

Walking the Fault Lines

Avoiding Conflict through Forced Cooperation

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Agiba Gas Generation Plant in Raml Field

Technology P.26

DwC Technology, Defyer Bits, OverDrive System with TorkDrive Tool Set Casing at Planned Depth in one trip, Mitigate Losses

Bullion Market			
GOLD		SILVER	
Price	Percentage	Price	Percentage
1744.72	+4.80%	34.23	+10.53%

Crude Oil			
		Price	Percentage
USD/BBL	WTI	102.43	+2.13%
	BRENT	118.99	+6.77%

EGYPT OIL & GAS NEWSPAPER

HIGHLIGHT

EGAS to amend new terms and conditions in coming bid round to be announced

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STANDING ON THE SHOULDERS OF GIANTS

The Egyptian petroleum industry's top-level executives convene to ponder the future of the sector's contractual agreements amid the vehement changing winds of the country's political makeup.

In Focus

A Roadmap to the Renaissance of Petroleum Agreements



One of the few remaining patches of solid ground in the Egyptian economy is the country's petroleum sector, which has fared far better than other sectors in dealing with last year's tumultuous events. In order for the sector to support the national economy, further development of its various aspects is necessary.

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In Review

Unitization Under the Egyptian Petroleum Exploration and Exploitation Agreements

Does the Egyptian petroleum exploration and exploitation agreements contain any provision governing the cases of unitization? Unitization in the Egyptian legal system is subject to the different provisions discussed further.



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Farewell Yomna

The team of Egypt Oil & Gas has been very fortunate to have Yomna Bassiouni as one of its founding editors. Her sharp wit, kindred spirit and depth of experience, are some of the qualities that were instrumental the growth and development of our publication. Her passion and tireless efforts are primary reasons behind the success we share today with all our readers and partners.

During her time with us, we did not only learn from her experience and talents, we were also inspired by her motivated spirit, which always gave us the extra push we needed. Her unparalleled professionalism and exemplary talents the reasons behind building the team of young professionals we share today.

Personally, I would like to wish her all the success in her new endeavor, and hope she achieves more than what she has during her presence with EOG newspaper. Her advice and consultation will always be welcomed and appreciated.

Taking this chance, I would like to also introduce our newly appointed Editor in Chief, Mohamed El-Baharwi, and wish him all the best in building on what we have achieved over the past years, and in enhancing the overall value of Egypt Oil & Gas Newspaper to our readers.

Moving ahead, this month's issue is a new benchmark for Egypt Oil & Gas. Not only because of our newly appointed Editor in Chief, but also for the success our roundtable discussion has achieved in bridging the gap between the various entities operating the Egyptian Petroleum Sector.

I would like to take this chance to thank the staff members of EOG for their continuous efforts... Keep up the good work.

Mohamed Fouad
Publisher



In the Absence of Unitization Legal Provisions



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Petrobel Drills Two New Developmental Wells

Belayim Petroleum Company (Petrobel) has concluded the drilling of two new developmental wells in fulfillment of the company's 2011-2012 drilling plan.

The 112-143 well is an oil-producing well located in the Petrobel's concession in the Sinai Peninsula. It was drilled to a depth of 8,120 feet via the ST-3 rig with investments totaling \$2.290 million. Production of the new well has yet to be added to the company's overall production rates.

The other developmental well, dubbed BL112-142, is located in the Belayim Land field concession in the Gulf of Suez. Sources revealed that the crude-producing well was drilled using the ST-1 rig, reaching the depth of 7,999 feet. Drilling investments in this well totaled \$2.327 million.

Petrobel's production rates slightly decreased in the month of February 2012, in comparison to the preceding month. Production rates stood at 3,893,835 barrels of crude oil and 8,999,906 cubic feet of natural gas in the former, as opposed to 4,186,036 barrels of crude oil and 9,808,969 cubic feet of natural gas in the latter.

Belayim Petroleum Company is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and the Italian veteran Eni.

First Oil from North Shadwan

Crude oil production from the NS377 field, located in the concession area of North Shadwan, commenced on the 13th of March 2012. Oil supermajor British Petroleum and the Australian company Beach Energy have announced that initial production from the well will be restricted to approximately 1,000 barrels of oil per day.

Production will be transferred via a tie-in to Petrobel's nearby RasGhara plant for treatment then piped to the main Petreco Oil Center.

The North Shadwan joint venture partners have applied for a development lease over the NS394 oil discovery with the development expected to commence in 2013. Production from NS394 is anticipated to start in 2014 at an expected flow rate of up to 7,000 barrels of oil per day.

BP is the operator of the North Shadwan concession, holding a 50% equity interest. Beach Energy holds a 20% interest and Egypt-based company TriOcean Energy owns the remaining 30%.

Edison Spuds New Western Desert Well

Italian petroleum operator Edison has completed the drilling of a developmental well located in the West Wadi El-Rayan concession in the Western Desert, which comes in the context of its 2011-2012 drilling plan.

The new WWER-6 is an oil-producing well. It was drilled using the EDC-67 rig to the depth of 5,465 feet, attracting \$2.363 million in drilling investments.

Edison is the operator of the West Wadi El-Rayan Blocks with a 60% interest, and

operates in Egypt through Abu Qir Petroleum, a jointly owned company in conjunction with Egyptian General Petroleum Corporation (EGPC), each owning 50%.

Abu Qir's production rates during the month of February 2012 stood at 167,643 barrels of crude oil and 1,358,440 cubic feet of natural gas.

Qarun Adds Two Wells to Western Desert Portfolio



In consistence with its development plan for the 2011-2012 fiscal year, Qarun Petroleum has completed the drilling of two new developmental wells in its concession area located in the Western Desert.

Sources have revealed that the first well, SHAKARA NE-3, spurred investments totaling \$748,311. The drilling operation was conducted to a depth of 7,500 feet, using an EDC-49 rig. The oil-producing well has yet to be added to the company's overall production rates.

The second developmental well, E.BAH-C29, is located in the East Bahariya West concession. The oil-producing well was drilled to a depth of 5,950 feet via an EDC-64 rig. Drilling investments in the well, which has not yet been added to Qarun's overall production rates, have reached \$1.182 million.

Qarun Petroleum Company is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and American petroleum operator Apache.

Sipetrol Drills Wildcat in Sinai, Hits Dry Hole



The Chilean Sociedad Internacional Petrolera SA (Sipetrol) has completed the drilling of a new exploratory well in its Rommana exploration block located onshore the Sinai Peninsula as part of its 2011-2012 drilling plan. Sipetrol is the operator of the block with a 40% interest, while partners PTTEP and Centrica each hold 30%.

The new JASPER-1 wildcat was drilled to a depth of 6,151 feet utilizing the EMSCO-605 rig. Drilling expenditure in the well, which was abandoned as a dry hole, amounted to \$4.155 million.

Sipetrol operates in Egypt through Petroshad Petroleum, a joint venture in which Sipetrol owns a 25.25% interest, Kuwait Energy with a 24.75% interest and the Egyptian General Petroleum Corporation (EGPC) holding the other 50%.

Bapetco Expands Western Desert Drilling

Badr El Din Petroleum Company (Bapetco) has concluded the drilling of two new developmental wells in its Western Desert concession area as part of its development plan for the 2011-2012 fiscal year.

Egypt Oil and Gas has learned that one of the new wells, dubbed BED-128, was drilled using the EDC-52 rig to the depth of 10,420 feet, with drilling costs reaching \$3.320 million. The new oil-producing well has been added to the company's overall production numbers.

The other well, named SITRAB-18, was drilled using the EDC-72 rig to a depth of 11,530 feet. Costs of the operation amounted to \$2.75 million.

During the previous fiscal year, Bapetco successfully drilled 34 wells, and the company is looking to drill 44 exploratory and developmental wells in the current fiscal year 2011-2012 in order to boost total production of crude oil and natural gas.

The company's production rates during the month of February 2012 stood at 1,126,540 barrels of crude oil and 2,118,393 cubic feet of natural gas.

Badr El Din Petroleum is a joint venture company between the Egyptian General Petroleum Corporation (EGPC) and Royal Dutch Shell.

Khalda Intensifies Western Desert Drilling

A significant increase in drilling activity has been undertaken by Khalda Petroleum over the previous two months, as the company completed the drilling of four exploratory wells, three developmental wells, and one water injection well in its Western Desert concession. The operations come in the context of Khalda's drilling plan for the 2011-2012 fiscal year.

KARANIS SW-1 ST-3 is an oil-producing exploratory well. It's located in the Matruh development lease in the Northern Egypt Basin and is currently in the appraisal stage. It was drilled to a depth of 16,500 feet via the EDC-54 rig, attracting investments of \$9 million.

In the Khalda concession of the Shoushan Sub-basin, the company spudded KHALDA SW-X3, an exploratory oil-producing. It was drilled using the EDC-8 rig to a depth of 16,000 feet. Drilling Investments in the well amounted to \$3.808 million, and it is currently in the stage of appraisal.

Another exploratory oil-producing well is the MEGAHAR-1X. It was drilled using the ST-10 rig to a depth of 13,400 feet. Currently in the appraisal stage, the well has cost \$4 million in drilling investments.

KAH B-42X is an exploratory natural gas well, which attracted investments of \$1.66 million. The drilling operation was conducted using an EDC-84 rig to a depth of 13,500 feet. The well has yet to be added to Khalda's overall production.

Khalda's three new developmen-

tal wells, namely the WRZK-69, the SHROUK NE-1, and the UMB-209, were drilled the company's Western Desert concessions.

The WRZK-69 is an oil-producing well that was drilled to the depth of 6,800 feet using an EDC-65 rig. \$451,305 worth of drilling investments was pooled into the operation.

