/50 joint venture between British Petroleum (BP) and Egyptian General Petroleum Corporation (EGPC), which is the regulatory body delegated with the task of carrying out joint exploration and production schemes with multinational entities. GUPCO was created in Egypt in 1965 and started its production with Morgan oil field in 1967. The company operates in several areas across Egypt, but the Gulf of Suez is by far its main focus of attention.

GUPCO's 40-year concession agreement ended in 2005, but on May 10, 2005 Egypt's Minister of Petroleum, Eng. Sameh Fahmy, and BP Egypt's President and General Manager Hesham Mekawi, signed another agreement to extend the merged concession agreement by 20 years. **Revamping GUPCO**

Since the signing of the concession extension, the company has decided to dedicate \$1.4 billion to implementing major renovations and to eventually wholly upgrade its existing facilities. Of the total, \$600 million will be allocated to renovating the infrastructure of the fields, while \$800 million will go towards the development of new discoveries. Twenty-five manned vessels have been sent out to repair and renovate the company's wells and pipelines.

The state-owned contractors, ENPPI and Petrojet, will be conducting the engineering, construction and installation

work. The task is scheduled to take at least two years, with over 100 platforms as well as more than 200 pipelines, totaling 3,000 kilometers, to be worked on.

ENPPI's services will include basic and detailed engineering, procurement services, construction, commissioning and start-up and overall management. This essentially means the rehabilitation of GUPCO's offshore and onshore facilities. The facilities will not only be renewed, but also improved on with additions. GUPCO plans to create four more pipelines in the Gulf in order to increase production by 15,000 barrels of oil.

*continued on page 7*

## Centurion receives \$12 per-share offer



CENTURION Energy International Inc. has entered into an arrangement agreement whereby a wholly owned subsidiary of Dana Gas PJSC will pay \$12 in cash for each outstanding common share of Centurion.

The total value of this transaction is approximately \$1.5 billion. The offer represents a premium of 55.9% based on the weighted average closing price of the shares on the Toronto Stock Exchange for the 20 consecutive trading days prior to Oct. 30, 2006, the day prior to the date that Centurion announced that it was in discussions with a party about a possible transaction.

A special committee of the boards of directors of both Centurion and Dana Gas has approved the terms of agreements and recommended that Centurion's shareholders accept Dana Gas's offer.

UBS Securities Canada Inc., the financial advisor to Centurion has indicated that the transaction is fair, from a financial point of view, to the Centurion shareholders. UBS and BNP Paribas have each provided advisory services to Centurion in connection with the transaction.

The transaction is to be carried out by way of a statutory plan of arrangement. It will be subject to the approval of 66-2/3 per cent of the votes cast by Centurion security holders at a meeting expected to be held in mid-January 2007. Closing is subject to certain other conditions, including court and regulatory approvals.

The agreement includes customary provisions prohibiting Centurion from soliciting any other acquisition proposal, but allows its board of directors to accept and recommend a superior proposal in accordance with its fiduciary duties. In such cases, Centurion will be required to pay a termination fee of \$34.75 million to Dana Gas.

The proposed transaction is expected to close in early January, 2007.

## Egypt hosts the first Global Energy Round Table

WITH the participation of petroleum ministers, ambassadors and senior officials from different oil and gas exporting and importing countries, the first Global Energy Round Table was held in Cairo from the period between November 30 to December 1. The event was held upon the initiative of Egyptian Minister of Petroleum Sameh Fahmy during the Organization of Petroleum Exporting Countries (OPEC) meeting last March.

The objective of this important gathering is to establish a framework agreement on price and supply to be fixed for five year periods to allow increased visibility to consumers and producers.

During the round table sessions, ministers highlighted the importance of dialogue between energy producers and consumers, discussing the challenges facing the oil and gas industries to develop a realistic and balanced vision of the future.

Also, the speakers shed the light on some of the reasons behind the current oil and gas market's instability and discussed the importance of balanced prices acceptable to all parties in order to maintain stable energy markets in the future.

Fahmy expressed Egypt's willingness to host the next Global Energy Dialogue co-organized by the EU Energy Commission.





On the Ground, In The Know

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WE would like to welcome you all to our first issue of Egypt Oil and Gas. Following the distribution of our Zero issue, we received very positive feedback that our project is much needed in the oil and gas market to inform decision makers, as well as employees, with the on goings of the sector they work in. In an industry that is booming, an accurate, timely and thorough newspaper is essential to link exploration and production companies with services companies, as well as the Ministry of Petroleum and its affiliates.

After bidding 2006 farewell, we must acknowledge the great steps that Egypt has taken in the field of gas exports, giving us a notion that the future looks bright. 2007 is a year to look forward to, with increased international cooperation in the fields of E&P and importing and building rigs. In 2006, Egypt hosted the first Global Energy Round Table where different oil and gas exporting and importing countries gathered together to establish a framework agreement on price and supply to be fixed for five year periods to allow increased visibility to consumers and producers. This initiative shed the light on the reasons behind the current oil and gas market's instability and discussed the importance of balanced prices acceptable to all parties in order to maintain stable energy markets in the future.

In this issue, we have had the pleasure of interviewing Hesham Ismail, Halliburton Egypt Area Manager, about the company's latest projects and how he sees the future of oil and gas in Egypt. To fulfill our objective of timeliness, our feature this month tackles the problem of rig availability in Egypt, with a special focus on the Sino-Egyptian Rig Agreement currently signed between the Egyptian Ministry of Petroleum and China.

Starting a new year, we all hope that Iran solves its ever-lasting nuclear "dispute" with the U.S. We have tackled this subject with an article entitled "Scenario: Iran", where we discuss the consequences of an American attack on the country.

Finally, we would like to remind you that your comments and suggestions are always welcome at info@egyptoil-gas.com. On behalf of the entire newspaper team we hope you enjoy our effort and hope to see you next month.

**Happy Bairam and may the new year bring joy and happiness to all.**

*Reem Nafie*

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Under the patronage of H.E. Eng. Sameh Fahmy,  
Minister of Petroleum, Arab Republic of Egypt

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# International Brownfield Development and Production Optimization Conference & Exhibition September 9-11, 2007

## Call for Abstracts

### Abstract Content

- Description of the proposed paper summarizing the scope of business upon which the paper will be based.
- Description of the results and conclusions of the proposed paper.

### Suggested Topic Categories

- New scenario and technologies for mature fields 'production optimization:
  - Drilling and well technologies
  - Application of 2D and 3D
  - Production and reservoir engineering
  - Completion and artificial lifting art of science
- Proposed solutions for the brownfield production problem.
- Gained experience in mature fields as a planning tool application in green fields.
- Government as a facilitator for new technology applications: Current obstacles and recommended actions.
- Business aspects and economics.

### Deadlines

1st of May 2007 – Abstract Submission

1st of June – Authors Notification

1st of July – Paper Submission

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# Egypt

## Kuwait to boost more oil and gas projects in Egypt

Kuwait and Egypt discussed means for more petroleum cooperation, through the establishment of a petrochemicals project and Kuwaiti refining plants in Egypt, said Ali Al-Jarah Al-Sabah, Kuwait's minister of energy.

Based on the cooperation agreements signed by both sides, Al-Sabah declared that there were ongoing studies for the exchange of investments through encouraging Egyptian companies to enter the Kuwaiti oil market and support the existing companies to expand their activities.

During the meeting held in Cairo last month, Egypt's Minister of Petroleum Sameh Fahmy discussed with Al-Sabah the entry of Egyptian services companies such as Enppi and Petrojet into the Kuwaiti market.



From left: Kuwait's Minister of Energy Ali Al-Sabah and Egypt's Minister of Petroleum Sameh Fahmy

Fahmy pointed to the previous projects initiated by Kuwaiti investments; such as the pipes factory in Portsaid, as well as refining Kuwaiti in Egyptian refining plants in Suez, and the distribution of natural gas to the various Egyptian areas in Cairo, Alexandria and Borg Al-Arab through Kuwaiti-Egyptian companies. *(Daily Star and MoP, Dec. 9)*

## Fahmy: Egypt earns \$5.5 per million BTU for LNG

Egyptian Minister of Petroleum Sameh Fahmy asserted that liquefied natural gas (LNG) exports to the European and American markets reached about \$5.5 per million British thermal units (BTU) since the beginning of LNG exports in early 2005.

According to the Egyptian state news agency MENA, the minimum price for Egyptian gas counts for \$0.75 per million BTUs but that price would only apply in cases when the international price of oil drops to \$15 a barrel or less, which has not happened in the last two years.

The minister declared that amending the gas pricing system in oil agreements, applied since July 2000, led to achieving great savings estimated by more than \$8.5 billion. *(Daily Star and MoP, Dec. 9)*

## Russian Gazprom to consider gas explorations in Egypt



Gazprom's Chairman of Management Committee Alexei Miller

Alexei Miller, chairman of Gazprom's management committee has expressed his company's interest in exploration of oil and natural gas in Egypt, declared the Egyptian Minister of Petroleum Sameh Fahmy.

This mutual cooperation is expected to include exploration, production, transportation and distribution of products in the oil and gas industry. A joint action committee is to meet in Cairo soon to negotiate the establishment of an integrated program for implementation of joint projects.

Fahmy discussed with Miller the means to exchange technical expertise, noting that the Russian company has extensive experiences and technologies that could help boost the Egyptian energy industry, reported the *Daily Star*.

This is not the first Egyptian-Russian cooperation in the gas sector. The Egyptian Trade and Industry Minister Rachid Mohamed Rachid and Russia's Gazprom signed a memorandum of understanding last October to develop Egypt's natural gas production and exports, covering the sectors of exploration, technology, besides cooperation in marketing gas.

*(Daily Star, Dec. 7)*

## Two Russian-Egyptian agreements to develop gas fields in Egypt

In the shadow of negotiations between Egyptian President Hosni Mubarak and his Russian counterpart Vladimir Putin to strengthen the economic ties between the two countries, the Russian Gas Company NOVATEK (NVTK) and Egypt's EGAS and Tharwa Petroleum signed two memorandums of understanding to develop the Egyptian petroleum sector.

The memorandums envisage the creation of joint ventures in the fields of oil and gas development, extraction and sale, said Sameh Fahmy, Egypt's minister of petroleum.

Fahmy pointed out during the signing ceremony that the Egyptian-Russian relations in the oil and gas sector "have undergone historical changes and moved from the stage of geological prospecting agreements to strategic cooperation and joint investments."

This joint venture represents the first foreign investment for NVTK, Russia's second largest oil and gas company, which until recently has worked only inside Russia.

According to the terms of agreement, NVTK will work closely with EGAS to conduct geological prosecutions and extract natural gas in western Egypt on the Libyan border and also in the Mediterranean offshore areas.

"We plan to consider sites where geological prospecting is possible and sites where we can participate in a tender on our own and together with Egyptian companies," said NVTK

## EGAS hands out gas prizes

The Egyptian Natural Gas Holding Company (EGAS) has awarded eight out of the 12 blocks on offer in its latest licensing round to a number of international players.

The gas-prone blocks are located in the Nile Delta, onshore North Sinai and the Mediterranean Sea basins.

EGAS has witnessed a booming success thanks to its offshore offerings but the latest tepid response may drive from the fact that exploration costs have risen dramatically, meanwhile Egypt's gas prices have remained unchanged regardless of the sharp increase of crude oil prices.

Austria's largest industrial company OMV announced its intention to start its debut in Egypt as it successfully bid for Block 11, which covers about 9,140 square kilometers, extending north from the Egyptian coast to deep-water. OMV said work on the offshore block is due to begin by next year with the shooting of a 3D-seismic survey.

Similarly, Thailand's PTT E&P Public Company Limited and its partners have won two exploration blocks; Sidi Abdel-Rahman Offshore Block and Rommana Block. Maroot Mrigadat, president of PTTEP declared that this success enables PTTEP to have the first investment in Egypt and it is another major step for PTTEP in expanding its investment in the North Africa region. *(Upstream Online & Rig Zone, Dec. 4)*



From left: Russian President Vladimir Putin and Egyptian President Hosni Mubarak

Board Chairman Leonid Mikhelson.

Egypt enjoys large natural gas reserves; it comes third in Africa, after Algeria and Nigeria. Lately, the Egyptian government has doubled its gas production, reaching 31 billion cubic meters a year.

*(Al-Ahram, Al-Akhbar, Al-Wafd & ITAR-TASS News Agency, Nov. 28)*

## Petrofac extends its \$200 million-gas plant contract with Khalda Petroleum

Oil and gas services company Petrofac announced that it has extended its contract with Khalda Petroleum Company (KPC) concerning the construction of Salam natural gas processing plant in Egypt, as it was given the right to build a fourth train for this joint venture.

The \$200 million contract has been increased to \$375 million. This train is the second to be built by Petrofac in Egypt.

The processing capacity of this new facility is expected to reach 710 million feet of gas and 66,000 barrels of condensate per day.

According to the terms of agreement, the project is scheduled to completion by the end of 2008. The contract also includes project management services, detailed design work, procurement, construction, pre-commissioning, commissioning, start-up, performance testing and initial operations.

Maroun Semaan, chief executive of Petrofac Engineering & Construction said after the signing of the first contract in mid November, "we are delighted to re-enter the Egyptian market. This is a major development for our core gas plant business and this will be our eighth gas processing plant project undertaken in the last ten years. We are very much looking forward to providing our expertise to this important new customer, Khalda Petroleum Company."

*(Upstream Online & Petrofac Website, Nov. 28)*

## Statoil wins offshore block in Egypt

Norwegian oil company Statoil has been offered acreage and operatorship of a deepwater block 9 off Egypt, located west of the Nile Delta, which extends the company's activities in the region of North Africa.

Statoil has an 80 % interest in deepwater block 9, at water depths of about one to three thousand meters. While its partner Sonatrach, the Algerian state energy company, owns the remaining 20% though its subsidiary Sipex.

"This secures us an important foothold in a promising oil and gas region," Ottar Rekdal, head of Statoil's activities in North Africa, said in a statement.

According to *Gulf News*, the offer is subject to finalization of a production sharing agreement and approval by the Egyptian parliament, Statoil said. Statoil and Sipex will be responsible for drilling one exploration well and conducting seismic surveys over four years in block 9 which is covering an area of 8,368 square kilometers.

Statoil established an office for business development in Cairo in January 2006.

*(Gulf News, Schlumberger and Reuters, Dec. 5)*





## Fahmy stresses the need to upgrade oil refineries

One of the Ministry of Petroleum's strategies is to carry out regular upgrades for the Egyptian oil refineries in order to enhance the quality of our petroleum products and achieve the maximum production capacity for higher economic benefit, said Sameh Fahmy, Egypt's minister of petroleum.

During the general meeting of public institutions, including Egyptian Petrochemicals Company, Alexandria Petroleum Company and El-Ameria Petroleum Refining, to discuss the 2005-2006 achievements, Fahmy pointed out that the ministry provides petroleum products to different sectors in the country, in addition to increasing the local production level in order to meet the local market's needs.