The SHROUK NE-1, also an oil-producing well, is located in the Shoushan Sub-basin. It was drilled to a depth of 6,500 feet via the EDC-61 rig with investments totaling \$710,000.

In its Umbarka field in Marmarica Basin, Khalda drilled the UMB-209 with investments worth \$1.444 million. The oil-producing well was drilled using an EDC-40 rig, to a depth of 12,000 feet.

None of the three developmental wells has been added to the company's overall production numbers.

Khalda has also completed drilling a water-injection well in Abu El Gharadiq South field, Abu Gharadiq Basin in the Western Desert, labeled AG-93. The well was drilled to a depth of 11,000 feet via an ST-6 rig, the cost of which has totaled \$3.901 million.

A joint venture between the Egyptian General Petroleum Corporation (EGPC) and American petroleum giant Apache Corporation, Khalda's production rates for the month of February stood at 4,194,049 barrels of crude oil and 4,363,393 cubic feet of natural gas.

Fuel Crisis Resurfaces



The car fuel crisis that had gripped Egypt towards the beginning of the year has struck once again, with queues at petrol stations lining the streets across the country.

Most petrol stations are unable to serve customers at many hours of the day due to a reported complete absence of supplies. The arrival of fuel tankers prompts massive crowding at stations.

All grades of fuel (80, 90, 92, and 95) are reported to be in short supply, with 90-octane fuel becoming a rarity across stations.

The Ministry of Petroleum has

blamed distributors for the crisis, claiming there is no shortage in the amounts supplied to them.

Authorities had similarly blamed the fuel crisis suffered earlier in the year, which had lasted several weeks, on distributors as well as panic buying resultant from rumors of a subsidy removal.

The fuel shortages had mostly abated following the peak of the crisis, causing many to believe the crisis was over, but recent weeks suggest the root of the problem is yet to be addressed.

Kuwait Energy Invests \$400 Million in Egypt



Kuwait Energy is estimated to have pumped approximately \$400 million of investments into the Egyptian petroleum sector, as the company increases exploration and production activities in the country.

As part of its drilling plan for the fiscal year 2011-2012, Kuwait Energy has conducted various drilling operations in Egypt. The company has completed the drilling of two new exploratory wells in the country.

One of the wells, dubbed W.AHMED-1X ST-1, was drilled in the company's Eastern Desert concession area and is currently in the appraisal stage. Drilling was conducted to a depth of 3,632 feet using the ECPC-1 rig, with costs reaching \$1.72 million.

The other exploratory well, the HAWALLI-1X well, was drilled in the Abu Sannan field in Kuwait Energy's Western Desert concession with investments of \$1.8 million. The well was drilled with a ZJ-46 rig to a depth of 6,500 feet, and produced a dry hole.

Kuwait Energy also achieved a new discovery in the Abu Sannan field at the beginning of March, via the Salama-1 well, the fourth find the company has made in the field following the GPZZ-4 and Ahmadi-1 wells in 2011 and the Jahra-1 well in January of the current year.

Initial production reports for the Salmeya-1 well

revealed preliminary commercial production of 5,600 barrels of crude oil per day. Kuwait Energy's overall production from the Abu Sannan concession is expected to reach 10,000 barrels per day.

The company owns a 50% share in the Abu Sannan concession; Dover Investments Limited and Beach Petroleum Egypt Limited own 28% and 22% respectively. Following the latest find, Kuwait Energy's discovery tally in Egypt has risen to 16 discoveries since the company began operating in the country in 2008.

Despite its relatively small size, the company's Egyptian operations contribute the largest share to Kuwait Energy's working interest; its production rate had reached 17,700 barrels of oil equivalent by the end of 2011.

Kuwait Energy operates in a number of areas in Egypt: Abu Sannan, Borg Al-Arab, RasQatara, the Gulf of Suez, and Al-Mesaha in Ganoub Al-Wadi near the Egypt-Sudan border. The company's total production has reached 23,000 barrels per day, up from 4,000.

Kuwait Energy was established in August 2005 in Kuwait as an independent oil and gas exploration and production company. Currently, the company operates in eight countries, namely Egypt, Yemen, Iraq, Oman, Ukraine, Latvia, Russia and Pakistan.

Assessment of Tanmia's Most Recent Activities

Egypt Oil and Gas's analytical report conducted to assess the drilling rigs leased by Tanmia Petroleum Company for oil and gas exploration has revealed the variety of rigs owned by the company in Egypt.

The company's TANMIA-1 rig was contracted by East Zeit Petroleum Company (Zietco) last February. The 1500 HP rig operates at a cost of \$18,500 per hour, and is contracted to drill three new wells and an optional fourth. The contract expires in June of the current year.

Sources have also confirmed that Tanmia has completed an agreement with Al-Amal Petroleum Company for the preparation of drilling plans and well maintenance programs. Drilling plans are already in place for the wells AMAL-18 and AMAL-19, and preparation of maintenance plans for the company's wells is currently underway.

Moreover, Tanmia succeeded in edging out veteran petroleum services companies to secure the bid round offered by the Aqqad Sons Company for five wells to be drilled in the northeast Eish Al-Melaha area.

The company also succeeded in winning an EGPC bid round for production facilities contracts for PetroAmir despite strong competition from other petroleum services companies operating in Egypt.

The facilities will be in PetroAmir's concession in the Eastern Desert as well as the East Ghazalat oil-

field in the Western Desert. Sources have confirmed that the new contract's value exceeds \$1 million per year.

In addition, Tanmia inked an early production facilities deal with the Gulf of Suez Petroleum Company (GUPCO) for its south Sinai concession. The company will lease the rig to GUPCO at the rate of \$750,000 per year, and the contract is to expire by 2013.

Tanmia's technical consultancy contract with Vegas Oil & Gas in the fields of drilling, production, and projects has also been renewed to extend until next September. Tanmia has successfully renewed its contract with oil company Edison for field production engineering as well, to extend until next December.

Tanmia has also sealed a deal for the provision of 2.1/4 P.C.P. pumps to Marina Petroleum Company for the Lagia field situated in RasSedr, Sinai.

Additionally, the company is providing technical expertise in a variety of fields in petroleum engineering to the companies of PetroAmir, North Sinai, and Al-Westani.

Founded in 2008, Tanmia is a petroleum services company operating in a wide range of activities encompassing services such as production facilities, field studies, production engineering and manpower, well test services, and drilling services.

Rountable Choice Words



“The market is very much a price market in Egypt and as a result it is deteriorating substantially”

”

Salah Hafez, Chairman of Petzed



“The ministry of petroleum is not against applying any technique that would mitigate the risk for exploration”

”

Mahfouz El Bony, First Undersecretary for Agreements



“I think we should be allowed to do more in terms of decision making according to what we see is needed for a specific project”

”

Ian Barden, Vegas General & Country Manager



“The coming bid round will contain an abandonment clause”

”

Mostafa El Bahr, Vice Chairman for Exploration & Agreements - EGAS



“we really need to deregulate the market and leave the economics to the international partners”

”

Tawfik Diab, Managing Director PICO International

Agiba Expands in the Western Desert

Agiba Petroleum Company has completed the drilling of four developmental wells located in the Western Desert as part of its 2011-2012 development plan.

Sources revealed that AGHAR E-10, a crude-producing well located in the West Razzak development lease in Abu Gharadiq Basin, was drilled using the PDI-147 rig to the depth of 6,500 feet. Agiba invested \$1 million in drilling and has yet to add the new well's output to its overall production levels.

Also situated in West Razzak is AGHAR-20, which was drilled last February. It is an oil-producing well spudded via the W.F-147 rig to the depth of 6,300 feet. Drilling investments reached \$800,000 in drilling the well, which was operated via the W.F-147 rig, reaching the depth of 6,300.

AMAN 52 is a gas-producing well located in the Meleiha development lease. Using the ST-8 rig, the well was drilled to a depth of 6,300 feet, with drilling expenses totaling \$743,000.

AMAN 53 is another gas-producing well, located in the Meleiha concession. It was drilled to the depth of 6,300 feet utilizing

the PDI-92 rig, the cost of which amounted to \$746,000.

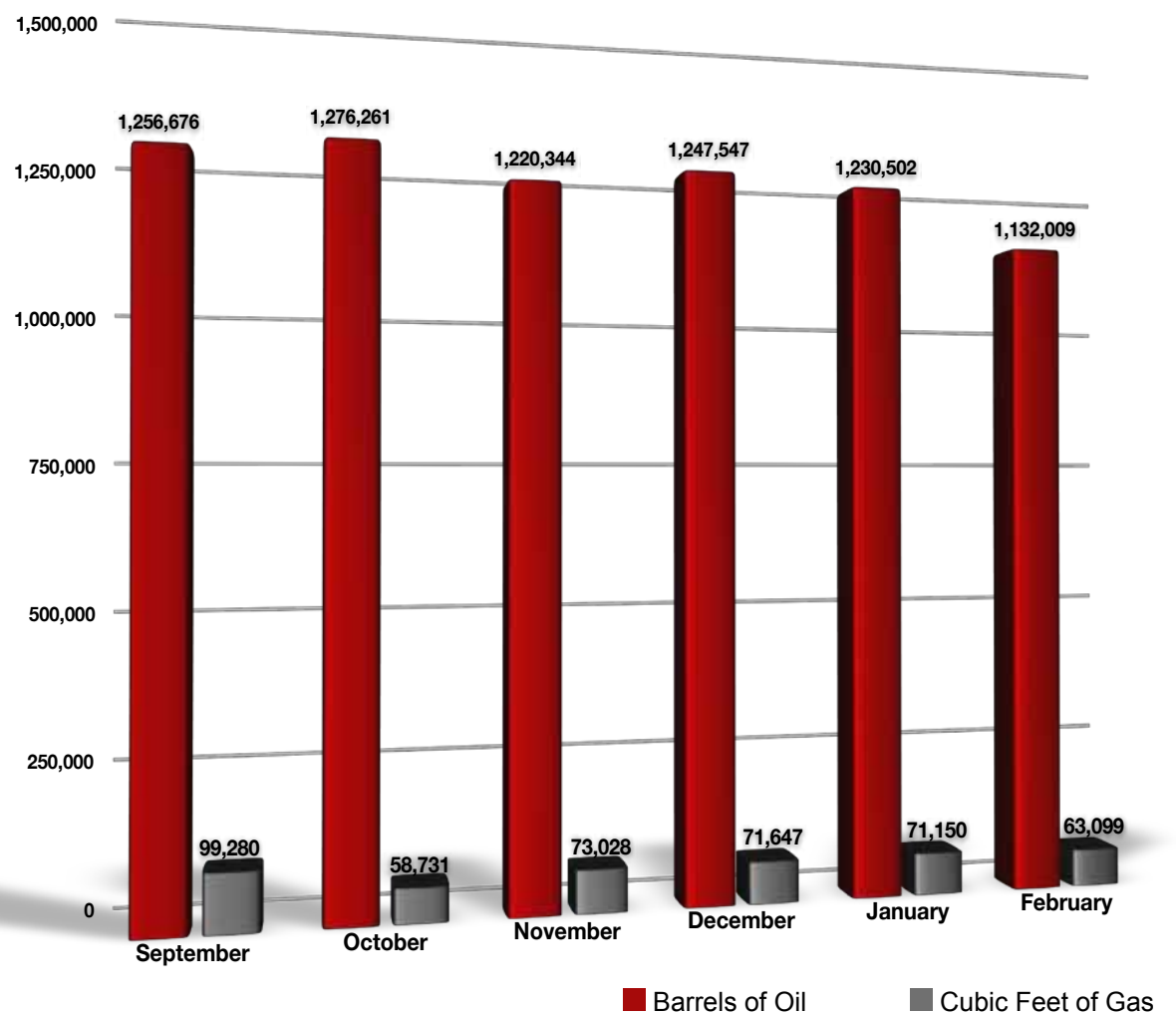
Egypt Oil & Gas conducted a brief analysis to assess the performance of Agiba Petroleum over the past six months. The analysis concluded that from September of 2011 to February of 2012, the company's production rates averaged 1,227,223 barrels of crude oil and 72,822.5 cubic feet of natural gas.

The company's production of crude peaked in October 2011, standing at 1,276,261 barrels. After which, production rates of crude fluctuated over a downward trajectory, reaching 1,132,009 barrels last February.

As for Natural Gas, Agiba's production numbers stood at 99,280 cubic feet in September 2011 and witnessed broader fluctuations as opposed its crude rates, however reaching bottom last February, standing at 63,009 cubic feet.

Agiba is a joint-venture company that includes Eni with 28%, Lukoil Overseas with 12%, the International Finance Company (IFC) with 10%, and the Egyptian General Petroleum Corporation (EGPC) holding the remaining 50%.

Agiba's Production Rates Over the Past Six Months



Apache Drills Dry Hole in the West Kalabsha Block, Western Desert



Copyright Apache Corporation

American Apache Corporation has concluded drilling operations for a wildcat well, labeled TELL-1X, located in the company's West Kalabsha block in the Western Desert. The operation comes as part of Apache's drilling plan for the current fiscal year 2011-2012.

Sources have placed drilling investments in the well at \$4.201 million. It was drilled via the EDC-59 rig to the depth 15,240 feet. Post drilling assessment has revealed the well to be a dry hole.

Apache Corp. is an oil exploration and development company with operations in various countries including the US, Australia, Canada, Argentina, the UK, and Egypt. The company produces an approximate 265,000 barrels of oil and 1.5 billion cubic feet of natural gas per day. The company operates in Egypt through Khaldia Petroleum and Qarun Petroleum, both of which are jointly owned by the Egyptian General Petroleum Corporation (EGPC).

Change of Hands at EGPC

Following rumors and speculation regarding who will take over the role of Vice-President for oil & Gas production at the Egyptian General Petroleum Corporation (EGPC), Egypt Oil & Gas's sources have confirmed that Eng. Abed Ezz El Regal, President of Tanmeya Petroleum Company, has been appointed for the position.

Eng. Ezz EL Regal will take over from Eng. Ali Meera, his predecessor in the position, after several oil production company managers were tipped for the role.

In related news, the EGPC has taken a decision to appoint Hisham Ateya Vice-President of the EGPC for company regulation, replacing Eng. Mohammed Bakr.

A number of EGPC employees had requested that the positions of EGPC Vice-President be filled from within the corporation itself, owing to the long time span required for outsiders to learn and adapt to the work-

ings of the organization.

Eng. Amin Abd El Monsef had been a popular potential replacement for Eng. Ali Meera. Employees cited the need for stability in the vital petroleum sector as their reasoning for favoring Eng. Abd El Monsef.



Zeitco Drills New Gulf of Suez Well

East Zeit Petroleum Company (Zeitco) has completed drilling a new oil-producing well in its concession area in the Gulf of Suez. The operation comes in fulfillment of the company's development plan for the current fiscal year 2011-2012.

The new well, dubbed A-12A ST-1, was drilled via the BAHRI-1 rig to the depth of 12,250 feet. Drilling investments in the well have reached \$10.31 million. Production of the new well has already been added to the Zeitco's overall production numbers.

The company's production rate of crude oil reached 90,190 barrels in February 2012, while its natural gas production stood at 2,964,286 cubic feet during the same month.

East Zeit Petroleum Company is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and British operator Dana Petroleum.

Norpetco Spuds New Western Desert Well

The North Baharia Petroleum Company (Norpetco) completed drilling activities for the company's new ABRAR-4 developmental well in its concession in the Western Desert towards the end of February. The well is part of the company's drilling plan for the current fiscal year 2011-2012.

Drilling was conducted to a vertical depth of 6,770 feet, at a cost of \$2.5 million. The oil-producing well was added to the company's overall production in the month of February.

The company's production of crude oil reached 562,415 barrels in the same month.

The North Baharia Petroleum Company is a joint venture between the Egyptian General Petroleum Corporation (EGPC) and Sahari Oil Company.

EGAS Shuts Down Gas Pipeline to Israel

Ampal-American Israel Corporation, a holding company in the business of acquiring and managing interests in various businesses, announced that it has been advised by East Mediterranean Gas Co. ("EMG"), in which Ampal has a 12.5% interest, that around 20:00 tonight there was an explosion along the Egyptian gas pipeline, approximately 10 kilometers (west of Al Arish, due to an alleged terror attack. The pipeline is owned and operated by GASCO, the Egyptian gas transport company, which is a subsidiary of EGAS, the Egyptian national gas company (EMG's gas supplier).

Following the explosion EGAS has initiated its standard shut down procedure affecting gas transportation throughout the Sinai area and gas supply to major Egyptian industries and gas consumers in the Sinai including cement factories, power stations and homes in Al Arish, as well as exports of gas to Israel (through EMG) and Jordan.

The extent of the damage to GASCO's pipeline and the estimated repair period are unknown at this point. Neither EMG's site nor EMG's pipeline were damaged as the affected GASCO's pipeline is not a part of the EMG pipeline system.

Petrosilah Drills new Well in Fayoum Development Blocks

Petrosilah Petroleum Company has completed the drilling of a new developmental well onshore Gindi Basin located in the company's Fayoum development blocks in Western Desert. The operation comes in the context of Petrosilah's drilling plan for the 2011-2012 fiscal year.

At a cost of \$1.71 million, the new well, SILAH-8, was drilled to the depth 7,185 feet using the EDC-53 rig. The oil-producing well was added to the company's total production numbers.

The company's monthly production stood at 104,086 barrels of crude oil last February, down from 106,705 barrels in January.

Petrosilah is a subsidiary of the US-based Merlon International and is jointly owned by the Egyptian General Petroleum Corporation (EGPC).

Abo Qir Completes Mediterranean Well

Abo Qir Petroleum Company has concluded the drilling of a new exploratory well in the company's development concession in Abu Qir North field, offshore Nile Delta as part of its drilling plan for the 2011-2012 fiscal year.

The natural gas-producing well, labeled NOQ PII-5 ST-1, was drilled via the use of the O.SPUR rig to a depth of 11,445 feet. Costs

of the operation reached \$17.6 million.

Abo Qir's output during the month of February reached 1,358,440 cubic feet of natural gas and 167,643 barrels of crude oil.

Abo Qir is a joint venture between the Egyptian General Petroleum Corporation and the Improved Petroleum Recovery Group (IPR).

BP Egypt to support Egyptian Olympic and Paralympic National Teams

BP, commemorating nearly half a century of successful activities in Egypt, has announced the signing of agreements with the Egyptian Olympic Committee and the Egyptian Paralympic Committee to support the national team and selected athletes in the run up to the London 2012 Olympic and Paralympic Games.

A signing ceremony was held in BP Egypt's premises where BP senior management celebrated BP Egypt's role as the official oil and gas partner of the Egyptian Olympic Committee and Egyptian Paralympic Committee. During the ceremony, BP Egypt also signed rights agreements with six Egyptian Athlete Ambassadors for the London 2012 Games. BP Egypt is supporting the following Egyptian Olympic athletes: Aya Medany (Modern Pentathlon), Hesham Mesbah (Judo) and Tarek Yehy (Weightlifting).