(Al-Ahram & Al-Alam Al-Yom, Dec. 5)

## Fahmy proposes the reverse of 1997 decision prohibiting multi-pricing of LNG and gasoline

Minister of Petroleum Sameh Fahmy proposed the multi-pricing of gasoline and natural gas to achieve more economic profits and benefit from the increasing demand for investment in Egypt and the ministry's capability to afford selling energy at higher prices to factories, while maintaining the subsidized price for the general public.

Fahmy's proposal was announced during the Shura Council's Industrial Production and Energy Committee meeting and his suggestion comes one week after the recommendations of economic experts issued during the annual Egyptian Center for Economic Studies Conference.

Fahmy highlighted that in case of setting two prices for gasoline and natural gas, foreign oil investors currently operating in Egypt will be encouraged to sell their products in the local market. Therefore, this will facilitate dealing directly with investors who are looking for high returns on their initial investments via exports, instead of going into long term export-guarantee contracts along with the ministry of investment, Fahmy added.

(Al-Alam Al-Yom & Daily Star, Dec. 2)

## Enap's Sipetrol Strikes Oil in Egypt

During a second drill stem test, Sipetrol, the international subsidiary of Chile's state oil company Enap has flowed up to 600 barrels of oil per day at the Shahd-1 discovery in the East Ras Qattara sector of Egypt's Eastern Desert.

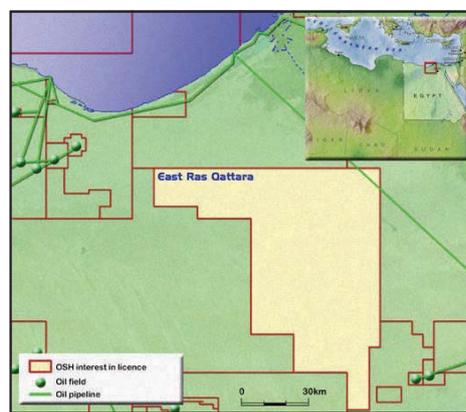
The test in Upper Bahariya formation resulted in flows of between 360 bpd to 600 bpd.

Enap said this confirms the deliverability of the pay zone in the formation and follows up the flow of between 700 bpd and 1000 bpd of oil from the Lower Bahariya formation.

The Ras Qattara concession is jointly run by Enap subsidiary Sipetrol with an interest share of 50.5% in association with Oil Search (49.5%).

Sipetrol also has stakes in the El-Diyur and North Bahariya blocks southwest of East Ras Qattara.

(Upstream Online & Rig Zone, Nov. 23)



Ras Qattara Map

## Devon farewells Egypt play

US company, Devon Energy plans to sell its oil and natural gas assets in Egypt claiming that it needs to focus "on regions that can better provide meaningful growth."

Devon stated that the Egyptian assets produce approximately 5000 barrels of oil a day, which represent less than 1% of its production and proved reserves.

Stephen J. Hadden, senior vice president of exploration and production, called Devon's divestiture plans "primarily a matter of focus."

Devon has been selling assets to concentrate on "areas that can provide meaningful future growth in companywide production and value."

The company did not specify a range of sales price; however, the complete sale agreement is to be finalized in the first quarter of this year.

Devon owns interests in eight fields, four in the Western Desert and four in the Suez Gulf. According to AP, the assets were acquired with Devon's purchase of Ocean Energy in 2003.

(Upstream Online & AP, Nov. 14)

## Egypt to Play Important Role in Gas Exportation to Europe

As part of a new European Union (EU) trend to diversify its energy sources, Minister of Petroleum Sameh Fahmy announced that Egypt will take part in the EU objective through the exportation of Egypt's natural gas to different countries in Europe.

In her speech in the European Commission Conference on Energy in Belgium, Benita Ferrero, the European commissioner for external relations shed the light on the importance of Egypt as a main liquefied natural gas (LNG) supplier to many European countries, such as Spain, Italy and France. Ferrero added that Egypt's cooperation will help in securing LNG supplies to Europe.

On arrival from Brussels, Fahmy said the conference focused on developments in the energy markets and ways to secure energy supplies. Several Arab and foreign countries were keen on attending the conference, including Russia, Ukraine and Norway, the minister added.

On the other hand, Egypt's Minister of Electricity and Energy Hassan Younes studied with the European Commission means of cooperation to develop the Egyptian nuclear program. Younes also discussed possible joint



Benita Ferrero, the European commissioner for external relations

plans to enhance the production of alternative energies, such as wind and solar energies in Egypt.

(Al-Ahram & Al-Akhbar, Nov. 26)

## Natural gas expansion contributes to Egypt's economic growth

Egyptian cabinet spokesman, Magdy Rady announced that the Egyptian economy witnessed a growth of 7.2% during the July-September quarter of 2006, compared to 3.5% in the same period last year.

Egypt's growth in gross domestic products (GDP) has increased at a high rate; it reached 6.9% for the 2005-2006 financial year, which ended on June 30. The Egyptian economy has not witnessed such an increase since the late 1980s.

Prime Minister Ahmed Nazif said last September that the government hoped to keep GDP growing at more than six percent to decrease the unemployment rate.

Finance Minister Yousuf Boutros-Ghali said his estimate for this financial year was 7 to 7.5%.

(AME Info, Gulf News & Reuters, Nov. 26)

## Sidi Krir Petrochemicals to produce butadiene for the first time in Egypt

Sidi Krir Petrochemicals Company (SidPec) is to set up two new factories with total investments of \$65 million; the first \$40 million-plant is designed for butadiene production, which is a vital industrial chemical utilized in the production of synthetic rubber.

The remaining \$25 million will be used to fund SidPec's second plant responsible for the production of materials used in the manufacture of natural gas pipelines, according to the Daily Star.

"The plant's production, which will be financed with the company's self-resources, will bring an end to importing butadiene and synthetic rubber from the international market in addition to opening up export markets," said Mohamed Nouredin, SidPec chairman.

The estimated capacity of SidPec butadiene plant is an average of 24,000 tons a year, added Nouredin.

Concerning the other natural gas pipe plant, SidPec chairman said, "We are in talks with the Arab Industrialization Authority (largest importer of such required materials to produce pipelines) to stop importing these products from abroad."

SidPec's net sales over the first nine months of 2006 rose to LE1.39 billion with a net profit of LE724 million, compared to LE582 million a year ago.

(Daily Star, Nov. 24)

## Egypt – Singapore to initiate a \$2.3 billion natural gas project

Celebrating 40 years of diplomatic relations, Egyptian President Hosni Mubarak and his Singaporean counterpart S R Nathan announced the initiation of a joint venture to convert natural gas into petrochemicals, to be located in the North West of the Suez Gulf.

With a total investment of \$2.3 billion, Singapore will be responsible for providing the needed technical expertise and new technology to run the project.

The two presidents share the same interest in strengthening the economic bonds between the two countries through the initiation of more joint investments and commercial projects.

(Ahram, Al-Alam Al-Yom & Al-Akhbar, Nov. 16)



Singaporean President S R Nathan



## Fahmy: First well in Upper Egypt to be drilled soon

The Egyptian petroleum sector studies the implementation of its plan to establish a natural gas line in Upper Egypt in addition to the Taba – Sharm El-Sheikh pipeline in order to better serve the governorates of South Egypt.

Sameh Fahmy, the Egyptian minister of petroleum announced, during the commemoration of the 31<sup>st</sup> National Petroleum Day, that the ministry is planning to drill a discovery well in Upper Egypt, which will be the first of its kind in this area. Fahmy added that this year, around \$3860 million were saved due to the modification of natural gas pricing.

According to Fahmy, during the 2005-2006 fiscal year the ministry succeeded in meeting the oil and natural gas demands in the local market which totaled \$20 billion based on international prices. The exports of oil, gas and petroleum products reached an unprecedented record; counting for \$10.6 billion although it was planned to achieve this record in 2010. This marks the highest record in the history of Egypt's petroleum sector despite the increase of import rates, added Fahmy.

Focusing on natural gas, the rate of gas production has doubled due to the discovery of new gas fields and the intensification of research projects, especially in deep-water at the Mediterranean Sea.

(Al-Esboua- Nov. 20)

## FROM THE PRESS

I believe that we are coming to the end of the third oil boom (in the Middle East)... This was longer and more diverse than the first two.

(Kuwaiti Finance Minister Bader Meshari Al-Humaidhi)  
Gulf News

The economic activity outside of the oil sector is behind the growth in FDI (Foreign Direct Investment)... In this year to June 2006, the oil sector accounted for 30% of FDI, down from 66% in the previous year.

(Mahmoud Mohieddin, Egypt's Minister of Investment)  
The Daily Star

This year the company achieved outstanding records; the total amount of our products increased to nearly \$3.7 billion in the local market, worth \$1.9 billion in the international market and exports of petroleum products counted for \$496 million.

(Al-Mohammady Mustapha, head of El-Ameria Petroleum Refining Co.)  
Al-Ahram

Egypt was likely to meet its target of booking proven gas reserves of 120 trillion cubic feet in five years time provided it manages to secure enough drilling rigs.

(Petroleum Minister Sameh Fahmy)  
Upstream Online

Some factors like the decrease of world economic growth and accumulation of oil and stockpiles of its by-products indicate that the market needs a cut in OPEC oil output again

(Iran's OPEC envoy Kazempour Ardebili)  
IRNA News Agency

Emirates Egypt reflects the active cooperation between the two countries which is strengthening economic ties... UAE is considered a vital strategic partner to Egypt, especially that this is the first time in Egyptian history that a joint Arab business is established in the field of marketing petroleum products

(Mohamed El-Hameli, UAE's Minister of Energy)  
Al-Ahram

# International

## Angola and Sudan to apply for OPEC membership

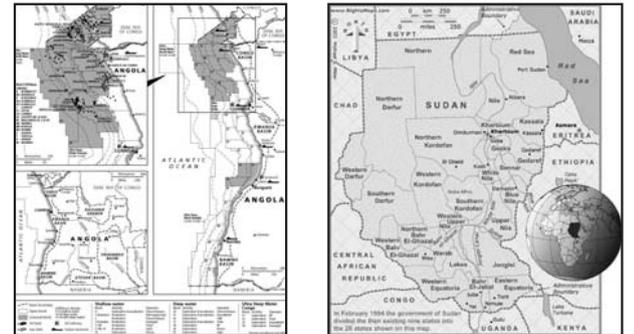
Following Ecuador, Angola and Sudan announced their intentions to join the Organization of Petroleum Exporting Countries (OPEC), which has not welcomed a new member since 1975.

OPEC Secretary General Mohammed Barkindo, speaking to Dow Jones Newswires, gave no timetable for Angola or Sudan to join the group.

According to analysts, such a move would boost the power of the oil cartel, as Angola, Sudan and Ecuador can add to around 2-million barrels a day, or 6%, and bring 10.5 billion barrels of proven reserves to OPEC output. Accepting the membership of the three countries will add impetus to resource nationalism and put international oil companies on their guard.

On the other hand, the International Energy Agency (IEA) expressed its concerns about this move, declaring that it would impede foreign investments in the oil companies operating in the three countries and slow the growth of spare production to shield consumers from supply shocks.

A move into OPEC by Angola would not go down well in Washington, the biggest importer of Angola's oil. U.S. groups Chevron and Exxon Mobil, the biggest



From left: maps of Angola and Sudan

investors in Angola's oil sector, are likely to be equally wary.

According to Reuters, the arrival of Angola, Sudan and Ecuador can possibly increase the political force of African and Latin American members and could change the dynamics of the group, which is dominated by Gulf Arab producers, led by Saudi Arabia.

(Business Day, Financial Times & Al-Alam Al-Yom, Dec. 2)

## Kuwait to start gas production by end-2007

Farouk al Zanki, head of Kuwait Oil Company said after opening a gas and oil conference that Kuwait plans to start its commercial natural gas production by the end of 2007 with a daily output of 180 million cubic feet.

Kuwait, an OPEC member has discovered large reserves of natural gas for the first time last March; 35 trillion cubic feet of free natural gas and a large quantity of light oil in Kuwaiti northern oil fields. Since then, several plans were studied in order to develop the natural gas sector in the country.

"According to the plan, our target is to increase production to 600 million cubic feet daily by 2011 and to one billion cubic feet by 2014-15," said Zanki. The Kuwait Oil Company is currently conducting research to explore five more sites in the same region.

On the other hand, Zanki pointed out that there are some plans to increase oil production capacity to reach four million bpd in 2020 by spending around \$26 billion for the sake of developing the domestic upstream sector. (Middle East Times, Nov. 20)

## Saudi Aramco to buy China oil refiner's stake

Sinopec, China's largest oil refiner is set to sell a 25% stake in an east Chinese refiner to Saudi Aramco.

A preliminary deal over the sale was reached between Sinopec and the municipal government of the port city of Qingdao from one side and Saudi Aramco on the other side, reported the China Business newspaper.

Du Guosheng, assistant to the president of Sinopec Group said the first phase of investment for Qingdao refinery counts for \$150 million and is expected to come into production by the end of 2007.

Back to April 2006, Aramco agreed to supply Sinopec and its affiliates one million bpd of crude oil by 2010. (Middle East News, Nov. 22)

## Singaporean Swiber wins BG contract

Swiber Holdings, Singapore-listed offshore services contractor has won a \$14 million BG contract for the provision of an anchor handling tug and provide vessel for oil and gas works in India.

The contract, due to start in April 2007, includes two extension options of six months each on the same rates, terms and conditions.

This is not the first BG contract to be won by the Singaporean company. Swiber signed also a \$5.75 million contract with BG for the provision of a spread of vessels for the transportation of jackets and decks within Indian waters.

(Upstream Online, Dec. 4)

## Taqqa to purchase BP's E&P business in Netherlands

The Abu Dhabi National Energy Company (Taqqa) is taking over BP's Netherlands-based exploration and production business, which encompasses onshore and offshore production assets, including the Piek Gas Installatie facility in Alkmaar.

In a statement issued by Taqqa, the sale is expected to be finalized by the end of January 2007, although the transaction value has not been disclosed yet.

"Taqqa will own and manage these assets with the utmost integrity and commitment to all parties involved... We believe we have the financial strength and industry expertise to take the BP Dutch E&P business to new heights of performance and profit," said Taqqa CEO Peter Barker Homek in the statement.

BP's Dutch E&P business operates assets both onshore and offshore in the Netherlands and its net production counts for approximately 1.8 million cubic meters a day (62 million cubic feet a day) in 2005.

(Al-Alam Al-Yom, Gulf News & AME Info, Nov. 29)

## New oil and gas reserves discovered in Iran's Ahvaz Field

In the oil-rich southwestern province of Khuzestan, Iran announced the discovery of new onshore oil and natural gas reserves with an estimated value of \$7.3 billion, declared Gholam-Hussein Nozari, the managing director of the National Iranian Oil Co (NIOC).