In addition BP Egypt is providing support to the following Egyptian Paralympic athletes: Mustafa Fathallah (Athletics), Ibrahim Ahmed (Athletics) and Fatma Omar (Weightlifting).

Hesham Mekawi, Regional President of

BP Egypt, said during the signing ceremony, "At this truly unique moment in our country's history, we are delighted to be supporting the Egyptian Olympic and Egyptian Paralympic Committees and our Egyptian athletes as they head for the Games. It will be an exciting time for the entire nation as we watch the progress the Egyptian athletes make in their efforts to bring home medals." He added, "We are confident that this special partnership helps us to develop even stronger links with our community and partners."

"This is the first time, since the establishment of the Egyptian Olympic Committee in 1910 that we partner with an oil and gas company, and for us this partnership with BP Egypt is

very significant," said Mr. Mahmoud Ahmed Ali, Chairman of the Egyptian Olympic Committee.

Dr. Ashraf Marie, Chairman of the Egyptian Paralympic Committee said, "I'm proud of this partnership with BP Egypt, and the entire Egyptian Paralympic Committee believes this partnership will help all our Paralympic athletes."



Guest Column



Petroleum Exploration and Production Agreements Regimes

There are three main regimes of contractual agreements regulating the petroleum exploration and exploitation activities around the world. In addition, there are hybrid systems that combine the characteristics of more than one of these regimes. The major types are:

Concession Agreement: In this regime, the petroleum company owns the entire hydrocarbon output. The state (or its national company) is only entitled to the royalty, income tax and other type of taxes that are imposed by the state. This regime is commonly adopted in Australia, Norway, Peru, Brazil and other countries.

Production Sharing Agreement: This type of regime compels the recovery of the contractor exploration, development and operations expenses and expenditures before dividing the production between the state (or its national company) and the contractor according to the volume of production. In some countries, such as Egypt, the state [or its national company (EGPC, EGAS or Ganoub)] bears and pay the royalty and contractor's income tax, which is based on the contractor's net profit, from its share of production. In other countries, the royalty deducted from the total production before the distribution of production. In this type, the contractor's entitlement is paid by a share of the produced hydrocarbon. This type of agreements is prevalent by Egypt, Algeria, Qatar, Malaysia, Angola, Nigeria and other countries.

Risk Service Agreement: In this type of contractual regime, the produced hydrocarbon is completely owned by the state (or its national company) and the contractor is not entitled any portion of the produced hydrocarbon. The contractor is only entitled a fee for services rendered, usually paid in cash. However, in some countries such fee is decided in accordance to the prices of the international market price on the payment day. This type is used in Argentina, Iran and Kuwait.

There are other types of petroleum exploration and production agreements; however, these types are derived from the three main regimes and they're limited in use. Examples of these types include tax royalty model, buy-back contract, participation agreements and technical service contracts.

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Chinese Diplomatic Maneuvers in the Sudans Oil Fiasco



As former foes Sudan and South Sudan try to break a long running deadlock over a furious oil dispute, economic giant China is forced into a difficult juggling of allegiances between the rivals.

While Juba and Khartoum resumed talks last month to resolve a bitter row, some fear risks tipping them back into war. Beijing is balancing support to both old ally Sudan and newly independent South Sudan, source of five percent of its oil.

Tellingly, Sudanese Foreign Minister Ali Karti paid a visit to their longstanding ally in Beijing before the latest round of African Union-mediated negotiations began.

Chinese Vice President Xi Jinping has cautiously called on Khartoum and Juba “to continue to keep patient and properly handle the relevant dispute at an early date.”

It is a statement that reveals “the delicate balancing act” China has been forced to tread, said Laura Barber of the London School of Economics.

“Unlike other international actors keen on a resolution, China does have leverage on both sides,” Barber added.

The two countries have been at loggerheads since the South split from the north in July, threatening to reignite conflict between the two former civil war foes.

Oil has been a major sticking point in the talks, since Juba took 75 percent of oil at independence but Khartoum controls processing and export facilities.

Key issues also include border demarcation and the future of the contested Abyei region, claimed by both sides but occupied by Khartoum’s army.

Juba took the drastic decision to halt production in January, despite oil making up 98 percent of its revenue, after Sudan started seizing the crude in lieu of a deal on transit fees.

China, a key ally and largest economic partner of diplomatically isolated Sudan, helped Khartoum to become a major exporter of oil.

It has also supported Khartoum militarily during its two decade long fight against the then southern rebel Sudan People’s Liberation Movement (SPLM), now the party in power in Juba.

However, since a 2005 peace deal

that paved the way for South Sudan’s independence referendum and final separation last July, China has been careful to also carry favors with the Southerners.

“Beijing is in a precarious position, caught between an old friend, the North, and a new friend, the South,” said Stephanie Kleine-Ahlbrandt, of the International Crisis Group think-tank.

“Although the majority of its oil and its economic interests are now in the South, Beijing does not give up easily longtime friends,” the China specialist added.

Tensions are high between the rivals, with both accusing the other of backing proxy rebel forces against the other, while Juba has said Khartoum has bombed oil fields along their volatile and disputed border, claims Sudan denies.

“Sudan was one of China’s first focuses in its “go out” campaign and is one of China’s military allies,” Kleine-Ahlbrandt added, referring to Beijing’s push to invest abroad during the 1990s.

“Therefore, despite the bleak economic outlook in the North, Sudan will likely continue to hold an important place in Beijing.”

But its influence and economic clout in Juba is strong too.

“Five percent of China’s oil imports came from Sudan in 2008,” said Matthew Bell of Frontier Economics institute, with that oil now owned by South Sudan since independence, a daily output of some 350,000 barrels.

“The China National Petroleum Corporation is the biggest equity partner in all but one of the fields producing before the shut-down.”

The brief kidnapping of 29 Chinese workers in Sudan’s South Kordofan in January, followed in February by the expulsion of the Chinese head in Juba of the Chinese-Malaysian oil company Petrodar, illustrated the challenges it faces.

China must also weigh up whether or not to finance a pipeline to export South Sudan’s oil via Kenya — a project likely to provoke angry reaction from Khartoum.

Beijing is highly unlikely to abandon its involvement in the two neighboring rivals, but some Chinese analysts are questioning the degree of such involvement.

Kenya Offer New Blocks for Exploration

Kenya has marked out eight new offshore oil blocks to be opened up for leasing by exploration firms, stated senior energy ministry officials.

Exploration interest in Kenya and its neighbors in eastern Africa has increased after oil deposits were found in Uganda and natural gas in Tanzania and Mozambique.

At least five oil companies are already jostling for the new blocks, which the east African nation had initially expected to list in the Kenya Gazette by the end of February, but according to Reuters, delays arose due to errors while surveying the blocks.

Their listing in the weekly government publication makes it legal for them to be leased out for exploration.

France’s Total, Norway’s Statoil, Brazil’s Petrobras, New York-listed Apache Corporation and UK’s Tullow Oil Plc had expressed interest in the blocks.

“The companies specified they wanted deepwater offshore blocks,” Alfred Odawa, a consultant geologist at the energy ministry, told Reuters.

The blocks will be to the east of existing ones off the coast of Kenya, and

will bring the total number of exploration blocks in the country to 46.

The blocks will have areas of between 10,000 square kilometers and 15,000 square kilometers and between 2,600 and 4,000 meters deep.

Explorers are already active on other blocks, collecting and analyzing 2D and 3D seismic data and drilling exploratory wells.

“The survey kept making mistakes. We corrected them ... it’s not a small exercise. Now, they are ready,” stated Martin Heya, the commissioner of petroleum at the Kenyan Ministry of Energy.

Heya added that Total had signed a preliminary agreement for the rights to one of the blocks.

Earlier last month, British oil firm Afren started the acquisition of 1,800 kilometers of 2D seismic data in Block 1, in northeastern Kenya.

Canadian oil and gas firm Africa Oil Corporation is drilling in block 10BB in the Lokichar Basin.

Kenya itself is yet to strike any oil or gas despite sinking at least 32 exploratory oils since independence in 1963.

BG Announces Fourth Gas Discovery in Tanzania

BG Group today announced its fourth Tanzanian gas discovery from the Jodari-1 exploration well located in Block 1 offshore southern Tanzania. Preliminary evaluation of the well results indicates gross recoverable resources are in the range of 2.5 to 4.4 trillion cubic feet of gas.

The partnership of BG Group (60% and operator) and Ophir Energy plc (40%) have had exploration successes in all four wells so far drilled in Tanzania, with mean total gross recoverable resources currently estimated to be approaching some 7 trillion cubic feet of gas.

Jodari-1 is located approximately 39 kilometers offshore southern Tanzania and in a water depth of 1,150 meters. It is part of the current three-to-four well exploration program, which also includes the acquisition of 2,500 square kilometers of 3D seismic data in Block 1.

The next target for drilling is the Mzia-1 location in Block 1, some 23 kilometers to the north of Jodari-1. The discoveries announced previously are Chaza-1 in Block 1, and the Chewa-1 and Pweza-1 discoveries in Block 4.

BP joins Serica in Namibia Exploration

Oil supermajor British Petroleum (BP) announced joining the London-listed Serica Energy in the exploration of the 0047 concession offshore Namibia by farming-in to Serica’s interest.

Covering the 2512A, 2513A, 2513B and part of 2612A blocks, the concession was recently awarded to Serica Energy Namibia B.V. (a wholly owned subsidiary of Serica) and covers an area of approximately 17,400 square kilometers in the deep water central Luderitz Basin.