Although the exact quantity of oil and gas reserves was not revealed, Nozari said 150 million cubic feet a day of natural gas in addition to 37,000 bpd of condensates to be produced by the end of first-phase of development.

The new gas reserves have been discovered at the Khami layer, which is one of the highest pressure and deepest natural gas reserves with an in-place gas reserve of up to 7.4 trillion cubic feet of which more than half could be extracted.

Nozari added that the average value of the new discoveries is around \$7.3 billion based on oil at \$35 a barrel, condensate at \$40 a barrel, and natural gas at 2.5 cents a cubic meter.

(Gulf Oil & Gas, Nov. 23)



## Syria aims to import Iranian gas through Turkish pipeline

Syria expressed its intentions to buy two billion cubic meters of gas annually from Iran through Turkish pipelines.

A senior Syrian ministry official told *Reuters* that officials from the three countries may meet to study the issue. "When other energy projects are also taken into account, Turkey is growing stronger in the region (as a transit country)," the official said.

An official from Botas, which runs Turkey's gas pipelines, stated that Syria could possibly receive the gas via a planned pipeline that will link Nevsehir in central Turkey and Kilis, a town near the Turkish-Syrian border.

It is worth highlighting that Turkey is currently examining with its main gas supplier, Russia, the possibility of extending the Blue Stream pipeline to Israel. Also, Turkey is central to a \$5.8 billion pipeline that would pump Central Asian gas to Austria via the Balkans. (*Gulf News, Nov. 28*)



## Sudan sells Nile Blend crude oil to Japan's fourth-largest trading company

Sudan Petroleum Corp., the country's state-owned oil company, sold a total of one million barrels of Nile Blend crude oil for loading in January to Itochu Corp., Japan's fourth-largest trading company.

According to the deal's terms, the cargo is sold at minus \$2.70 a barrel to the price of Indonesia's Minas crude oil. The oil will be loaded from Bashayer Marine Terminal, south of Port Sudan.

It is worth mentioning that the Nile Blend crude is produced by the Greater Nile Petroleum Operating Co., in which both Sudan Petroleum and Petrolia Nasional Bhd., Malaysia's state oil company, hold stakes. (*Bloomberg, Nov. 22*)



## Qatari Nakilat appoints Shell for LNG transportation



From left: Faisal Al-Suwaidi, chairman and CEO of Qatargas, Linda Cook, Shell executive director of gas and power and Sig Cornelius, ConocoPhillips president of Global Gas

Qatar Gas Transport Company (Nakilat) and Shell International Trading and Shipping Company Ltd signed a 25-year deal to manage Nakilat's fleet of 27 new liquefied natural gas carriers, according to the local *Daily Peninsula*.

Under this arrangement, Shell will work on the development of Nakilat LNG Ship Management Company located in Qatar by providing a variety of shipping services to the Qatari company including ship management as well as the exchange of expertise.

Linda Cook, Shell executive director said "Qatar is well positioned to be the world leader in LNG while Shell is already involved in over a quarter of all LNG cargoes delivered. The agreement is aligned with our broader strategy of helping Qatar develop its natural gas resources and further strengthens a well-established relationship."

Faisal Al Suwaidi, vice-chairman of Nakilat and CEO of Qatargas said, "Our aspiration is to develop a world-class centre of excellence for LNG shipping in Qatar. To achieve this, we knew we had to partner with a world leader in the industry. We chose Shell because we believe Shell has the track record, knowledge and skills to help us reach our goal."

(*Gulf News, Nov. 20*)

# GUPCO Renovates, Gulf of Suez Generates

continued from page 1

## Gulf of Suez Discoveries

THE Gulf of Suez contains approximately 70% of Egypt's oil, but 40 years of operation has rendered many of the huge, older fields less productive. In the 40 years since the concession agreement, the Gulf of Suez has yielded over 4.5 billion barrels of oil. In 1983 the daily production rate of the area stood at around 616,000 barrels, however, this rate has greatly diminished.

GUPCO is hoping to add 4.5 million barrels to its production through its upgrade. The company, along with the government, views this recent overhaul as not only a major step toward producing more oil, but ultimately greater investment in the country. According to Dr. Ahmed Rashdan, President of Tiba Investment Group, the investment is a welcome development because it "brings in more advanced technological techniques in the petroleum sector," something, which at the moment is sorely needed.

The upgrade will guide the way to the introduction of better technology in the field. This will, in due course, lead to more discoveries and improved statistics. This will also allow for the mapping of already found new discoveries such as the Saqqara well and the GS327 well.

The new mapping system is welcome news to those who have been aspiring to keep track of recent discoveries. Such discoveries include the 2001 discovery of two wells with combined proven reserves of 35.5mm barrels. The first find had a capacity of 10,000 bpd and proven reserves of 29mm barrel and the second had a capacity of 3,000 bpd and proven reserves of 6.5mm barrel. Another recent discovery was in 2000 when the company discovered eight wells with total proven reserves of 28.65 mm barrels.

In 2006, GUPCO announced yet another discovery in the Gulf of Suez. The site of the discovery is nine kilometers southeast of the Morgan offshore field (the Gulf's largest field) and seven kilometers Northwest of Tor City at a depth of 133 feet. The estimated reserves and rate of production are 10 million barrels and 5000 barrels per day respectively.

The company is also adding a new drilling rig to its arsenal. The new marine drilling rig will be used to drill crude from the Red Sea. The estimated cost of the rig is \$50 million and it will be constructed by Balayem Petroleum, Petrobal.

After the heydays of the company's high production rate in the mid-1980s, production levels began to fall dramatically reaching a low of 190,000 barrels per day. This, of course, was explained by natural decline due to the fields' maturity, but today new hope faces the company.

The revamping efforts of GUPCO come at a time when energy concerns are high. The company hopes to achieve improved production rates by executing better waste management and by investing in advanced research and development for exploration.

## Better Technology, Smaller Wells

It must be noted that GUPCO has not been the only company making new oil discoveries in the Gulf of Suez. In September of 2006 the Arab Oil company announced a new discovery in the Gulf. The new discovery was made at 1,700 to 1,900 meters below the seabed and is expected to yield 4,900 barrels per day of crude production.

All in all it has been a good year for the Gulf of Suez, a year which has exceeded the expectations of not only the 1960s predications, but also the predications of only a decade ago. But one must not get overly enthusiastic about the new discoveries. While there have been many, they are in large part small wells that are being discovered.

Technology has undoubtedly become more advanced over the years. The seismic technology available in the 1960s could only detect large reserves, but as the world technologically advances the exploration tools used by oil companies can detect smaller wells, hence all the recent discoveries.

It is also possible that GUPCO's renovations amount to little more than means of enhanced oil recovery; meaning that the infrastructure will allow for the use of alternative methods of extracting oil from a well. This includes mining oil with electrical or hydraulic pumps or injecting water or gas into the wells in order to pressurize the oil out, something that Saudi Arabia has been doing for several years and which is now adding to its growing water shortage problem.

This is not meant to discourage any excitement over the indisputable fact that discoveries are being made, it is only meant to stress that conservation will always be the solution in the background. Companies can pursue all the technology in the world to maximize oil recovery, but

eventually it will dry out, as all non-renewable energy must.

However, for others, like Dr. Rashdan, these methods are an encouraged necessity and not a whimsical luxury. "Searching for alternative plans is crucial to decreasing and ultimately avoiding the waste in daily production," he said. He is hopeful when it comes to the renovations, earnestly believing that "the domains of research and production necessitate the use of new more developed

## An Interview with Graham Scotton, General Manager & Managing Director of the Gulf of Suez Company

### 1) What prospects do you see the recent GUPCO upgrade creating?

GUPCO's strategy is to create a long term, sustainable oil business for Egypt and the GUPCO Shareholders (EGPC and BP). This can be achieved in the following way:

A. Improve the reliability of existing infrastructure, particularly in Gulf of Suez, through the replacement of ageing facilities (pipelines and platform equipment). This both reduces the frequency of ongoing failures which impact current production and also ensures that future production can be produced without interruption.

B. Improve the recovery of hydrocarbons from mature fields through use of new technology such as low salinity water injection.

C. Find and develop new oil and gas reserves in existing licence areas through the application of new reservoir management techniques and seismic imaging technologies.

D. Improve the reliability of existing infrastructure, particularly in Gulf of Suez, through the replacement of ageing facilities (pipelines and platform equipment). This both reduces the frequency of ongoing failures which impact current production and also ensures that future production can be produced without interruption.

E. Improve the recovery of hydrocarbons from mature fields through use of new technology such as low salinity water injection.

F. Find and develop new oil and gas reserves in existing licence areas through the application of new reservoir management techniques and seismic imaging technologies

### 2) Are these renovations a means of accommodating to new methods of pressurizing oil out of already mature fields?

Use of low salinity water instead of traditional seawater continues to provide the reservoir pressure maintenance required to enhance recovery and also improves the "sweep" of oil left behind in the primary recovery phase.

### 3) Are ENPPI and Petrojet working on these renovations? If yes, then why ENPPI and Petrojet?

ENPPI, Petrojet and PMS have valuable knowledge of our facilities, which was gained through our longstanding relationship. In GUPCO, we feel it is our duty to maximize the benefit the national contractors can get from the program being undertaken, not only from their direct share of the investment being made, but also through introducing them to the state-of-the-art technologies while they are working with our international contractors. This will definitely contribute towards enhancing their competitiveness in the local market, as well as the global marketplace.

### 4) Should there be excitement regarding recent discoveries at the Gulf of Suez even though the majority of them are smaller wells?

Yes, there should be some optimism about recent and future discoveries in GoS. This is a world class hydrocarbon basin and although it is very mature, new technologies can unlock significant additional reserves through improved seismic techniques and enhanced recovery methods in existing fields. They key enabler is the reliability of the existing infrastructure, without which future oil cannot be efficiently produced.

### 5) Are you getting a new marine drilling rig from Balayem and Petrobal?

A new rig is being built for GUPCO by the EDC Company. It is a land rig and is intended for use in the Western Desert.



# The Far East and Near East are Meeting Somewhere in the Middle:

## an In-Depth Look at the Recent Sino-Egyptian Rig Agreement

**On October 16, 2006 Egypt signed an agreement with China whereby the latter would produce three oil rigs for Egypt in 2007, seven in 2008 and 20 a year in 2010. This feature explores the motivation behind the agreement based on recent Chinese relation-building efforts with Egypt and its surrounding neighbors.**

By Diana Elassy

IN his *Little Red Book*, Chairman Mao Zedong once wrote, "The people of the countries in the socialist camp should unite, the people of the countries in Asia, Africa and Latin America should unite, all peace-loving countries should unite, and all countries subjected to U.S. aggression, control, intervention or bullying should unite, and so form the broadest united front to oppose the U.S. imperialist policies of aggression and war and to defend world peace." In the past few months it seems that China is continuing its legacy of relation building between Africa and Asia, the camps might no longer be divided into socialist and capitalist, but much has remained the same.

U.S. presence in many African and Middle Eastern nations has become an unwanted reality. Resistance to such presence has taken several forms, chief of which is violence. However, resistance comes in various forms and is based on several levels. On the international level, it appears the latest form of resistance to one country's ambitions of global influence is simply cooperation between those countries which face the economic or political aggression of the U.S.

For years China has been economically giving the U.S. a run for its money, now it has taken its opposing strategies to new heights. In an effort to proclaim its economic supremacy to the world, China has taken its communist capitalism abroad. Starting with cultural exchange through a radio station in Kenya, which was launched on February 27, 2006 and the proliferation of the Confucius Institute in Africa, which promotes Chinese language and culture, China appears to be preparing for its long term presence in the African continent. As opposed to a decade ago, China's cooperation in Africa and the Middle East is no longer solely based on economy and trade, but also culture, education, science and technology and soon enough will follow military. It is however the economic ties which seem to be generating the most discourse.

### Strengthening Sino-Arab Economic Ties

In 1991 Sino-Arab trade stood at \$1.5 billion, this has skyrocketed to \$33.8 billion in 2005. In 2004 negotiations on a free trade agreement began while the new China Arab Forum, consisting of 22 states from the Arab League and China, commenced. By the end of 2005, Arab investment in China was worth \$700 million and Chinese investment in Arab countries stood at \$5 billion. China is hoping to reach \$100 billion in trade by the year 2010. The Chinese government is taking all necessary steps to assure that their goal is met. With Iran alone China has signed deals reaching more than \$100 billion.

In terms of trade, China is the world's second-biggest energy consumer and third-biggest importer and so their main motivating factor in Sino-Arab trade is securing energy sources for the years to come. At the moment, the Middle East and especially the Gulf deliver the majority of China's oil, 58% to be precise. Seventeen percent of this figure comes from Saudi Arabia (equaling close to 500,000 barrels per day), making the country China's biggest oil supplier, followed by Iran and then Oman.

Specialists predict that by the year 2015 China will be importing 70% of its oil from the Middle East, which presents China with an inevitable relationship with the region. China's largest oil refiner, Sinopec, is becoming the leading entity in most of China's energy deals. With approximately 120 projects in the Middle East, the company is constantly seeking more opportunities in the region. The biggest joint venture in the petrochemicals industry was recently created between Sinopec and Kuwait Petroleum Corp. The \$5 billion agreement was made in an effort to invest in China's downstream infrastructure in the country's southern Guangdong Province. Sinopec has recently signed another large agreement with the Egyptian government, as well as several deals with the strategic Arab state.

### Sino-Egyptian Relations

In 1956 Egyptian President Gamal Abdel Nasser was the first Arab leader to recognize the existence of communist China. On September 17<sup>th</sup> of the same year the first Egyptian Ambassador, Hassan Ragab, was received by Chairman Mao Zedong. The relationship between Egypt and China has truly stood the test of time; hence, recent cooperation between the two entities should come as no surprise.

In 2004, Egypt's Ain Shams University initiated a Chinese studies center wherein students can learn politics, economics, tourism, culture and art in the Chinese language. The cultural exchange between the two nations was a telling sign for things to come.

In the same year the Minister of Trade and Industry, Rachid Mohamed Rachid, signed a memorandum of understanding worth more than \$2 billion in Chinese investment in Egypt. In the first half of 2005 Chinese-Egyptian trade stood at \$1.96 billion almost doubling the previous year's outcome. Today, Egyptian exports to China range from cotton to plastics while Chinese exports to Egypt range from tobacco to radio transmission equipment.

The Chinese government is not solely basing its relations with Egypt on trade and investment; it is also pursuing technological relations with the nation. During President Hosni Mubarak's November visit to China, the two nations signed an agreement for cooperation on the peaceful use of nuclear energy. However, the most lucrative and interesting agreement signed between the two countries would have to be the oil rig agreement signed with Sinopec.

### Sinopec in Egypt

On October 16, 2006 an agreement creating a 50:50 Egyptian-Chinese joint venture with Sinopec was signed by the Egyptian Minister of Petroleum Sameh Fahmy. The new company, named Sino-Tharwa, was created in order to produce oil rigs for Egypt. Production will begin with three rigs in 2007, seven in 2008 and 20 a year in 2010. The rigs will be the first to be manufactured in not only the Middle East but Africa at large.