Serica currently has an 85% interest in the blocks, while the National Petroleum Corporation of Namibia (NAMCOR) holds a 10% interest, and the remaining 5% held by Indigenous Energy (IEPL.) The interests of both NAMCOR’s and IEPL’s are carried by Serica for prescribed work programs.

BP agreed to pay to Serica a sum covering Serica’s past costs and earn a 30% interest in the concession by meeting the full cost of an extensive 3D seismic survey. As a result of the farm-out, Serica’s interest in the concession following completion of the seismic survey will be 55%. Serica has also announced that it has signed a contract with Polarcus Seismic Limited to acquire up to 4,150 square kilometers of 3D seismic across the concession area.

The deep-water geological basins offshore Namibia, including the Luderitz Basin, are at the early frontier stage of exploration. Although the presence of very large structures have been shown to exist from seismic surveys, very few wells have been drilled in the deeper water Na-

mibian basins to date and the full hydrocarbon potential of the area has not yet been fully tested. Water depths in Serica’s Luderitz Basin blocks range from 300 to 3,000 meters. Drilling in these depths of water, whilst becoming more commonplace in the industry, requires sophisticated drilling techniques and equipment, which is quite costly.

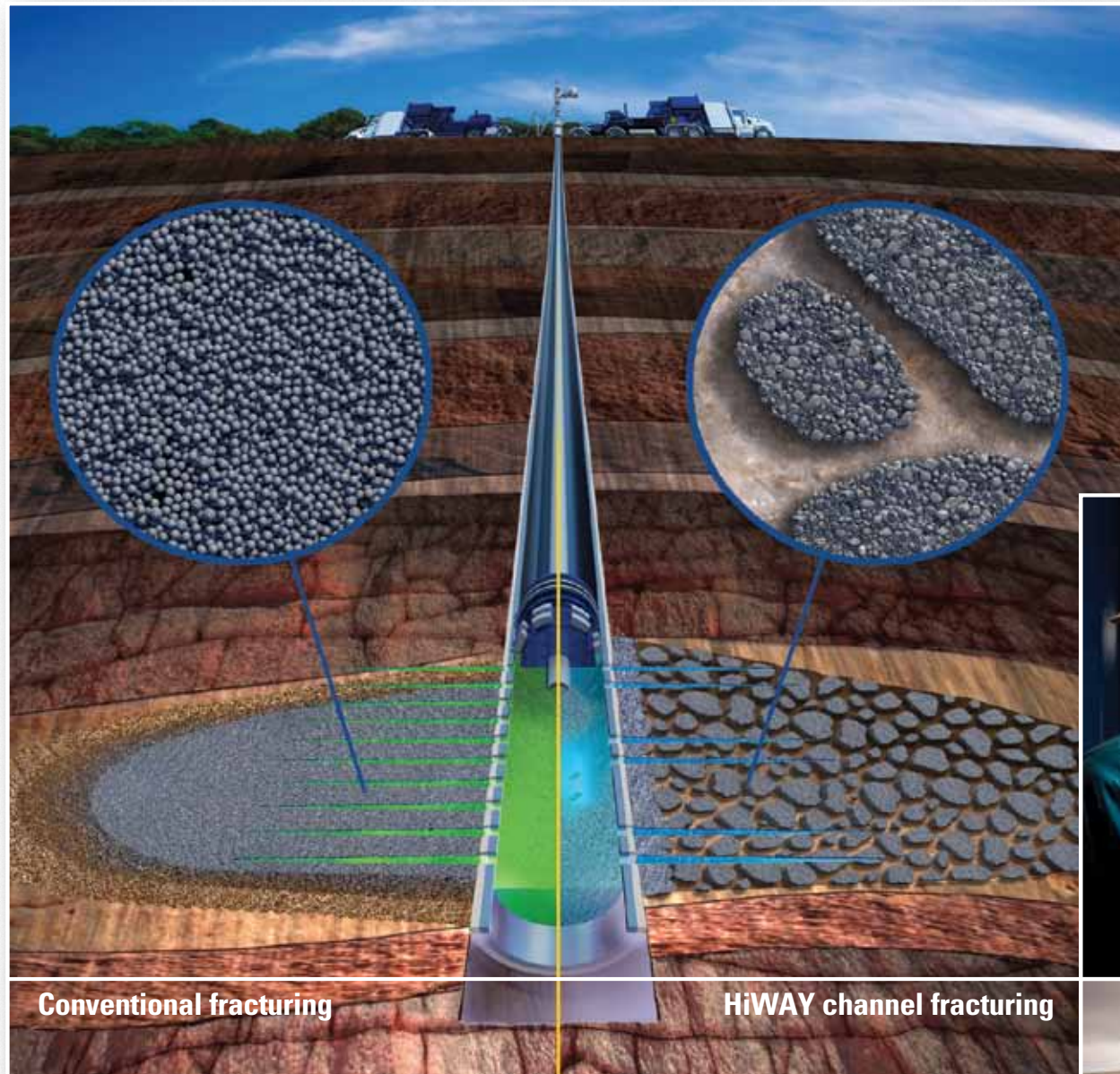
Serica has therefore granted an option for BP to increase its interest in the concession by meeting the full cost of drilling and testing an exploration well to the Barremian level before the end of the first four-year exploration period. In the event that this option is exercised, Serica’s interest in the concession will be 17.5% carried through the first well, which will have very considerable value if the exploration drilling is successful.

Serica will continue to be the operator of the concession during the initial seismic period with BP taking over as operator if it exercises its option to drill and test a well.



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BP Settles Oil Spill Victim Lawsuits for \$7.8 Billion

British oil giant BP has reached an agreement to settle the lawsuits filed by 110,000 businesses and individuals affected by the Deepwater Horizon accident in the Gulf of Mexico and the subsequent oil spill.

The settlement is estimated to be worth \$7.8 billion, which marks it as one of the largest class-action settlements in history, although no cap for compensation was agreed upon. BP expects the money to be taken from the \$20 billion compensation fund set up by the company in the wake of the disaster. Currently, the fund's assets are estimated to be \$9.5 billion.

BP shares rose by more than 2 percent in the hours following the announcement of the settlement.

"From the beginning, BP stepped up to meet our obligations to the communities in the Gulf Coast region, and we've worked hard to deliver on that commitment for nearly two years," said BP CEO Bob Dudley.

BP is yet to settle with its biggest legal opponent, the U.S. government, as well as states affected by the spill, and its drilling partners in the Deepwater Horizon project. Claims by the government in particular could amount to billions more, but some analysts are predicting a gentler settlement for BP due to the lower-than-expected settlement with individual plaintiffs.

The 2010 accident was caused by deep well pressure, which led to the explosion of a massive oil rig, resulting in the death of 11 workers and an oil spill considered the worst spill in U.S. history. The spill took nearly three months to contain, damaging beaches, killing wildlife, and forcing the closure of commercial fishing areas in the process. BP chief Tony Hayward was forced to step down following several PR blunders, and the company was pulled into a long-running crisis.

Iraq Oil Production Breaks 3 Million bpd

Iraq's oil production surged to reach over 3 million barrels bpd, the highest it has been in more than three decades, according to Iraqi officials.

"While I am talking to you today, Iraqi oil production has exceeded 3 million barrels per day," Deputy Prime Minister Hussein al-Shahrastani said in a speech at the oil ministry in Baghdad.

Iraq's production averaged 2.7 million bpd in 2011, which has risen to 3 million bpd. OPEC estimates place production at just 2.68 bpd for the month of February, however; exports are generally hampered by a lack of export infrastructure.

The conference also witnessed the announcement of the completion of a new floating oil terminal with an export capacity of 850,000 to 900,000 bpd. The facility is the first of five planned terminals, with the aim of enhancing the country's overall export capacity.

Iraqi exported an average of 2.106 million bpd in the month of January 2012, which fell to 2.014 million in February 2012. Officials blamed bad weather in the Gulf for the decline.

Baghdad seeks to substantially in-

crease both production and exports of oil in the coming years. Oil Minister Abdelkareem Al-Luaybi revealed that Iraq is targeting production of 3.4 million bpd and exports of 2.6 million bpd within the current year. The country's long-term plan hopes to boost production to an ambitious 12 million bpd by 2017, according to officials, but this is a projection which the IMF considers unlikely.

The Iraqi government has concluded service contracts with international companies for the development of 12 oil fields, but exploration in the north of the country has been held back by a growing rift between the Kurdish Regional Government (KRG), which rules the Iraqi region of Kurdistan autonomously, and the central government in Baghdad. The Kurdish authorities have begun offering contracts to international firms, while the central government has vehemently denied their right to do so.

Iraq, which relies on oil for more than 90% of its budget, is home to estimated reserves of 143.1 billion barrels of oil as of 2010, according to official sources.

Iran Oil Production Hits 10-Year Low

Iranian production of crude oil dropped to a ten-year low in the months leading up to the full implementation of an European Union (EU) embargo on Iranian oil imports, according to the International Energy Agency. The Paris-based Energy watchdog estimated that production fell by 50,000 bpd to 3.38 million bpd in February.

Iranian production has witnessed steady decline under pressure from international sanctions aimed at curbing the country's nuclear program. The announcement of impending sanctions EU sanctions, to be adopted by July 1st, has dealt further damage to an already ailing industry.

The IEA also expects Iranian oil exports to dive as a result of the EU sanctions. The energy agency's forecasts predict a drop of as much as 50% in exports, from 800,000 to 1 million bpd.

A number of Iran's Asian buyers have decreased purchases of oil from the country in the wake of the EU's announcement of sanctions, including China, the biggest buyer of Irani-

an crude, which drastically decreased imports by roughly 50% in January.