Another agreement which has been signed by Fahmy involves the exploration and discovery of oil and natural gas. The agreement was signed with Sinoc to cooperate in international tenders for the resources. These agreements have been signed in hopes of bolstering exploration and production of energy sources in the country. The agreements come at a time when the search for energy is brazen in the global imagination.

### In Search of Energy: The Global Trend

In 1956 Marion King Hubbert proposed a theory to the American Petroleum Institute, which generated much skepticism from its audience. Today, not only is his theory etched in the minds of most professionals and academics, but it stands as a stanch warning to the people of the world. Hubbert's theory was simple: based on the fact that world oil reserves are finite, oil reserves will follow a curvature life-line. Hence, after initial exploration and the intensification of infrastructure, oil production will increase reaching a peak point after which oil depletion will begin.

"Peak oil" has become the term of the century. Governments deny it, producers await it, citizens fear it and economists do little to prove or disprove it. In 1971 the U.S. announced that it had reached its peak point. Thus began the international search for oil. What some called diversification of oil supplies; others saw as securing what little energy the world had left to offer. Eight years later and the OPEC oil price shock occurred. The world began to notice a certain propensity that associated oil with political instability.

More recently, following the war in Iraq and the Israel/Lebanon war, the latest concern is whether Iran will be the next target of international aggression. This concern has caused states to preemptively defend their energy needs. Iran currently controls 10% of the world's total proven oil reserves and has the world's second largest proven natural gas reserves and while it might seem a sound idea to be on the country's good side, being part of the all too topical "axis of evil" makes the nation an unpredictable oil provider.

As one of the world's biggest oil consumers China is





September 17, 1956. First Egyptian Ambassador Hassan Ragab presents his credentials to Chairman Mao Zedong

taking all necessary steps to assure that it does not rely on just one oil supplier, especially if that supplier might soon be going to war. Following in the global trend of diversification, the nation has decided to play a greater role in exploration and not only consumption. The prime example of this can be found in Egypt, where China has invested not only in already produced oil, but more importantly in the exploration for that oil.

#### In Search of Rigs: The Egyptian Bend

As most intelligent businessmen do when it comes to investment, China has found a country with energy potential, located a weakness and decided to invest in strengthening that weakness. The country with energy potential is Egypt; the weakness is its rig market. In 2000 the Egyptian Ministry of Petroleum decided to restructure its activities and give natural gas more attention. Since their ministerial renovation, Egypt has made 227 new oil and gas discoveries. Exploration, and consequently discoveries, requires rigs. The Egyptian rig market today consists of 89 rigs. This is an improvement on the 76 rigs of 2005, but for the potential of Egyptian natural resources this figure leaves much to be desired. Eighty-nine rigs can barely cover proven reserves, let alone new discoveries. It can be said the new agreement with China will partially solve the problem. And as a short term solution it seems to be apt, but for the long term, the introduction of 20 rigs by the year 2010 does not do much for a market which has just had more than 200 new discoveries. For the short term, this agreement seems to work on several levels. It provides much needed rigs, strengthens relations with a new and powerful ally, and boosts investment in a country trying to develop in hopes of catching up with advanced economies.

There is also another problem with the rigs that will be produced under this agreement: they will all be land rigs most of which are work over rigs. These rigs cannot be used for exploration, which is what is truly needed in our overly consumptive age; if new reserves are not found then conservation efforts must be pursued and it would be foolish to believe that such efforts are being seriously pursued by the world at the moment.

But why not manufacture rigs here at home? Technically speaking, Egypt has the know-how and the resources to build their own rigs. Simply put, it all boils down to economics. China's steel is incredibly inexpensive, especially compared to Egyptian steel, an industry which relies on subsidized energy. So, the rigs that Egypt would produce using their own steel would consume as much oil as it would produce. Also, China has numerous rigs, which just need to be renewed. There is also a political strategy at play; while China is engaging in diversification of energy sources, Egypt is engaging in diversification of international relations.

The problems of the rig market become even clearer when the figure of total rigs is dissected. Forty-six of the 89 rigs in Egypt are contracted by the Egyptian Drilling Company (EDC). EDC's virtual monopolization of the market makes new contractors hesitant to enter into a seemingly restricted field; when your main competitor is the government it is highly unlikely that the natural laws of an open market will prevail. However, the above is just the tip of the iceberg when it comes to the problems of the Egyptian rig market.

#### Problems of the Egyptian Rig Market

In 2005, Egypt had approximately 14 rig contractors: the Egyptian Drilling Company (EDC), the Egyptian Chinese Drilling Company (ECDC), Atwood Oceanics, Dasco, Gharib Oil Company, Global SantaFe, Precision Drilling, Pyramid, SAPESCO, Challenger, Transocean, Saipem, China Shengli and K. Energy. In 2006, this figure has slightly dwindled, with contractors either not operating in Egypt, as is the case with Challenger, or having sold off their international divisions, as in the case of Precision Drilling.

For the utilization of international rigs, figures have been encouraging. In 2005 utilization was 83%, this year it has climbed to 95%. Regionally speaking, utilization in Africa has increased 26% rising from 73% to 99%. This improvement however was mainly due to Algeria's augmented utilization. It is of great importance to note that when utilization of rigs increases so does the need for new rigs. But, in the Egyptian market it is not only the amount of rigs available that present a problem for potential investors.

If the government was asked to name the problems of the rig market their answer besides the lack of rigs would be that operators do not fulfill their obligations when it comes to rig rental contracts. They hinder the full efficient utilization of rigs by extending their duration due to poor planning and execution. However, if one were to ask contractors what the problems of the rig market are they would say that there are two main predicaments that face the market; the first is the pricing rate.

#### The Problem of Pricing

According to Ayman Abbas, managing director of the Egyptian Chinese Drilling Company (ECDC), regarding the Egyptian rig market "the major drawback that we must stress on is the low price rates of rigs in the Egyptian market which are 30-35% lower than other surrounding countries."

To comprehend the pricing strategy of the market one must keep in mind that, as contradictory as it might sound, pricing does not always amount to money. Egypt as opposed to surrounding markets provides a stable environment in which a contractor can operate. The possibility of a coup or a drastic change in policy is more unlikely than in the surrounding areas of Africa and North Africa.

Not only is Egypt more politically stable, but it is also more contractually stable. Rig contracts in Egypt are long-term and are ratified by the parliament, giving them more permanence in legal terms. The government assures contractors their due payments, an assurance which is not always provided in other nations. In addition, there are more proven wells in Egypt to work on.

So, while Libya might have an average daily rate of \$120,000, a contractor is not guaranteed his payment, nor is he guaranteed his stay in the country. However, in Egypt where the daily rate might be \$50,000, the contractor will receive his money and is assured his prolonged stay.

#### The Problem of Personnel

The second predicament that confronts the market is personnel. In Egypt, as it is around the world, finding reliable and experienced crew members presents a problem. But unlike other countries, Egypt's educational system does not properly develop its abundant human resources. Abbas makes an apt comparison between Egypt and China, yet another nation with copious human resources. He states that "in Chinese universities, for instance, graduates can get a degree in petroleum engineering with a specialization in rigs only."

China has a mass amount of rigs, so it seems only natural that they have a specialization in an industry which they obviously dominate. Egypt has 89 rigs; to have a specialization in a field that barely exists seems a bit odd. This does not justify the exclusion of knowledge in any field, but it does explain the situation.

In Egypt, there are some universities, including the renowned Cairo University, that have petroleum engineering departments, but they have yet to enhance their specializations. According to Dr. Ashraf Sabry, a Mechanical Engineering professor at the American University in Cairo, the university is currently "studying the possibility of creating a petroleum engineering Major."

Until more universities accommodate for the rising need for trained professionals, the private sector will just have to solve this problem themselves. And for the time

being, they have. Abbas along with other contractors, chief among them being the EDC, have compensated for the lack of experienced personnel by creating training centers.

These training centers however are based on experience. A person learns on the methods of trial and error and not on specialization. People are trained to operate the machines that are available and not to operate all machines; their level of expertise is not as honed as actual professionals. But, for the moment, it suffices for the purposes desired.

According to Dr. Ahmed Rashdan, President of Tiba Investment Group, another problem that faces professional labor is "immigration of experienced personnel; many people work abroad due to the higher salaries they get in addition to the more advanced technology that is provided there."

Language is yet another problem that faces personnel. The rigs provided by China come with Chinese manuals; these manuals cannot be comprehended by Egyptian workers. This means that in either case, even if Egypt did have trained professionals, they would still confront a lingual barrier. This is solved by bringing in Chinese workers. Egyptian labor laws regulate the amount of foreign labor that can be brought into any company. The ceiling is put at 10%, meaning that if a rig has 100 workers, ten of them can be Chinese, and usually are, but on the bright side 90 are Egyptian signifying emerging employment with the recent agreement.

#### The Chinese are Coming!

The recent agreement with China and Egypt is a telling sign of a political shift in the international arena and an economic shift in Egyptian policies. China is swiftly becoming a dominate force in the global market. From its stance, it sees economic cooperation as a foot in the door towards political and military cooperation. This is an accurate attitude; China has managed to make several agreements with close U.S. allies without putting the nations in any awkward position where it must choose sides, after all they are only trade agreements and the U.S. cannot very well stand against its founding principles of capitalism's open markets.

China is also strategically securing its growing energy demands by not solely purchasing oil and gas, but helping in the process of its exploration. The recent Egyptian agreement signed with Sinoc to cooperate in international tenders for the resources is an excellent example of this.

From the Egyptian standpoint, the reliance on one international power, namely the U.S., is perilous, whether this reliance is economic or political. Egypt's rig market is satiated with problems. A few more rigs, while they will not completely solve the problem, do alleviate the pressure off the market providing time to think of other solutions.

This agreement benefits both sides equally. In basic terms, Egypt needs China as much as China needs Egypt. The cooperation between the two countries provides each side with a certain assurance towards the future. For China, this assurance is energy, for Egypt it is trade and investment. This is a strategic alliance that goes far beyond the mere need for rigs: these agreements directly tackle the real issue for the entire East, and it is the need for development through cooperation. While not as militant as Chairman Mao Zedong, Chinese policies are uniting what were at once marginalized international entities not to "defend world peace" yet, but to develop world economies.



April 5, 1999. Chinese President Jiang Zemin with Egyptian President Mohamed Hosni Mubarak



# “Halliburton is above the competition”



Hesham Ismail

**Halliburton's Egypt Area Manager, Hesham Ismail, spoke with *Egypt Oil and Gas Newspaper* about the company's achievements this year and their aspirations for the following year. Halliburton has been able to build themselves a reputation as solid as the services they provide. They have grown from 36 employees in 1969 to 850 in 2006, all dedicated to maintain their company's reputation as a leader in the Egyptian and international oil and gas market.**

By Reem Nafie

**Q How competitive is the Egyptian market? And where does Halliburton stand amongst other services companies?**

Halliburton have been always above the competition. Why? We are considered to be the only service company in the market that can go into a turn-key drilling and completion project from A to Z, and this is why I always say that Halliburton is above the competition when it comes to providing services and offering solutions. We are capable of supporting the operators in Egypt with the correct collective approach of the services they need based on a proper study of the job requirement. We do this with our customers in the Mediterranean concessions where there is a huge activity to fulfill the gas needs and the country export commitments.

We understand there is a respected competition in the market and we respect their capabilities, but on the other hand, we are very confident of our capabilities. New competitors in the market will be facing difficulties in the future; activities are going up rapidly, the dollar value of the barrel is increasing, we are expecting that by 2010 the barrel will go up to \$110 for various reasons, and because of this, we should expect acquisitions to take place faster than ever, and there will be no place for small or even medium size service providers.

**Q What difficulties do you face when operating in Egypt, in a general sense? Is it the culture, the people, the government or the operators you're dealing with?**

In Egypt, we don't have a problem with the culture as we are almost Egyptians in Halliburton Egypt (96% Egyptians) and we are all proud of this. We're all proud to have the highest percentage of nationalization within Halliburton globally. So as I said, culture is not a problem. We have very good relations with the government represented by the Ministry, EGPC, E-Gas and the JVs we deal with. This doesn't mean that we don't face difficulties during our operations in Egypt; in a general sense, fast decision-making is sometimes a problem and I would understand that when this is related to cost, time would be always involved. Another very important issue is that we need to give and offer proper training to the oilfield staff in Egypt. I would believe that the government should give a little bit more attention to the training and development of their employees. The introduction of technology with some JVs – and again because of the involvement of high cost – is another important issue. We all have to understand that technology will be always expensive; it costs us money but it solves a lot of downhole drilling, completion and production issues which are all translated to both time and money savings.

**Q From 36 employees in 1969 you have grown to 850 employees in 2006. Is finding trained personnel a problem for you in Egypt? If yes, do you do your own training? Please elaborate.**

Training and development of our employees have been always viewed to be the guarantee for future success. We send our engineers and field staff to workshops, seminars and technical training forums to the US and other Halliburton Technical Centers around the world. We also support lower & middle management levels with leadership training and managerial skills courses. Since the beginning of 2006, Halliburton has established one of the biggest three Technical Excellence Centers (TEC) in the world in Egypt. This TEC is supporting Halliburton areas of Africa,

the Middle East and other parts of the world with specialized instructors to offer their field staff on-job training and field experience. The training program consists of three phases with a total of approximately 30 weeks after which the graduate will get specialized in one of Halliburton's products and/or service.

**Q I understand that one of the main HSE concerns in Egypt is driving and this you tackled using the UK company “Exploration and Logistics” to train your employees in the skills of defensive driving. Are there any HSE concerns that pertain solely to Egypt other than driving? If yes, how will you tackle them?**

Driving is one of the biggest safety hazards in our operations. For this reason, Halliburton does not stop

“The challenge in 2007 with the increasing activity in Egypt is securing enough resources and training and developing our field staff.”

thinking of solutions to eliminate this type of hazard. Several years ago, the use of private taxis was approved as a way of transporting our engineers to the worksite in an attempt to reduce their driving exposure on the roads, improve their ability to be fresh when they arrive onsite and avoid driving back home following long working hours on jobs. As time progressed we gave the third party taxi drivers Defensive Driving training and also insisted that the taxis were thoroughly inspected by our Maintenance department. These measures improved our target for an incident free environment, but has not removed incidents altogether. We are now in the process of purchasing sufficient pick-ups (double and single cabs) besides long leased pool of cars with Halliburton assigned drivers where we can monitor the driver's night time activities to improve their mental condition for driving.

Every employee in Halliburton has a defensive driving license. We cannot drive in Egypt without having this license valid for a two-year period. Along with the defensive driving courses, we give safety awareness courses for our employees and our third party drivers. It is a belief inside Halliburton that “Safety can not be compromised”.

Another important concern is environment. Issues like handling our chemicals or transportation of radioactive material is of high importance in our operations and would pass under our risk assessment procedures.

**Q From all the services which you provide which do you have the highest demand for and why?**

The demand is increasing on all services during this high activity period. Halliburton's strength is always known by its pumping service side of the business. We are offering the market a variety of services in the drilling, production and completion sides. Cementing and fracing business

will be tremendously growing in Egypt since a good cement job is considered to be the base for a good successful and safe drilling practice and fracing on the other hand is one of the most valuable solutions for production problems.

**Q Are there any current projects of interest that Halliburton is working on?**

We have this big project going on with Petrobel in the Mediterranean. This project is in the Tamsah field where we are doing integrated project management work. We have other big projects going on in the Mediterranean besides the preparation for a big project with Apache for the next 3-5 years.

**Q What percentage of Halliburton's overall profits would you say is brought in by Halliburton Egypt?**

Egypt is doing great and it all goes for the integrity, dedication and commitment of our Egypt Team. We are proud to be one of the top profit (as a percentage of revenue) producers of Halliburton worldwide.

**Q With 2006 coming to an end, what are Halliburton's greatest achievements this year? And what are your plans for the following year?**

There are so many, but I would say the continuous support we are giving in the area of technology and the fracing service support we are offering to the oil field is a great achievement. We are all very proud and satisfied with the performance of all our services in Egypt from the drilling, logging, and completion, to the fluids and pumping services. We are coming very strong in the area of geological and geophysical technologies through Landmark technology and consulting services. The market in Egypt will see a different Landmark in 2007 with regard to reservoir management and structural interpretation.

We have another important challenge in supporting our neighbors in Africa and the Middle East. Egypt is becoming a regional technical school and the producer of good experienced technical hands which we're all proud of.

The challenge in 2007 with the increasing activity in Egypt is securing enough resources and training and developing our field staff.

**Q How do you see the future of Halliburton in Egypt?**

With God's will very promising. We're professionally going on with our development plans. We have a very good performance record in 2006 and we will be challenging ourselves to continue with the same performance level in 2007.





"Shell makes my business their business with round-the clock technical support leading to greater efficiencies and guaranteed success. Partnering with Shell has enabled us to increase our vehicles' engine life from 300,000 kms to 450,000 kms."

**Khaled Khayrat**  
Engineering Department Manager



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# Scenario: Iran

**Egypt Oil and Gas Newspaper explores the consequences of a potential U.S. war against Iran. Will occupation once again become a means for a specific end: oil?**

By Yomna Bassiouni

“IRAQ is just one campaign... the Bush administration is looking at this (the Middle East) as a huge war zone. Next, we’re going to have the Iranian campaign,” Seymour Hersh, a Pentagon consultant, was quoted in January 2005 in the *New Yorker*. Based on the same pretext of combating terrorism and disarming their weapons of mass destruction through military invasion, this scenario could possibly be repeated in Iran. In fact, the U.S. will not settle for a negotiated resolution of the conflict that has risen over Iran’s nuclear program, because its goal, eventually, is a regime change.

## U.S real motivation

Since the victory of Mahmoud Ahmadinejad in Iran’s presidential election in June 2005, the country has been considered a threat to U.S. interests as the new president’s policies challenge U.S. influence and allies in the region. The American administration claims that the Iranian development of a nuclear program and enrichment of uranium endanger regional security. Saman Sepehri, author of “The Geopolitics of Oil” summarized the real reasons behind the U.S.’s interest in Iran, saying “Iran is central to U.S plans for reshaping the Middle East, as it possesses a combination of energy resources, strategic location, economic potential and political weight.”

## Importance of Iran

In terms of energy capacity, Iran is in control of strategic oil and gas resources; it is classified as the second largest untapped oil reserve in the world, with an approximate amount of 125.8 billion barrels, ranked after Saudi Arabia (260 billion) and ahead of Iraq (115 billion). Iran also has the second largest natural gas reserves counting for 940 trillion cubic feet of gas, approximately 16% of total world reserves, falling slightly behind the world’s largest supplier Russia, with 1,680 trillion cubic feet, according to *Oil & Gas Journal*.

Unlike Saudi Arabia, the largest oil producer, which is currently producing oil at close to its sustainable rate, Iran is producing only a small share of its oil and gas reserves; about four million barrels of oil per day and 2.7 trillion cubic feet of natural gas per year. This means that over the next 20 years, Iran has a significant potential to double its production compared to Saudi Arabia. Accordingly, Iran is expected to play a critical role in the world’s future of energy with a high probability of dominating regional power in the Persian Gulf, where two-thirds of the world’s oil reserves exist.

Michael T. Klare, professor of peace and world security studies at Hampshire College and the author of *Blood and Oil: The Dangers and Consequences of America’s Growing Dependency on Imported Oil* said that oil is not the “sole driving force.” Iran’s growing ties with America’s competitors in the global energy market, which endangers the status of the U.S. as the main super power controlling the Middle East also motivates a certain intimidation.

In February 2000, Iran set a goal of “cooperation among Iran, Russia, India and China to confront the hegemonic policies of America,” and it has implemented this foreign policy with economic, energy and military deals. Early in 2003, a group of three Japanese companies acquired a 20% stake in the development of the Soroush-Nowruz offshore field in the Persian Gulf, a reservoir estimated to hold one billion barrels of oil. One year later, the Iranian Offshore Oil Company granted a \$1.26 billion contract to Japan’s JGC Corporation for the revival of natural gas and natural gas liquids from Soroush-Nowruz and other offshore fields.

In October 2004, the Iranian government signed a \$100 billion, 25-year contract with Sinopec, a leading Chinese energy firm, for joint development of one of its major gas fields. Also, Russia is currently building Iran’s Bushehr nuclear plant and developing security and defense systems for not only the plant, but for all of Iran’s enrichment

facilities. India is also developing long-term energy ties with Iran; in January 2005, the Gas Authority of India Limited (GAIL) signed a 30-year deal worth \$50 billion, which includes shipment of LNG in addition to the development of Iranian gas fields.

Iran has further extended its economic bonds with European countries, such as France and Germany; French automakers Renault and Peugeot and Germany’s Mercedes Benz have production lines in Iran, and are planning to expand their operations to not only fulfill Iran’s domestic market, but for exports to Asia, Africa, and Western Europe. These economic ties are considered another threat to the U.S. hegemony in the region as its competitors are cooperating with Iran and gaining more shares and control over Iran’s energy resources and economy, which diminishes U.S. dominance over the region.

Iran has also found a partner in Venezuela to challenge the U.S. Ahmadinejad and his counterpart Hugo Chavez voiced the same themes in their speeches at the UN General Assembly in September saying, “Confronting the U.S. and Great Britain, building the resistance of the poorer Third World nations of the “South” against the imperial North, condemning the special privileges of the permanent members of the Security Council which make them and their close allies immune to international law, reforming the UN to make it egalitarian and not just a tool of imperial powers (like inclusion of permanent members on the Security Council from the Third World).”

According to Sepehri, recently, the U.S has been the conduit for coordination of policies between its Arab allies – Egypt, Saudi Arabia, and Jordan – and its watchdog Israel; but for the time being, new forces have been emerging in the region and gaining more power.

## Possible impacts of Iran-U.S war on oil

What if the U.S. led a military invasion in Iran? What will the consequences be? In case of any possible military attack, Iran has warned that it will close the Strait of Hormuz and obstruct oil shipping in the Persian Gulf area. The Strait of Hormuz is of great strategic importance, as it is the sole sea passage through which oil from Kuwait, Iraq, Iran, Saudi Arabia, Bahrain, Qatar, as well as most of United Arab Emirates, can be transported.

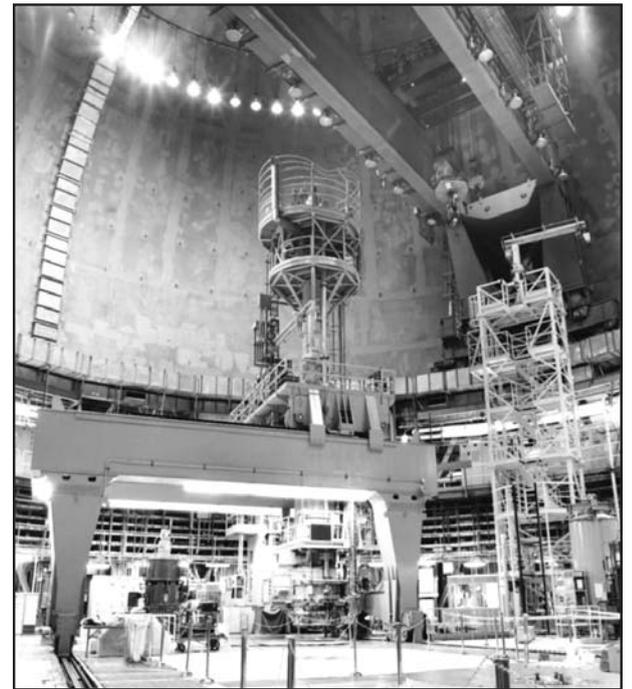
The Iranian Expediency Council Secretary Mohsen Rezaei declared, “An attack on Iran will be tantamount to endangering Saudi Arabia, Kuwait, and, in a word, the entire Middle East oil.”

Such a reaction could trigger a “market panic” with oil prices exceeding \$100 per barrel. Besides, if the U.S. succeeds to take over the strait, this can be a point of concern for U.S. competitors, especially China. Fifty-six percent of Iran’s oil exports are to Asia and 29% to Europe. Japan and China together buy over one-third of Iran’s oil exports. China is paying particular attention to Iran, according to *China Daily*, Chinese oil imports from Iran increased by 25% during the first quarter of this year.

The Bush administration realizes that any military attack on Iran will have a global impact. However, this does not negate Iran’s insecurities from the U.S., which surrounds the Persian Gulf area with its troops; two of Iran’s neighboring countries, Iraq and Afghanistan, have been invaded by the U.S. in the past 5 years.

Besides, Pakistan and Saudi Arabia have been known to have friendly relations with the U.S. The Iranian administration has succeeded to a great extent in protecting its territory through the various economic and diplomatic ties it has established with many countries as mentioned before, especially with U.S. competitors.

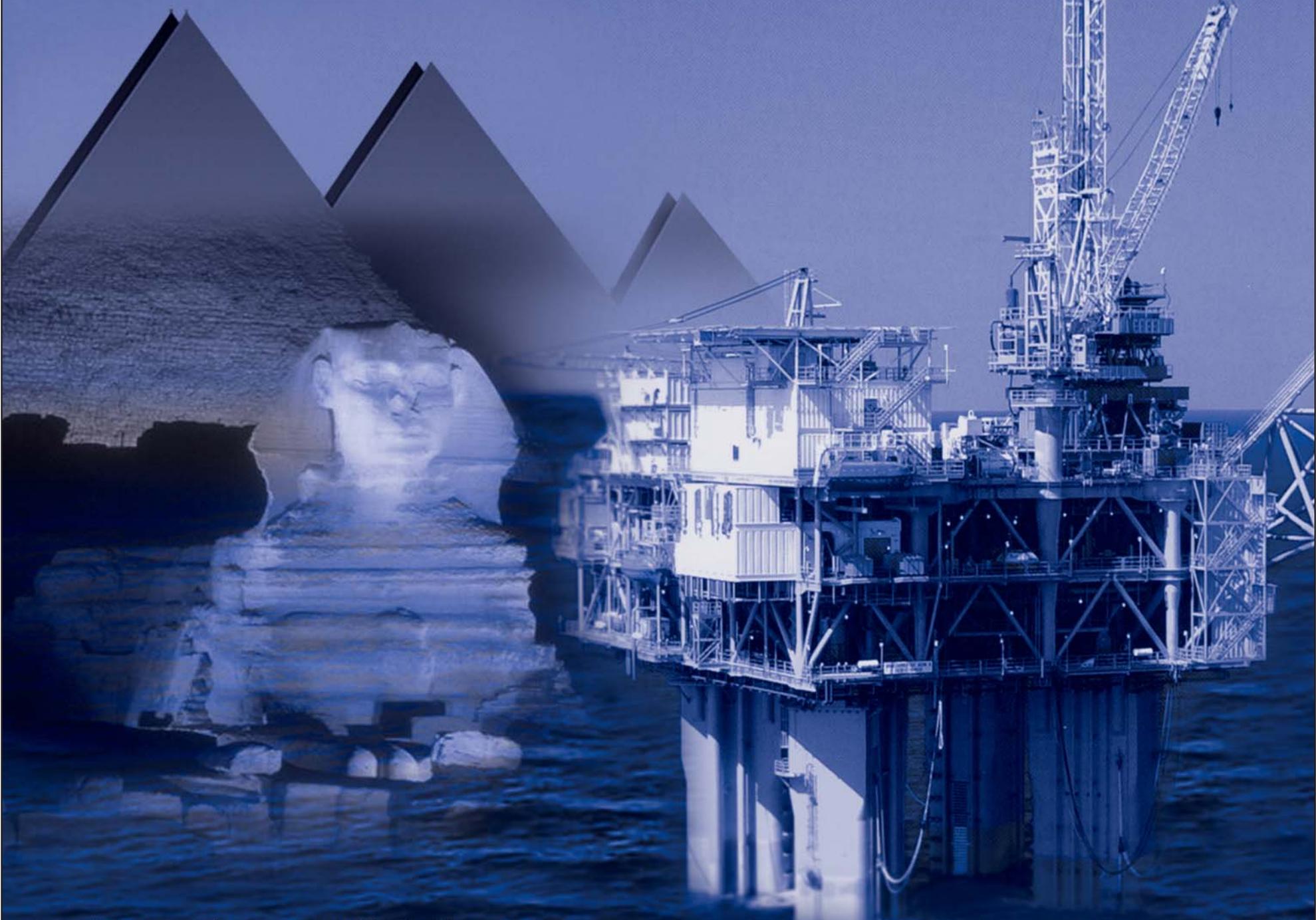
Accusing Iran of developing nuclear weapons under the veil of the peaceful use of nuclear energy could possibly be used by the U.S. to fulfill its ambitions of leading an attack in order to gain control over Iranian oil resources. While in fact, U.S. concerns of losing its hegemony in the Middle East region, being challenged by its competitors like China and its need for oil and gas, are the real reasons behind the current U.S. campaign against Iran.



From top: International tensions mount over Iran’s nuclear program; Iran’s petroleum facilities map (2004) and the Strait of Hormuz which is of great strategic importance as a sea passage for oil exports



# Egypt Rig Market Report



A comprehensive guide to the Egyptian Rig Market exploring new opportunities, and aiding every contractor's and operator's decision making .