Iranian oil minister Rostam Qasemi claimed that his country's reliance on oil revenues is decreasing, and accused Western countries of utilizing oil as a political weapon.

He said: "We have never utilized oil as a political or military weapon or instrument. Those who have used a weapon in that manner, they will see the outcome of what they have done."

Falling market supply and uncertainties regarding regional security in the Middle-East have pushed oil prices by 20% since December, with the prospect of a war involving Iran keeping markets nervy.

Saudi Arabian oil minister has made assurances that the kingdom will compensate any shortfall in global oil supply caused by the Iran situation, easing tensions somewhat and prompting a 0.6% drop in crude prices.

Iran is one of the world's richest nations in terms of oil, holding approximately 10% of the world's proven oil reserves.

Brazil to Charge Chevron and Transocean Executives

Brazilian prosecutors have announced their decision to file criminal charges against 17 executives from US oil company Chevron and drilling contractor Transocean. The decision comes in the wake of a new leak of crude near an offshore well which witnessed a high-profile leak in November of last year.

The executives, who include George Buck, the chief operating officer for Chevron's Brazil division, are to face a federal court for charges which include environmental crimes. The reported nationalities of the executives are: five from the US, five from Brazil, three Australians, two French, one Canadian and one British national.

A Brazilian court has ordered travel bans on all 17 executives until the end of the investigation.

Chevron, already facing a multi-billion dollar suit as a result of November's spill, has refused to comment on the situation, claiming the company has not yet been notified.

Chevron had earlier suspended production in Brazil after announcing the detection of a "small new seep" of crude oil in the same well. The spill was later confirmed when the Brazilian Navy discovered an oil stain on the ocean surface.

The well, situated in the Frade field 370km off the coast of Rio de Janeiro, suffered a spill last November in which 3,000 barrels of crude oil leaked into the ocean.

Brazil's National Petroleum Agency (ANP), the country's oil regulator, explained that the new leak was not coming from the well, which has been sealed. According to the ANP, the leak came from cracks in the ocean floor.

It is estimated that at least 50 billion barrels in oil wealth are located off Brazil's coast. The Frade field, the biggest foreign-run oil field in the country, produces about 60,000 barrels a day and has a capacity of approximately 80,000 barrels a day, more than 3% of Brazil's total output.

Aramco and Sinopec Sign Agreement of Cooperation



Saudi Aramco, Saudi Arabia's state-owned oil company, has inked a preliminary agreement of cooperation with China Petroleum and Chemical Corp., or Sinopec. According to Sinopec, the agreement spans a wide range of fields, which include oil exploration and development, petrochemicals and refining.

The agreement will also cover close cooperation on sales, trading, and project engineering, Sinopec said.

The memorandum of understanding which outlines the agreement was signed in Beijing by Aramco CEO Khalid Al-Falih and Sinopec Chairman Fu Chengyu.

The two companies are currently working on developing a refinery at Yanbu on the Red Sea coast in Saudi Arabia, in accordance with a deal inked earlier this year. The refinery will be capable of processing 400,000 bpd when completed.

Aramco currently exports an estimated 240,000 barrels of crude oil per day to a joint venture refinery operated by Sinopec in the Fujian province of China, a refinery in which Aramco holds a stake of almost 25%.

China's Premier Wen Jibao had called on China in January to further open up its petroleum sector to Chinese investments. China relies heavily on Saudi oil exports to meet its growing energy needs

Shell Completes First Shale Gas Deal in China

Royal Dutch Shell has concluded the signing of the first ever production-sharing contract for shale gas in China with Chinese state-run energy firm CNPC. The deal is part of China's efforts to increase investment and thus boost development of its shale gas reserved.

The deal is for shale gas production, exploration and development in the Fushun-Yungchuan, a 3,500 square km in China's Sichuan province. Shell and CPNC will share production from the block. The value of the agreement, which is still awaiting government approval, has not been dis-

closed.

The contract was inked by Vice-President of PetroChina Co. Zhao ZhengZhang and Shell Companies in China Executive Chairman Lim Haw-Kuang in Beijing. The signing ceremony was attended by Shell Chief Executive Peter Voser.

Voser stated: "We are delighted about this new milestone in our strategic cooperation with CNPC. China has huge shale gas potential and we are committed to making a contribution in bringing that potential into reality."

Shell claims it has procured more than \$1 bil-

lion worth of equipment and services from China in 2011, including \$300 million for upstream operations in China. The company plans to drill as many as 25 wells in China this year.

Shell is the latest oil giant to partner with China in pursuit of developing the country's shale gas, following companies such as BP and Chevron.

China is looking to generate 10% of energy needs from natural gas by 2020, up from the current percentage of less than 5%, in order to decrease dependency on coal which accounts for 70% of the country's energy mix, as well as oil

imports. China has already pooled significant investments into US and Canadian shale gas reserves.

China is estimated by the U.S. Energy Information Administration to have 50% more shale gas reserves than the U.S., which is the world's biggest gas producer. The agency places China's shale gas wealth at 1.275 trillion cubic feet of recoverable gas, which is more than 12 times the country's conventional natural gas reserves.

Petrochemicals Aspirations Foiled by Ethane Scarcity

The Middle East petrochemicals sector is facing new challenges to maintain its competitive edge as lost-cost ethane feedstock becomes less available, according to an industry expert.

The region's established producers enjoy the some of the highest margins in the world, based on price-capped feedstock to produce ethylene and its derivatives.

Graham Hoar, vice-president of energy consultancy Nexant, Middle East, expects regional producers to move further down the supply chain, producing more specialty chemicals to maintain profitability.

"Ethane continues to provide the basis for competitive advantage for ethylene derivatives," said Hoar, speaking at a Middle East Petrochemicals conference in Dubai. "[But] reduced methane and ethane availability is driving Middle East investment down the value chain."

Petrochemicals giant Saudi Arabia basic Industries Corporation

(Sabic), which has focused on high-volume commodity products, is aiming to generate 30 per cent of its sales from specialty chemicals by 2020.

Due to the limited availability of ethane feedstock, many of the future cracker projects will be based on heavier feedstock, such as naphtha.

"Gas is no longer the huge excess resource it used to be, with the exception of Qatar," said Hoar.

The US petrochemicals sector has also become more competitive due to the surge in shale gas production, which is used as feedstock for crackers. Hoar said 81 per cent of US crackers are now capable of using light feedstock.

Middle East petrochemicals producers are also likely to face competition from the development of new processing routes, especially coal to monoethylene glycol (MEG) technology in China, methanol to olefins, and biopolymers.

Noble Energy Considers Pipeline Offshore Cyprus

Cyprus' newspaper Politis reports that the U.S.-based oil and gas exploration and production company, Noble Energy, is contemplating building a natural gas pipeline to connect a natural gas field offshore Cyprus to the mainland.

The Politis says that Noble, the operator of the Cyprus' Block 12, if the plans become a reality, will spend approximately \$2 billion for the setting up of the 300 km long pipeline which will transport natural gas from the block to the still not-approved LNG terminal. According to the Politis, the construction of the LNG terminal will require an investment of \$10 billion.

Further, the newspaper writes that Noble has already hired a survey vessel, the Odin Finder, for seabed mapping in order to find the best possible route for the pipeline. Noble recently reported that the Aphrodite field in Block 12 may contain 5.2 trillion cubic feet of natural gas. The field borders Israel's economic waters and part of the strata could run over into the Pelagic license of Teddy Sagi and Beny Steinmetz.

Israel is yet to announce if it will support a partnership in a Cypriot LNG installation or prefer to set up its own installation in Israeli waters. The decision is expected to be made only after publication of the recommendations of an inter-ministerial headed by Shaul Tzernach on Israel's gas production sector. Publication of the recommendations is expected at the end of this month after being postponed for 30 days.

On the other side, Turkey, which has opposed Cyprus' decision to let Noble Energy explore for natural gas in Cypriot waters, has its own plans.

As a response to Noble's start of drilling offshore Cy-

prus, Turkey and a self-declared state of Northern Cyprus, last year signed a "Petroleum Services and Production Sharing Contract". According to the agreement Turkey is allowed to search for oil and gas reserves offshore/onshore Northern Cyprus.

Turkey has, since then, completed seismic data acquisition, using its survey vessel Piri Reis, and according to Reuters, plans to start drilling offshore Cyprus by the end of the month.

Reuters quoted Mehmet Uysal, a TPAO chief executive officer as saying: "We're starting drilling in northern Cyprus in the coming days ... We have started shipping our equipment there."



SPX to Provide Condensers for Largest Geothermal Plant in Kenya

SPX Heat Transfer, a unit of American company SPX Corporation, has won a contract to supply four advanced direct contact condensers (ADCCs) for a geothermal power plant currently under construction in Kenya.

SPX segment president Drew Ladau said: "The advanced direct contact technology used within our condensers has gained significant momentum worldwide owing to the technical advantages it provides."

According to SPX, the company's ADCC technology offers many technical advantages, including high thermal efficiency, low liquid/vapor side pressure drop, and low susceptibility to fouling and/or corrosion.

The ADCCs will be provided in order to serve four Toshiba 70MW steam turbines at the new plant, which is being built by the Kenya Electricity Generating Company in Olkaria, roughly 100km northwest of the capital Nairobi. The 280MW plant is the largest geothermal power project ever to be undertaken in Kenya, with an overall expense of \$1.2 billion.

Financing for the Olkaria project will be jointly provided by the Kenya Electricity Generating Company and the government of Kenya as well as multi-lateral lenders such as the World Bank, the European Investment Bank and the French Development Agency.