# April 2007

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# Nuclear: The future of Egyptian energy

**“Major companies like BP and Shell will sooner or later be labeled energy companies. I believe we need to move on to alternative energies, especially the nuclear one.” These were the words of Dr. Ashraf Sabry, Professor of Thermo-fluids at the American University in Cairo and Cairo University, during his interview with *Egypt Oil and Gas Newspaper*, concerning his views regarding the future of energy in Egypt.**

By Yomna Bassiouni

**Q How far is “Fluid Mechanics” applied in Egypt’s energy sector to generate energies other than oil and gas?**

Fluid mechanics is a major part of energy, its course falls under the umbrella of thermo fluid division. In the energy sector, you have a medium of liquid or gas; this medium can either require the addition or extraction of energy. For example, with pumps and compressors, you are adding energy to fluid. Even in the case of oil and gas, you need to add energy to them. In other cases, you subtract energy from fluid like turbines in order to generate power. Of course, fluid mechanics studies, thermo dynamics and heat transfer courses are related to the concept of renewable energies, such as wind and solar energies. The problem is that the required techniques to generate these energies are very costly compared to oil and gas.

Concerning wind energy, it is already generated here in Egypt, near Hurghada, but on a small scale, however, it is more feasible economically. It has become a more reliable and successful method to generate energy.

**Q Fuel Cell, a new energy-saving technology to generate electrical power for our homes and cars, how far is it used here in Egypt?**

Fuel Cell is based on hydrogen energy; it is a new era all over the world. But, as we know we will have a scarcity of oil and gas within around 20-50 years, the world in general has started searching for equivalents or alternative energies.

Because of the high cost of using fuel cells, this technology is not applied here in Egypt yet. There are currently researches conducted in Egyptian universities to study possible solutions to reduce fuel cell costs and implement them in the Egyptian society.

Currently, the School of Sciences and Engineering at AUC is studying the establishment of a new department of petroleum and energy for undergraduates. The objective of this new major is to specialize in the petroleum field, which is one of the most demanded majors all over the world. Most of engineering graduates travel abroad for post-grad studies and usually they don’t come back. This major will be designed to set the basis for this science needed for oil, gas and energy, especially that major oil companies, such as BP and Shell will be labeled later on as energy companies. Throughout the courses, students will learn how to conserve energy and study the concepts of energy conservation and co-generation.

**Q What do you mean by co-generation?**

Co-generation promotes the concept of efficient usage of energy; for instance, in factories like steam ones for example, they need both electric power and heat energy. First, they use gas to handle a gas turbine that will operate by its turn to generate electricity; this is the first generation. However, exhaust gas coming out of the turbine is hot, thus we can use this medium to generate steam. As a result, the plant efficiency becomes higher. Thus, using the resulted hot gas instead of returning it to the air and burning other fuels to produce steam is much more economic and environmentally beneficial. This process illustrates the co-generation concept.

**Q What are the pros and cons of implementing fuel cells in Egypt?**

Concerning the pros, fuel cells will definitely save us more energy and we can consider it a main source of alternative energy in the future. Also, it will help in diminishing the present pollution level that resulted from burning fuel, as it is an environment-friendly type of energy. On the other hand, the disadvantages so far lie in its high cost, which is not affordable for the time being.

**Q Do you think utilizing alternative energy will meet the energy demand compared to oil and gas?**

The consumption of oil and gas is increasing, while their resources are decreasing, thus sooner or later we will have to search for alternative energies. I believe we should turn to nuclear energy which is capable to provide us with huge energy quantities.

**Q In your opinion, what are the factors needed to develop the nuclear program?**

There is a Chinese proverb “the road of 1000 miles starts with one step.” Thus, it is better to start now to avoid facing oil and gas scarcity. Back in the 1980s, we had a nuclear program that was due to begin, but it was postponed due to the Chernobyl incident and fear of lack of safe techniques. However, nowadays we have developed techniques that are much safer. We just need to take the first step especially that we have the privilege of having many experts in the nuclear energy field, mainly in Alexandria University. Also, Cairo University is studying the possibility of initiating a new nuclear engineering department. What we need now is to start working on the project.

**Q One of your current researches is about “Computational Fluid Mechanics and the modeling and simulation of solar chimney,” what is your vision concerning the use of solar chimney in Egypt?**

Solar Chimney is basically a structure that absorbs heat from the sun and produces air at high temperature and velocity, which can drive a turbine and produce energy from it. This method has been used in Spain since the 1980s. We do have the potential to use this technique as a means to generate energy, but once again, its implementation is restricted by economic hindrance.

**Q Highlighting economic constraint, do you believe it is better to focus on developing alternative energies regardless their high costs or to continue working on research and studies within the available economic resources?**

Spending money to fund research for the aim of finding alternative energies is definitely an investment for the future. Renewable energy studies are needed to determine



Dr. Ashraf Sabry

types of energy that can be generated in Egypt whether solar, wind...etc and their location, in order to secure energy for coming generations. Unfortunately, we lack the ideology of spending money on research as it is costly and time consuming.

**Q Being a member of the International Conference on Thermal Issues in Emerging Technologies’ organizing committee held this month in Cairo, how will it help develop Egypt’s energy sector?**

This conference is based on research and usually we issue a final report and some recommendations, which are sometimes adopted by the government and some private companies.

**Q Based on your studies and research, what are the alternative energies Egypt should look for?**

From my experience, we should pay more attention to wind and nuclear energy. I believe we have to produce our own fuel through uranium enrichment for peaceful and civil use in order to become independent like Iran.

**Q What are the major problems facing Egypt’s energy sector?**

We lack the awareness of how to produce energy in an efficient way on production and consumption levels. Within the existing facilities, we can improve our efficiency through the concepts of energy conservation, co-generation...etc

**Q What is your advice to develop the energy sector in Egypt?**

There should be new laws to encourage people to change their attitudes in terms of energy consumption. Also, incentives should be granted to people who efficiently produce or use energy whether at homes or in factories. This will not help the energy sector only, but it will save the environment as well.

*Dr. Ashraf Sabry is a professor of Thermo-fluids, Mechanical Engineering at the American University in Cairo (AUC) and Cairo University. His educational achievements include a B.Sc. from Cairo University, 1979, M.Sc. from Cairo University, 1983, M.Sc. from Brown University, 1986 and a Ph.D. from Brown University, 1987.*



Can wind energy replace oil and gas in the future?

## HALLIBURTON

### Baroid Fluid Services

# Hydrating lost-circulation squeeze helps restore circulation in severe loss zone

By Ahmad Ezz and Moataz A. Aziz

WHILE drilling a deep gas well through sensitive shales in the Qawassim formation in the Nile Delta area of Egypt, a major operator encountered severe lost circulation in the 8-1/2-in. intermediate interval, beginning immediately below the 9-5/8-in. casing shoe at approximately 3,100 m. Porous sand stringers are interspersed in the shale sequence, and these stringers were the suspected thief zones.

After performing two cement squeeze jobs over a five-day period (at an approximate total NPT cost of \$150,000), the operator was able to drill another 100 m before encountering a drilling break and increasing the mud weight to 14.8 ppg to prevent an influx. As a result of the density increase, the losses recurred at rates up to 150 bbl/hr. Five lost circulation material (LCM) pills were spotted as the operator attempted to reach logging depth.

The decision was made to log the interval at ~3,300 m despite continued losses. The static loss rate was five bbl/hr when the first logging run was made. After the first logging run, the drillstring was tripped to bottom for circulating and conditioning the KCl polymer mud system. After two more LCM pills were spotted, the dynamic loss rate reached 40 bbl/hr. However, the static loss rate was comparatively low at eight bbl/hr, and the operator continued with the logging program.

New 15.2 ppg mud was mixed at the rigsite to keep up with the losses and a final 300-bbl pill containing 80 lb/bbl of varied non-damaging LCM was mixed in preparation for conditioning mud to run 7-in. casing. The pill was spotted in three 100-bbl stages as the operator tripped into the hole to a depth of 3,070 m. At this point, the maximum pump rate possible without incurring significant losses was 17 spm.

After having poor success with conventional LCM treatments, the operator decided to try the recently developed HYDRO-PLUG® lost circulation treatment. This is a dual-action LCM that contains multiple-sized particles to enhance fracture tip screenout, along with a synthetic polymer that hydrates in water. When mixed with fresh water and spotted downhole, the polymer can swell up to 400 times its original size. The HYDRO-PLUG pill expands while held under low squeeze pressure.

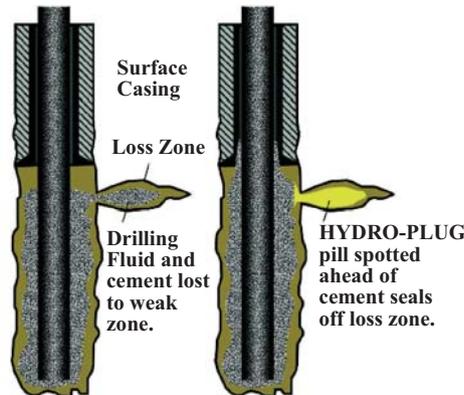
A 50-bbl pill was mixed at a density of 15.0 ppg using 80 sacks of dual-action HYDRO-PLUG material. Rig pumps were used to place the pill and pumping time was approximately two hours. A 150-psi squeeze pressure was applied to this pill for approximately five hours even though before the treatment the well had severe losses. After bleeding off the pressure, the operator was able to wash to bottom and establish circulation at incremental rates of 30, 40, 50, and 60spm. The maximum loss rate observed at 60 spm was 22 bbl/hr—a significant reduction from previous dynamic loss rates. To help ensure that losses would remain manageable, the decision was made to spot and squeeze a 120-bbl LCM pill. At 70 spm, the loss rate dropped to eight bbl/hr. A final 100-bbl LCM pill was spotted before pulling out of the hole to run casing. The chart below summarizes the losses versus depth and events.

The operator was able to run a 7-in. liner on a 5-in. drillstring smoothly to bottom with zero losses. The liner was cemented with only 20 bbl lost, indicating a quality cement job was obtained. This application was the first use of the HYDRO-PLUG® treatment in Egypt.

Designed to rapidly heal severe losses, the HYDRO-PLUG pill is mixed in fresh water, then pumped downhole and spotted across the loss zone using a rig pump. Under gentle squeeze pressures (150 to 250 psi), the plug penetrates into the fractures, then expands to fill the voids, resulting in a competent seal inside and across the formation within a few hours. Spacers are not required.

The plug expansion is rapidly activated by temperatures of 150°F or higher and, once formed, the plug remains effective at temperatures up to 300°F. The pill forms a protective film to preserve its effectiveness when immersed in water-, synthetic- or oil-based fluids.

This operator was particularly pleased with the performance of the HYDRO-PLUG. The economic value it brought to the operator exceeded \$500,000.00, considering that over 6000bbl of mud were lost and the bill for conventional LCM pills grossed up to \$50,000.00 for this short 190m section. The cost of the single HYDRO-PLUG treatment was less than 2% of the non-productive time costs associated with this hole section.



### The Authors

Ahmad Ezz holds a B.Sc. degree in petroleum engineering and has 12 years experience in the oilfield, 11 years of which in the drilling and completion fluids business. He is a senior technical professional with Baroid/HalliburtonEgypt. His drilling fluids experience includes work in several countries of Africa and the Middle East, with broad experience in the coordination of single string drilling fluids projects in remote locations.

Moataz A. Aziz holds a B.Sc. degree in chemistry and has more than 13 years experience in the oilfield, 11 years of which in the drilling and completion fluids business. He worked in different locations and countries, including the Middle East and Africa. Much of his experience includes high profile jobs, such as deep wildcat wells in Saudi Arabia, deep exploratory wells in Egypt (Western desert), and deep exploratory wells in Eritrea.

Activity	3000m	3050m	3100m	3150m	3200m	3290m
Drill 9 5/8" csg shoe						
Start losses, 14ppg MW						
Spot 2 cmt plugs						
Drill Ahead with 14.6ppg						
Increase MW to 14.8ppg, start lo						
Spot 100bbls LCM pill #1						
Spot 100bbls LCM pill #2						
Reduce MW to 14.0ppg, LCM pill #3						
Spot 100bbls LCM pill #4						
Spot 100bbls LCM pill #5						
Fluid influx						
Raise Mud wt to 15.1ppg						
Pump 50bbls Hydro-plug						
Run 7" liner, cmt liner						

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January 2007



# Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy

By Sarah Broberg

SAUDI Arabia is undoubtedly one of the world's leading oil producers whose proven reserves have serviced the world for the past half a century. But are they truly the powerful world oil supplier that they claim to be? Matthew R. Simmons' book *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy*, scrutinizes the Saudi claim to oil fame.

Simmons' skepticism towards Saudi Arabia's reserves is based on, among other things, the growing demand for oil in the global market. Global demand has increased by 14 million barrels/day in ten years, most of which stems from the growing economies of China and India. Of this demand, 74% is supplied by Middle East oil. Saudi Arabia, with 36% of the Middle East's reserves, is the largest oil producer in the world and is currently producing at close to its sustainable rate.

The author essentially questions the nation's guarantee to consumers that it can provide them with the oil they need. Keeping in mind that Iran's reserves peaked in the 1970s and the reserves of Kuwait, Syria, Oman, Iraq, and Yemen have all passed their peak output; Simmons fixes a suspecting eye on Saudi's enthused attitude towards its own oil fields.

Beginning with a description of the oil rich kingdom, the book traces its oil history from its inception to the present. The author attempts to present the reader with a clear look at Saudi Arabia's importance to the world. He portrays the beginnings of the country's national oil company, Saudi Aramco, and examines the kingdom's secrecy regarding its giant and super-giant reserves.

The book then offers an in-depth analysis of the country's oil and gas sector as well as Saudi Aramco, the organization that mainly controls the sector. It discusses the strengths and weaknesses of the company and generally outlines its activities. In addition, Simmons criticizes the company's inventory records, which list several discoveries that have never produced substantial magnitudes of oil.

Moving on to a detailed examination of Saudi Arabia's oil fields, the author conducts a thorough literature review, relying on over 200 papers written by engineers and scientists from the Society of Petroleum Engineers (SPE) to analyze the country's current and expected future production.

Simmons dissects proven reserves, which amount to 260 billion barrels, and probable reserves, which equate to another 200 billion barrels. He suggests that if Saudi Arabia, which now produces 9.5 million barrels a day, is truly to continue its reign as the top oil producer then exploration is the answer. However, with 80 new discoveries yet to produce significant finds, the small nation has already explored much of its land.

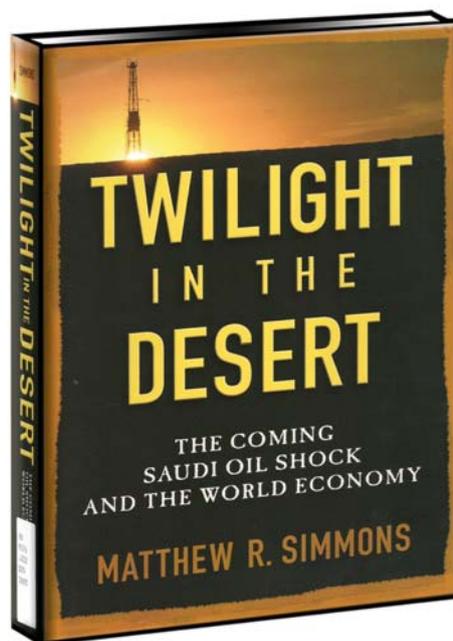
In examining the Saudi position further, Simmons plots the production of these reserves against not only international demand, but also domestic consumption and the outcome appears dreary to say the least.

Simmons does not solely argue against the Saudi government's statistics, but also against the Energy Information Administration (EIA) and the International Energy Agency (IEA), who, using supply models, have assumed that Saudi Arabia's oil can double or triple in output. His main argument is that none of the facts used in these models are verified by an audit from a third party. His main concern is that Saudi Arabia, much like most large oil-producing countries, has vehemently refused to provide data that would substantiate their production levels or reserve claims.

Referencing the last verified assessment of proven reserves, which was conducted in 1979, Simmons points out that those proven reserves stood at 110 billion barrels and 77 billion in probable reserves, 63 billion barrels of which have been produced since the assessment. Based on Hubbert's simple yet ingenious theory of peak oil, once half of that oil has been produced, technically it should start to decline. However, Saudi Arabia claims to have another 200 billion barrels in possible reserves, thereby contradicting the peak oil theory.

The Kingdom claims that it can maintain its current production rate and maybe even raise it to 10.5 million barrels a day. Yet most of the reserves are concentrated in a small strip of land that come to approximately 120 miles and most of these wells are aging fields that are now being flushed out with water in order to push their oil out.

This, for obvious water shortage reasons, cannot



continue for long. Hence, new wells are needed in order for production to be maintained, but as previously discussed the existence of these wells, until verified by audited data, remain tentative at best and illusory at worst.

Simmons concludes his tome by using his data from previous chapters relating to global demands and Saudi oil and gas expectations to illustrate a nation with fickle data and overly optimistic prospects. In essence, it boils down to the fact that Saudi Arabia is over producing its oil reserves, which is problematic because the faster the production of a well the faster the high reservoir pressures

end. In fact, based on the findings of the author it is not implausible that the country has already passed its peak output. If this is true, not only has the nation's oil peaked, but so has the world's oil supply.

The author argues that the world's reliance on Saudi Arabia's oil is false hope, which, when shattered, will spell explosive oil prices and ultimately an immense energy deficiency. As such, the world must first understand the crisis before it can solve it. It must properly manage what little non-renewable energy is left and allocate it appropriately. In addition, the book suggests that when oil prices inevitably peak, a management of the revenues must also be prepared for and should be spent on the research and development of new energy sources.

Simmons firmly stresses that the world's peak oil point will come, likely sooner rather than later. If this is true, then a transition to energy efficiency is essential. He emphasizes that the world must awake to the truth of oil exhaustion. He finalizes his work by proposing that the world address the critical issue of non-renewable energy depletion by pursuing alternative energy. He hypothesizes that the future will belong to solar and wind rather than oil and gas.

**Matthew R. Simmons received his MBA from Harvard University. He is now the Chairman and Chief Executive Officer of Simmons & Company International, an investment bank specializing in oil services and one of the largest energy investment banking groups in the world. Simmons created the bank in 1974, following the 1973 oil shock. He currently serves on the Board of Directors of Kerr-McGee Corporation, Brown-Forman Corporation, The Initiative for a Competitive Inner City, Houston Technology Center and the Center for Houston's Future.**

**Egypt Oil & Gas**  
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## Time to reflect

**With the end of the league's first half, oil companies' teams have yet to improve their performance in the second half.**

By Mohamed El-Sayed

WITH the end of the fifteenth week of the National Football League, the first half of the competition has come to an end. The interval between the first and the second half will provide a golden opportunity for oil companies' clubs to review their performance throughout the last fifteen games, enhance their line-up, and change tactics if they are willing to leave a good impression this season.

As a matter of fact, the three oil clubs playing in the national league could hardly impress critics. Except for the newly promoted Petrojet, which did quite good during the first half, the other two teams—Enppi and Assiut Petrol—failed to give a performance worthy of praise.

Enppi, the first oil club to make it to the national league in 2003, failed to continue the illustrious streak it achieved in the past three seasons. After finishing second in the 2004-2005 season and third in the 2005-2006 season, it seems that the club will not end this season among even the first four positions. After the fourteenth week of the tournament, the club has garnered only 15 points, leaving them in 11<sup>th</sup> place. The team won only three games (after beating the Olympic Club of Alexandria 1-0, Assiut Petrol 4-1, and the Coastal Guards 2-0), lost three encounters (to Zamalek 3-0, the Arab Contractors 2-1, and Suez Cement 1-0) and drew in four games (with Ismaili 1-1, with Tanta 0-0, with Ittihad of Alexandria 0-0, with Misri of Port Said 1-1, with Mehalla 1-1, and with Tersana 0-0). Having scored only 12 goals, the team's net received the same number of goals.

Rubbing salt to the wound, the team bid the Arab Champions League farewell, having lost to Faisali of Jordan in the round of 16. It also decided not to participate again in the most prestigious Arab competition, saying "the competition is no longer fair," according to one of the club's officials.



Despite their impressive performance in the league, Petrojet were unable to beat Zamalek

Despite the fact that the LE15 million spent on the new thirteen players didn't pay off until this moment, it seems that the club will have to further enhance its line-up. Enppi officials have announced that they managed to sign the Iraqi striker Mustafa Kareem of Erbel Club. The 19-year-old player will wear the club's turquoise jersey for the coming five years for \$120,000, according to Alaa Abdel-Sadeq, football affairs manager of Enppi. The club is also trying to sign a foreign goalkeeper during the transfer period in January, after its Angolan goalkeeper was injured two months ago. The club's fans are hoping that German coach Reiner Tsobel brings the team back on the right track, given his long experience in Egyptian football.

As the performance of Enppi has been on the decline during the first half, the star of Petrojet began to rise. The newly promoted team has collected 22 points out of fourteen games, which catapulted it to seventh place on the league table. The team won six matches (The Army 3-2, Olympic Club of Alexandria 3-1, Tanta 2-1, and Assiut Petrol 3-2, Misri of Port Said 2-0, and Enppi 2-1), drew four games (with the Arab Contractors 0-0, and with the Coastal Guards 2-2, with Ittihad of Alexandria 1-1, and with Mehalla 1-1), and lost to Zamalek 2-0, and to Ismaili 2-1, and to Suez Cement 2-1, and to Ahli 4-0.

Thanks to its veteran coach Mokhtar Mokhtar, the team has presented quite good performances in the first half. Critics nominate the club to claim one of the first four positions by the end of the second half.

### Cement Assiut bids Mohamed Sabry farewell

Perhaps the most tragic sports event in December was the fatal road accident that claimed the life of one of Cement Assiut's players, Mohamed Sabry, while leaving 14 injured. The bus transporting the team collided with a truck five kilometers from the Upper Egyptian city of Minya as it was on its way back from Cairo.

Sabry, 23, had moved to Cement Assiut from Al-Qanater Al-Khairiya at the beginning of this season. The club's board intends to honour the player and compensate his family.

Amongst the injured were five players, the team's physician, the administrative officer, and the assistant coach.

Cement Assiut, which is currently in second position in the first division league, had participated in the premier league for the first time in the club's history the past two years.

**Egypt Oil and Gas has taken the initiative of gathering donations for Mohamed Sabry's family. Those interested, please contact Laila Fayek at 516-4776.**

The third oil club representing the oil sector in the League, Assiut Petrol, has been the worst of the three oil clubs in the league. Up till now the club has garnered only six points out of fourteen matches, leaving it in the bottom of the table. Having achieved only one victory over Tanta – 1-0 — the club has drawn in three games with Misri of Port Said, powerhouse Zamalek, and Tersana, the team suffered ten losses (to the Coastal Guards 2-0, Ittihad of Alexandria 2-1, Ahli 3-1, Ghazl El-Mehalla 3-0, Enppi 4-1, Petrojet 3-2, the Army 2-0, to the Olympic Club of Alexandria 2-1, to Ismaili 3-0, and to the Arab Contractors 1-0), conceded 28 goals, and scored only ten goals.

Given its string of dismal performances, many critics firmly believe that the team is highly unlikely to show up in the premier league next season.

### Team rankings

R	Club	P	W	D	L	GS	GA	P
1	Ismaily	14	9	4	1	28	8	31
2	Ahly	11	9	2	0	30	4	29
3	Zamalek	12	8	2	2	22	8	26
4	Mekawleen	14	7	4	3	11	9	25
5	Mahala	14	7	2	5	19	11	23
6	Gaish	14	6	4	4	20	17	22
7	<b>Petrojet</b>	<b>14</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>21</b>	<b>21</b>	<b>22</b>
8	Ithad	14	5	4	5	18	24	19
9	Sawahel	12	4	6	2	16	14	18
10	Suez Cement	14	5	3	6	12	15	18
11	<b>ENPPI</b>	<b>13</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>12</b>	<b>12</b>	<b>15</b>
12	Masry	14	3	4	7	8	20	13
13	Tersana	14	2	6	6	10	16	12
14	Olympic	14	2	3	9	12	25	9
14	Tanta	14	1	3	10	7	24	6
16	<b>Assiut Petrol</b>	<b>14</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>10</b>	<b>28</b>	<b>6</b>

### January fixtures

#### Week 16

02/01/07

**ENPPI vs. Olympic Petrojet vs. El-Geish**

03/01/07

**Sawahel vs. Assiut Petrol**

#### Week 17

10/01/07

**Olympic vs. Petrojet Assiut Petrol vs. Ittihad**

11/01/07

**Enppi vs. Zamalek**

#### Week 18

15/01/07

**Ahly vs. Assiut Petrol Enppi vs. Ismaili Petrojet vs. Zamalek**

#### Week 19

19/01/07

**Ismaily vs. Petrojet Tanta vs. ENPPI Assiut Petrol vs. Masry**



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**Table 1 Rig Count-Africa**

Africa	RIG COUNT			YTD AVERAGE		
	Oct 2006	Prior Month	Change	Through Oct 2006	Prior Year	% Change from Prior Year
ALGERIA	71	73	(2)	69	61	13%
Offshore	0	0	0	0	0	0%
Land	71	73	(2)	69	61	13%
ANGOLA	23	24	(1)	21	17	24%
Offshore	23	24	(1)	21	17	24%
BENIN	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
CAMERON	1	1	0	2	2	0%
Offshore	1	1	0	2	2	0%
Land	0	0	0	0	0	0%
CHAD	4	4	0	4	3	33%
Offshore	0	0	0	0	0	0%
Land	4	4	0	4	3	33%
CONGO	11	9	2	10	8	25%
Offshore	4	3	1	5	4	25%
Land	7	6	1	5	4	25%
EGYPT	57	50	7	54	41	32%
Offshore	15	11	4	13	12	8%
Land	42	39	3	41	29	41%
EQUATORIAL GUINEA	5	5	0	4	4	0%
Offshore	5	5	0	4	4	0%
Land	0	0	0	0	0	0%
GABON	9	9	0	9	6	50%
Offshore	3	2	0	3	3	0%
Land	6	6	0	6	3	100%
GHANA	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
GHINEA BISSAU	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
IVORY COAST	1	1	0	1	3	(67)%
Offshore	1	1	0	1	3	(67)%
Land	0	0	0	0	0	0%
KENYA	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
LIBYA	39	36	3	34	29	17%
Offshore	2	2	0	2	4	(50)%
Land	37	34	3	32	25	28%
MADAGASCAR	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
MAURITANIA	0	0	0	0	2	(100)%
Offshore	0	0	0	0	2	(100)%
Land	0	0	0	0	0	0%
MOROCCO	0	1	0	1	0	100%
Offshore	0	0	0	0	0	0%
Land	0	1	0	1	0	100%
MOZAMBIQUE	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
NIGER	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%
NIGERIA	27	25	2	22	24	(8)%
Offshore	21	21	0	16	17	(6)%
Land	6	4	2	5	7	(29)%
SENEGAL	0	0	0	1	0	100%
Offshore	0	0	0	0	0	0%
Land	0	0	0	1	0	0%
SOUTH AFRICA	1	1	0	1	0	100%
Offshore	1	1	0	0	0	100%
SUDAN	24	25	(1)	24	20	20%
Land	24	25	(1)	24	20	20%
TANZANIA	2	1	1	0	0	0%
Offshore	1	0	1	0	0	0%
Land	1	1	0	0	0	0%
TOGO	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
TUNISIA	8	5	3	5	3	67%
Offshore	2	2	0	2	1	100%
Land	6	3	3	3	3	0%
UGANDA	0	0	0	0	0	0%
Offshore	0	0	0	0	0	0%
Land	0	0	0	0	0	0%

Source : Schlumberger

**Table 2 World Crude Oil Production (Including Lease Condensate) (Thousand Barrels per Day)**

	Algeria	Indonesia	Iran	Iraq	Kuwait <sup>1</sup>	Libya	Nigeria	Qatar	Saudi Arabia <sup>1</sup>	United Arab Emirates	Venezuela	Total OPEC
2006 January	1,825	1,045	4,100	1,603	2,600	1,650	2,560	835	9,400	2,602	2,540	30,760
February	1,825	1,050	4,050	1,803	2,550	1,650	2,410	835	9,500	2,602	2,540	30,815
March	1,825	1,043	4,000	1,903	2,525	1,680	2,370	835	9,350	2,602	2,540	30,673
April	1,825	1,035	4,000	1,903	2,525	1,690	2,370	835	9,350	2,602	2,540	30,675
May	1,785	1,038	3,950	1,903	2,525	1,700	2,370	835	9,200	2,602	2,540	30,448
June	1,795	1,027	4,030	2,153	2,550	1,700	2,465	835	9,100	2,602	2,540	30,797
July	1,805	1,020	4,035	2,203	2,550	1,700	2,380	855	9,300	2,702	2,440	30,990
August	1,805	1,015	4,035	2,203	2,550	1,700	2,430	855	9,300	2,702	2,490	31,115
September	1,835	1,005	4,035	2,153	2,550	1,700	2,430	885	9,000	2,702	2,490	30,785
2006-9-Month	1,814	1,031	4,026	1,982	2,547	1,686	2,421	848	9,277	2,636	2,517	30,784

<sup>1</sup> In August 2006, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 570,000 barrels per day. Data for Saudi Arabia include approximately 150,000 barrels per day from the Abu Safah field produced on behalf of Bahrain.

Note: OPEC=Organization of Petroleum Exporting Countries.