The condensers contract was awarded to SPX by Hyundai Engineering, the full turnkey contractor for Kenya Electricity Generating Company's Olkaria and IV geothermal plant projects. Both projects are expected to be completed by April 2014.

Kenya is a heavy investor in geothermal power, capable of generating a potential 7,000-10,000 MW of electricity through geothermal sources. Official sources expect

geothermal power to make up 30% of all power output by 2030.

The country is looking to spend up to \$50 billion in the coming 20 years in order to cope with rising annual growth of electricity demand.

Dubai to Issue Solar Park Bid Rounds

The Dubai Electricity and Water Authority (DEWA) has announced its intention to issue bid rounds for the emirate's Dh12 billion solar park by next September. The Muhammad bin Rashid Al-Maktoum solar park is aimed at generating 1,000MW by the year 2030.

2.5 billion Euros of investment have been pooled into the project so far, which is set to become the largest solar park in the Persian Gulf. Bids for the first 10MW unit, which is to become operational in 2013, will be issued in the third quarter of this year, and the contract is to be issued in the fourth quarter.

The park, which will cover a 48 square km area along the Dubai-Al Ain highway, will be divided into two sections, one for photovoltaic power and one dedicated to concentrated solar power (CPS).

"Photovoltaic energy will be given precedence over CPS, since it has fewer interconnectivity requirements with the existing DEWA network," said the Vice President of the Supreme Council for Energy Sayed al Tayer.

The park is to be funded in its entirety by Dubai in the first phase, with private sector participation coming in the form of consultancy services and in the later stages of the pro-

ject. ILF Consulting Engineers was awarded a contract by DEWA in February to provide consultancy services for the project.

The park is part of a wider initiative by the United Arab Emirates to diversify energy sources and decrease dependence on traditional hydrocarbon and gas resources for energy needs. The UAE plans to invest at least \$1 billion in renewable energies before 2015. Dubai is seeking to generate 1% of its energy needs from solar power by 2020, to reach 5% by 2030.

Friis Arnen Petersen, Denmark's ambassador to China commented "the opening of CNREC is not only a breakthrough in China's road towards green growth, but also a milestone in cooperation between China and Denmark in renewable energy."





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Unitization Under the Egyptian Petroleum Exploration and Exploitation Agreements;

Does the Egyptian petroleum exploration and exploitation agreements contain any provision governing the cases of unitization?

Essam Taha - Attorney at Law, Petroleum Agreements Expert - Member of the AIPN

Unitization in the Egyptian legal system is subject to the following provisions:

Article III (e) of the Egyptian petroleum exploration and exploitation agreements stipulated that:

“If, upon application by Contractor it is recognized by EGPC that crude oil or gas is being drained from the exploration block under this agreement into a development block on an adjoining concession area held by contractor, the block being drained shall be considered as participating in the commercial production of the development block in question and the block being drained shall be converted into a development lease with the ensuing allocation of costs and production (calculated from the effective date of the date such drainage occurs, whichever is later) between the two concession areas. The allocation of such costs and production under each concession agreement shall be in the same portion that the recoverable reserves in the drained geological structure underlying each concession area bears to the total recoverable reserves of such structure underlying both concession areas. The production allocated to a concession area shall be priced according to the concession agreement covering that concession area”, and

Article 45 of the Executive Regulation, issued by the Minister of Industry No. 758 of 1972, of the Mines and Quarries Law No. 66 of 1953, stipulated that:

“If it is proved that the producing layer extends into areas of more than one exploiting party, then EGPC may ask the concessionaires to agree among themselves on carrying out joint efforts toward achieving the best exploitation of this layer in accordance with the observed and recognized principles of the oil Industry, considering that the said layer represents one oilfield. If the Parties to the relation fail to reach agreement within six months from the date they are notified thereof by EGPC, therefore EGPC shall set the rules it considers to be realizing this purpose, which rules shall be binding to all parties to the relation. In any case, a prior approval from EGPC shall be obtained for any agreement to be reached in this respect between the parties to the relation.”

Analysis of the effectiveness of the aforementioned provisions:

The provision of Article III (e) cannot be considered unitization provision as understood by the international petroleum industry. However, it could be considered unitization-related, since it only deal with the merger of two adjacent blocks, one of them being drained for development purposes to be under the control of the same contractor.

Notwithstanding the provision of the Executive Regulation, one case remains ungoverned under such provisions; that is if the adjacent area has not been granted to any party. In such case, EGPC shall have the right to:

1. Consider the adjoining area as a development lease and announce a bid round requesting proposals for it, which will take long time for such development lease to join in the production.
2. Grant the adjoining area to the holder of the first area, where the reservoir has been discovered, as a development lease by a direct order, for the reasons of necessity and emergency and in such case EGPC may request extra unusual benefits from said holder and will need only to

amend the law of the first area.

The unitization case that is not subject to the framework of Egyptian concession agreements and the entirety of the Egyptian law – which is in dire and urgent need of treatment - is the case in which the reservoir happens to extend across the borders of another State. In such case the Egyptian Government must take action with the other State government.

We believe that Egypt will face this situation soon with the State of Israel for Leviathan structure in the east of the Mediterranean as shown in the following map A. On August 2010, The U.S Geological Survey Bureau (USGS) issued its report on the prospected natural gas in the Eastern Mediterranean. The report concluded that an estimated 122 trillion cubic feet of undiscovered natural gas, technically recoverable are in the Levant Basin Province located in the Eastern Mediterranean region.

On January 2009, Israel announced the discovery of natural gas offshore the Tamar field, which is located approximately 80 kilometers west of Haifa city within the Levant Basin. The Tamar 1 well contains 8.3 trillion cubic feet and can supply between 50 to 80% of Israel's demand of natural gas.

On March 2009 Israel announced a new discovery offshore the Dalit well, located about 60 kilometers off the coast of Hadera, a town south of Haifa. Dalit deposit proved to contain 247 billion cubic feet of natural gas. On December 2010 Israel, made another announcement, declaring the finding of the largest offshore natural gas discovery in its history, which is the Leviathan field. The field contains at least 16 trillion cubic feet, and is situated about 156 kilometers from Israel's Northern Coast.

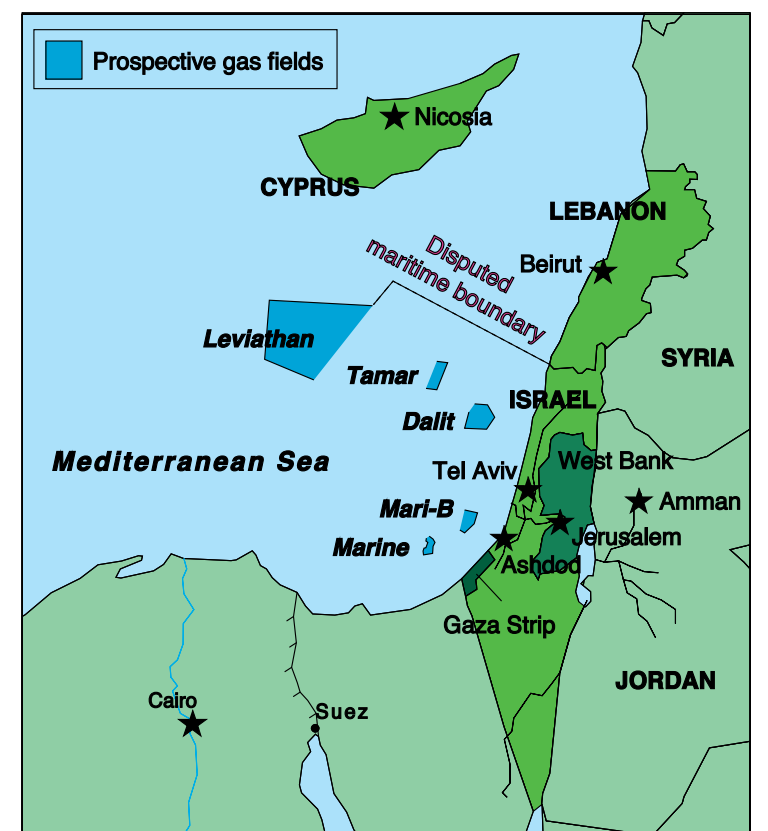
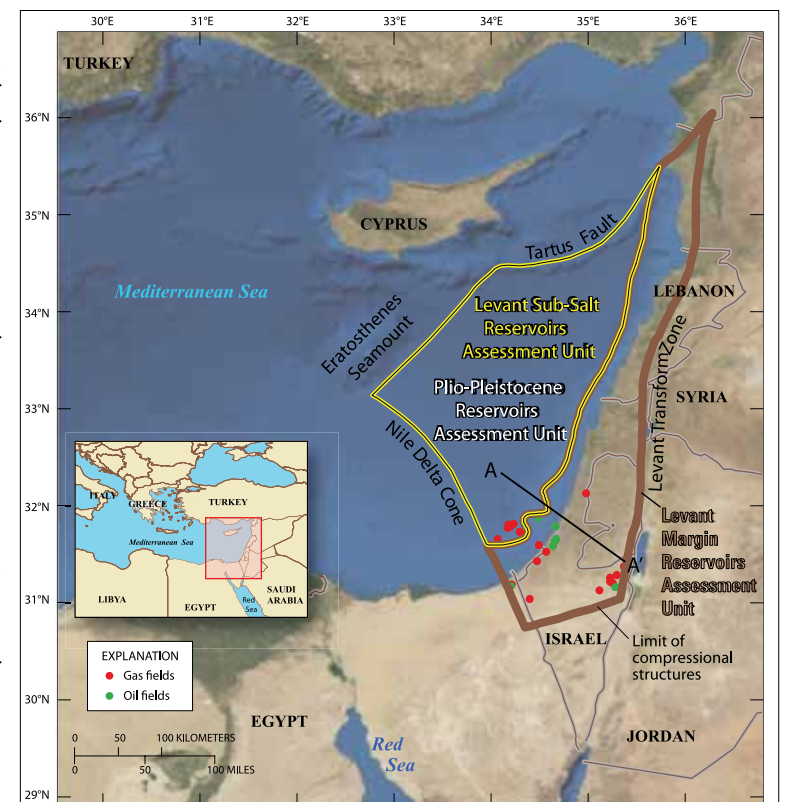
The abovementioned data and the USGS report prove the existence of natural gas along the Egyptian borders with Israel. Another evidence confirming the existence of natural gas at such area is the number of Israeli gas fields near the Egyptian land border and inside the Egyptian waters as shown in maps.