Source : EIA

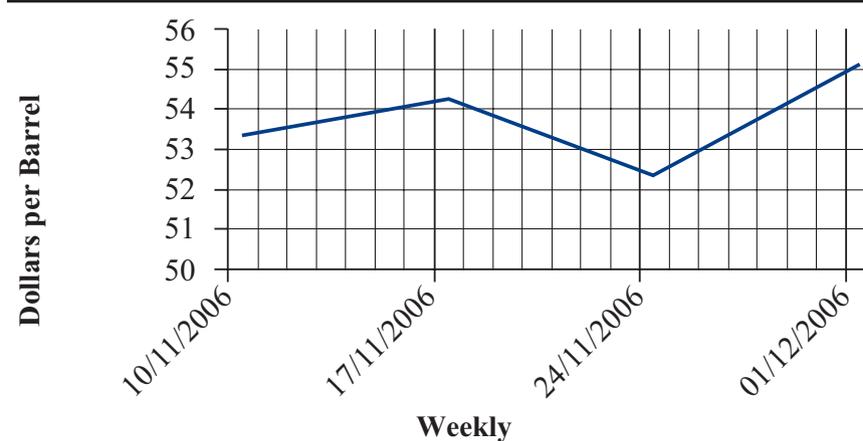
**Table 3 World Crude Oil Production (Including Lease Condensate) (Thousand Barrels per Day)**

	Norway	United Kingdom	North Sea <sup>1</sup>	Angola	Argentina	Australia	Brazil	Canada	China	Colombia	Ecuador
2006 January	2,657	1,707	4,737	1,428	686	335	1,688	2,591	3,670	521	559
February	2,620	1,639	4,635	1,418	665	400	1,692	2,482	3,662	533	551
March	2,610	1,597	4,594	1,428	695	380	1,696	2,423	3,710	535	528
April	2,407	1,590	4,371	1,428	692	370	1,737	2,471	3,680	536	546
May	2,535	1,500	4,416	1,328	705	380	1,748	2,353	3,712	539	547
June	2,365	1,392	4,111	1,239	717	370	1,630	2,405	3,700	538	536
July	2,571	1,453	4,383	1,468	709	490	1,725	2,340	3,716	536	542
August	2,430	1,198	3,997	1,468	697	470	1,703	2,438	3,670	534	542
September	2,338	1,350	3,966	1,446	711	500	1,733	2,420	3,659	527	533
2006-9-Month	2,504	1,491	4,356	1,412	698	411	1,706	2,435	3,687	533	543

<sup>1</sup> North Sea includes the United Kingdom Offshore, Norway, Denmark, Netherlands Offshore, and Germany Offshore.

Source : EIA

**Fig 1 Egyptian Suez Blend 33° Prices**



Source : Egypt Oil & Gas



**Table 4** World Crude Oil Production (Including Lease Condensate) (Thousand Barrels per Day)

	Egypt	Gabon	India	Malaysia	Mexico	Oman	Russia	Former U.S.S.R.	Syria	United States	Other <sup>1</sup>	World
2006 January	654	238	669	760	3,372	771	9,030	---	345	E 5,047	6,049	73,536
February	657	238	679	760	3,311	765	9,040	---	345	E 5,048	6,144	73,465
March	651	237	686	700	3,350	754	9,150	---	345	E 5,016	6,128	73,292
April	663	237	685	680	3,370	744	9,170	---	340	E 5,067	6,201	73,289
May	655	237	689	700	3,329	734	9,160	---	340	E 5,100	6,375	73,113
June	607	237	704	695	3,287	739	9,260	---	340	E 5,219	6,306	73,137
July	620	237	691	690	3,232	726	9,260	---	340	E 5,171	6,345	73,852
August	630	237	650	685	3,252	727	9,330	---	340	PE 5,155	6,401	73,673
September	640	241	701	685	3,258	720	9,280	---	335	PE	6,335	73,316
2006-9-Month	642	242	683	706	3,307	742	9,188	---	341	PE 5,096	6,220	73,379

<sup>1</sup> Other is a calculated total derived from the difference between "World" and the sum of production in "Total OPEC" (Table 2) and all other countries listed (Tables 3 and 4). -- = Not applicable. E=Estimated. PE=Preliminary estimate. RE=Revised estimate.

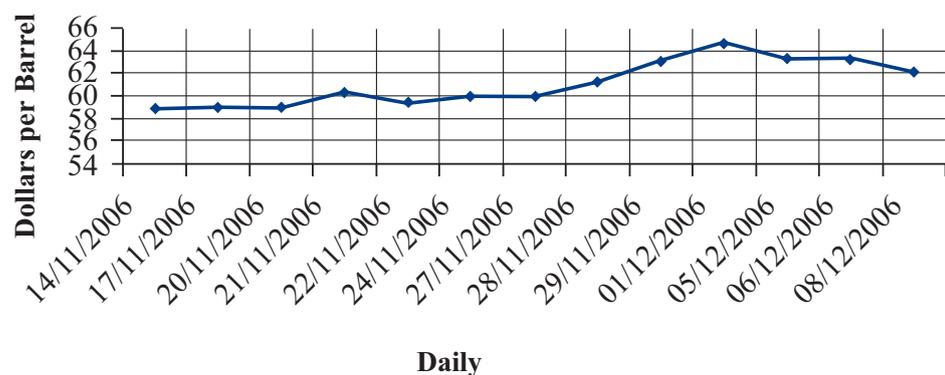
Source : EIA

**Table 6** World Rig Count

Region	RIG COUNT			YTD AVERAGE		
	Oct 2006	Prior Month	Change	Through Oct 2006	Prior Year	% Change from Prior Year
Africa	283	269	14	259	222	17%
Offshore	79	74	5	69	66	5%
Land	204	195	9	190	155	23%
Asia Pacific	270	269	1	266	251	6%
Offshore	103	104	1	103	101	3%
Land	167	165	2	163	150	9%
CIS	374	374	0	322	223	44%
Offshore	16	17	1	13	10	30%
Land	358	357	1	309	213	45%
Canada	353	387	(34)	417	386	8%
Offshore	6	5	1	5	6	17%
Land	347	382	(35)	411	380	8%
Europe	195	188	7	177	163	9%
Offshore	98	96	2	98	91	8%
Land	97	92	5	79	72	10%
Latin America	400	392	8	396	380	4%
Offshore	85	82	3	84	83	1%
Land	315	310	5	311	297	5%
Middle East	329	323	6	303	265	14%
Offshore	51	51	0	49	49	0%
Land	278	272	6	254	216	18%
US	1984	1961	23	1885	1645	15%
Offshore	111	110	1	117	116	(1)%
Land	1873	1851	22	1768	1529	16%
<b>Global Count</b>	<b>4188</b>	<b>4163</b>	<b>25</b>	<b>4023</b>	<b>3535</b>	<b>14%</b>

Source : Schlumberger

**Fig 2** IPE Brent Prices



Source : Egypt Oil & Gas

**Table 5** World Natural Gas Liquids Production (Thousand Barrels per Day)

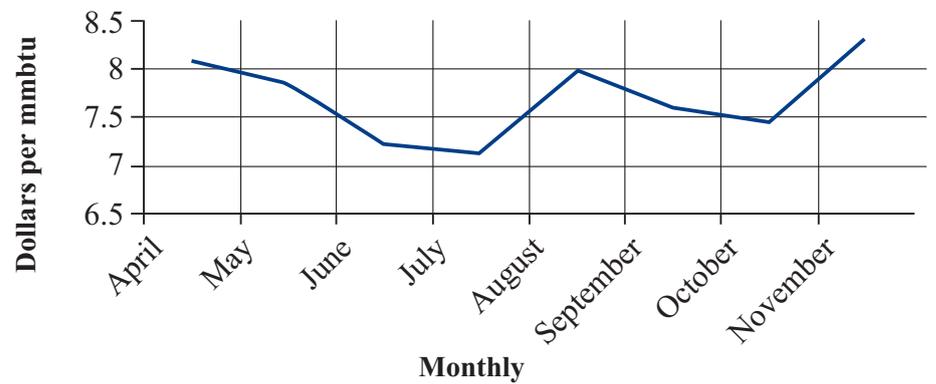
	Algeria	Canada	Mexico	Saudi Arabia	Russia	Former U.S.S.R.	United States <sup>1</sup>	Persian Gulf	OAPEC <sup>2</sup>	OPEC <sup>2</sup>	World
2006 January	295	640	438	1,460	410	---	E 1,684	2,281	2,652	2,948	7,795
February	295	640	436	1,460	410	---	E 1,677	2,286	2,660	2,963	7,862
March	295	640	432	1,460	410	---	E 1,688	2,286	2,660	2,963	7,798
April	295	640	441	1,480	415	---	E 1,729	2,310	2,682	2,987	7,907
May	295	640	441	1,480	415	---	E 1,753	2,310	2,681	2,987	7,750
June	315	645	436	1,480	410	---	E 1,753	2,310	2,701	3,007	7,738
July	315	583	449	1,490	420	---	PE 1,755	2,320	2,729	3,037	7,954
August	315	626	445	1,490	420	---	PE 1,726	2,320	2,729	3,037	7,935
September	320	702	427	1,490	390	---	PE 1,752	2,320	2,734	3,042	7,773
2006-9-Month	304	643	438	1,477	411	---	PE 1,724	2,305	2,692	2,997	7,835

<sup>1</sup> U.S. geographic coverage is the 50 states and the District of Columbia. Excludes fuel ethanol blended into finished motor gasoline.

<sup>2</sup> OAPEC=Organization of Arab Petroleum Exporting Countries. OPEC=Organization of Petroleum Exporting Countries. -- = Not applicable. E=Estimated. PE=Preliminary Estimate.

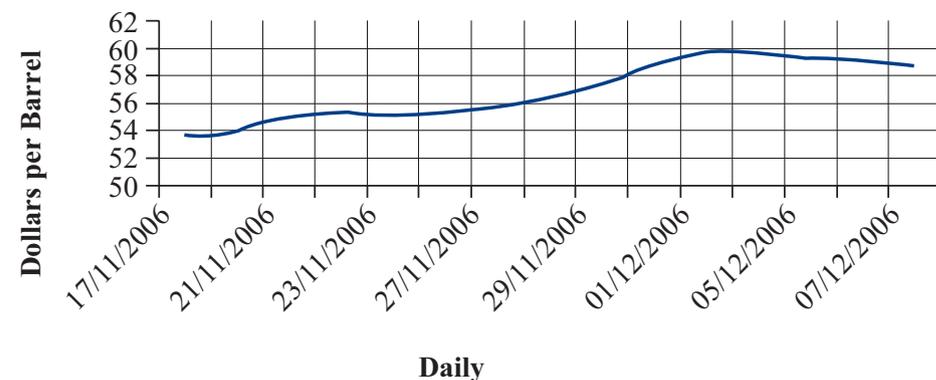
Source : EIA

**Fig 3** NYM Natural Gas Prices



Source : Egypt Oil & Gas

**Fig 4** OPEC Basket Price



Source : Egypt Oil & Gas

Average Currency Exchange Rate against the Egyptian Pound (November / December)

US Dollar	Euro	Sterling	Yen
5.7128	7.4653	10.6137	4.7193

Stock Market Prices (November / December)

Company	High	Low
Alexandria Mineral Oils (AMOC.CA)	80.95	75.00
Sidi Kerir Petrochemicals (SKPC.CA)	108.03	96.63



## Gas Tech landmarks its success for a third year



Eng. Sameh Fahmy discussing Egypt Oil and Gas Newspaper with its publisher Eng. Mohamed Fouad

local energy prices. However, the ministry set a strategy to overcome these challenges by maximizing natural gas utilization in the local market to satisfy local demand on energy and achieve the optimum exploitation of natural resources, through the extension of gas networks to cover all of Egypt, including Upper Egypt, Sinai and Red Sea areas.

Egypt's Minister of Petroleum Sameh Fahmy inaugurated the 3rd International Conference and Exhibition for Natural Gas Technology and Petrochemical Industries (Gas Tech) with the participation of 75 local and international companies.

In his inaugural speech, Fahmy confirmed that the oil and gas industry in Egypt witnessed great successes through the partnership of the international oil companies in upstream and downstream activities as well as achieving huge milestones that added more reserves and increased production.

Fahmy pointed out that in 2005/2006, petroleum exports reached \$10.6 billion, while gas exports counted for \$2.7 billion; Egypt's share is \$2 billion.

The minister shed the light on the challenges facing the oil and gas sector, such as the rapidly increasing local demand on petroleum products and natural gas and the heavy burden of subsidized



## African Union Ministers' First Conference



Under the patronage of Sameh Fahmy, the Egyptian minister of petroleum, Cairo hosted the first conference of the African Union Ministers, organized by the African Union in association with the Egyptian government and the technical support of the African Development Bank, at the Cairo International Conference Center.

In his speech at the inauguration ceremony, Fahmy stressed on the importance of this conference as its goals revolve around the adoption of strategies to strengthen cooperation and solidarity amongst African states; producing and non-producing countries of oil and gas.

The conference witnessed the participation of many petroleum African ministers and experts of the member states in the African Union responsible for policies, global economic and financial strategies, as well as specialized petroleum and gas sector institutions, such as the African Commission of Energy, the African Petroleum Producers Association (APPA), the Association of African non-oil producing countries.

## ECES tackle energy conservation



On November 21-22 the Egyptian Center for Economic Studies (ECES) held a conference entitled *The Egyptian Economy: Current Challenges and Future Prospects*. The fourth session of the two-day conference, entitled *Toward Better Management of Energy Resources*, discussed Egypt's current problems with its depleting oil reserves and the nation's expectations of natural gas reserves. The session debuted the works of Tarek Selim, an economics professor at the American University in Cairo and Abdallah Shehata, an economics professor at Cairo University. Dr. Selim discussed his latest working paper on "Efficient Utilization of Egypt's Energy Resources: Oil and Natural Gas." Dr. Shehata gave a summarization of his working paper "Assessing the Impact of Removing Energy Subsidies on Energy Intensive Industries in Egypt."

Dr. Mona El Baradei an economics professor from Cairo University moderated the discussions and two discussants, Tamer Abu Bakr from the Genco Group and Dr. Mohamed Fathi Sakr from Cairo University, remarked on the presentations of the two working papers. The session essentially stressed on Egypt's need to continue exporting its oil while utilizing a majority of its natural gas resources for domestic purposes.

## SPE members recognized in monthly gathering

Last month, the Society of Petroleum Engineers (SPE) celebrated the distribution of its Regional Technical Awards for Reservoir Description and Dynamics, and Health Safety and Environment that were respectively awarded this year to Dr. Sameh Macary and Dr. Sherif El-Ghazaly. Dr. Hanafy Hussein was also recognized by the SPE as a recipient of the Century Club Membership for the year 2006.

The distribution of awards was followed by the SPE technical seminar, held under the title of "Micro Seismic: Mapping of Hydraulic Fracture Stimulations – Applications, Observations, and Conclusions for optimizing production." The presentation was conducted by Larry Griffin, vice president of Diagnostic Services Pinnacle Technologies in Houston. Griffin focused on the concepts of micro seismic and tilt mapping used to measure hydraulic fracturing, which is one of the most economic methods developed to increase oil and gas production.



Larry Griffin



From top: Dr. Sameh Macary, Dr. Sherif El-Ghazaly and Dr. Hanafy Hussein receiving their awards