In this situation, Egypt has the right to take all appropriate legal procedures according to Egyptian law since the Israeli action represents an invasion of the sovereignty of Egyptian land and sea according to the international law.

The problem with Israel will eventually rise in the case of offshore fields, because until today, Egyptian demarcation of its maritime borders with Israel is ambiguous at best. Not to mention that Israel refused to sign the United Nation Convention on the Law of the Sea of 1982.

The relationship between Egypt and Israel is governed by the Peace Treaty of 1979 that was signed by the two States. Subject to Article VII of the Treaty, disputes arising out of the application or interpretation of the Treaty shall be resolved by negotiations. Any dispute that cannot be settled by negotiations shall be resolved by conciliation or submitted to arbitration.

Accordingly, Egypt must inform the State of Israel that Israeli petroleum activity is invading Egyptian land and



waters and negotiations should be in order. In case of the failure of diplomatic solution, Egypt must raise an arbitration claim.

In the case of settlement of the dispute relating to such offshore fields, the two States must sign a Joint Development Agreement to develop and exploit these fields.

The same problem facing Israel will be encountered by Egypt soon, but this time on the southern borders with Sudan. The Sudanese government from 2009 started to re-announce that Halaib Triangle, which includes Shalatin area are Sudanese Lands and Sudan will not relinquish such areas.



STANDING ON THE SHOULDERS OF GIANTS

The Egyptian petroleum industry's top-level executives convene to ponder the future of the sector's contractual agreements amid the vehement changing winds of the country's political makeup

You as Egypt will have unknowns, and the expatriate countries will have unknowns. The best way is to have the same unknowns."

Dr. Hamdy Al Banbi
Former Minister of Petroleum



When some of the heaviest hitters of the Egyptian oil and gas sector gather under one roof, it is only natural for the most pressing issues troubling the sector to rise organically to the fore. When these personalities represent different sides of the equation, namely governmental entities and different private companies, it is inevitable for battle lines to be drawn across the table. This is what happened when Egypt Oil & Gas took the decision to bring together some of the biggest players in the sector to discuss the future of oil and gas agreements in the country.

The discussion extended for hours, shifting from stumbling blocks to proposals to points of contention, all in the context of refining the Egyptian petroleum sector and the agreements framework that guides its dealings. The difficulty of producing a balanced system that preserves the country's sovereign rights and

simultaneously provides an enticing prospect for investors was evident in the positions taken and exchanged by general managers and ministry officials during the symposium, but it was abundantly clear that everyone in attendance had their sights set on optimum resource development, if only for the sake of mutual benefit.

The tentatively optimistic spirit of the entire affair was best reflected in former Minister of Petroleum Dr. Hamdy Al Banbi's opening remarks, as he called on all investors to participate in the sector despite the challenges clearly in place. This is a thread that ran through the entire discussion, as both investors and government officials accepted the obstacles and hindrances that present themselves in drafting agreements, but showed resilience in their will to overcome them and remain active in the sector. The focal themes of the discussion were clarity, flexibility, and balance. The centrality of these three tenets to the pricing regime of natural gas spontaneously led the flow of the talk to that particular topic, which proved to be one charged with investor frustrations. Geol. Mostafa Al-Bahr, Vice Chairman for Agreements and Exploration at GANOPE, was responsible for bringing the issue to the fore as he revealed governmental considerations that would have drastic implications. Geol. Al-Bahr announced that the government was contemplating pushing negotiations for prices in gas agreements until after a commercial discovery has been made, triggering a complex debate revolving around the pricing regimes for natural gas.

The Struggle for Pricing Natural Gas

The Struggle for Pricing Natural Gas The ascendancy of natural gas as a resource and the rise of technology capable of more efficient development of the resource give massive importance to the pricing system governing natural gas transactions. Petzed Chairman Salah Hafez identified the price of gas as the only factor relevant a favorable internal rate of recovery (IRR) during the roundtable discussion, demonstrating just how vital a variable it is to investors.

A portion of the discussion was dedicated to gas agreements already in place, some of which include fixed terms and conditions regarding gas pricing. Geol. Mostafa Al-Bahr, Vice Chairman of EGAS for Agreements and Exploration, and one of the most contributive members to the debate, expressed his openness to the notion of modifying the gas price in extant agreements in order to more effectively develop gas.

Investors in attendance showed appreciation for such a step to be considered; Mr. Ian Barden, General & Country Manager of Vegas Oil, complained of gas contracts his company is currently operating under, which dictate fixed gas prices that have not moved with the times.

The fulcrum of the gas pricing discussion, however, was the gas pricing regime to be implemented in future natural gas deals, on which most of the participants focused their attention. Several widely contrasting opinions were on display, illustrating both the precariousness of the issue and the importance it holds.

It was Geol. Mostafa Al-Bahr's suggestion of inking agreements with contractors without initially determining the price of gas that sparked the influx of ideas,

rejections, proposals and warnings that followed. Geol. Al-Bahr's view was that each discovery should be dealt with individually following a detailed economic study assessing the different factors that affect gas price.

Thus he suggested that in future gas agreements, price negotiations should be undertaken after a commercial discovery had been made, assuring investors that market price at the time of development would be considered in the negotiations and that pricing would be fair because Egypt ultimately had to remain competitive.

Geol. Abu Bakr Ibrahim, Vice Chairman for Agreements and exploration at GANOPE, agreed that it was possible to postpone gas pricing until a discovery had been made in the case of associated gas discovered with oil, but insisted that deepwater prospects demanded that the price be set even before the concession agreement is signed.

Dr. Al-Banbi warned against the idea, claiming that it presented investors with a vague prospect, asking them to commit an investment with no indication of what will happen once a discovery is made. Many of the investors proved that Dr. Al-Banbi's point was not unfounded, expressing wariness regarding such an uncertain prospect.

Shell Egypt Chairman Mr. Jeroen Regtien pointed out that pricing post-discovery was a sound concept from a development standpoint, but was not advantageous for an investor such as himself. As an investor, he needs an indication of the gas price before submitting an exploration bid, and an expectation of what the price will be before deciding to conduct an appraisal. Clarity from the offset is clearly key to investors. Companies such as Statoil are considering making a reentry into Egypt, and according to the company's General Manager Mr. Anders Kullerud, they will have to make assumptions regarding gas price, which makes it more difficult for them to take the decision to reenter the sector and renders the process of presenting an appropriate bid more challenging.

Mr. Kullerud suggested the introduction of what he labeled 'principles' on which to base gas price negotiation, citing the example of a link between gas prices and oil prices. This thought was echoed by Mr. Barden of Vegas Oil, who called for the suggestion to be implemented.

Other investors went further in their ambitions, demanding that the government refrain from setting a price for gas before and after discovery, leaving the task to the oil companies instead. Mr. Miguel Vargas, General Manager of Sipetrol, was one proponent of this concept.



Mr. Vargas cautioned that leaving negotiations until the development stage would leave open the possibility of no agreement being reached at all, even in the wake of a commercial discovery, which would leave the investor empty-handed and leave the ministry of petroleum to do as it sees fit with the discovery. He added that the exploration risk, a substantial factor in submitting a bid, is not taken into account if the pricing is left to post-discovery.

The solution, according to Mr. Vargas, is to leave the process of assessing each block to the international companies while having a certain point of reference in place. Rather than over-regulating this particular aspect of the agreements, the government should let the companies balance their own risk and reward, and select the most competitive offer in the end.

Price de-regulation was a position shared by Mr. Tawfik Diab, Managing Director of PICO International Petroleum and one of the most adamant advocates of the idea present at the event. Mr. Diab assured government officials that the government would always get its fair share of the pie, whether from profit share, production share, or simply a larger signature bonus, and so gas pricing should simply be left entirely to the investors, emulating a global market which is largely de-regulated.

Dr. Al-Banbi interjected Mr. Diab's argument by pointing out that the contracts on offer were almost entirely deregulated, and that only the gas price, the only regulated aspect, is kept under control because of the inconsistencies between oil and gas prices when left to the free market's whims. Dr. Al-Banbi argued that the a minimum and maximum gas price were incorporated into gas agreements in Egypt in the early 2000s only because prices of oil had jumped tremendously and gas prices failed to reflect such a jump from the range of \$20 a barrel to the region of \$150.

This argument was rejected by Mr. Diab, however, who claimed that oil prices had not yet reached such heights when the gas clause was introduced, and that the clause was introduced to put in place a floor for gas prices in order to lure investors into the sector. He conceded that this had worked at the time, but could

"Leave the economics to the foreign companies, they should balance the risk and reward, the gas price should be open, don't over-regulate this."

Miguel Vargas
General Manager, Sipetrol International

"Currently we sit down and agree on a gas sales agreement, a gas price. We should have some sort of base principles for negotiations."

Anders Kullerud
General Manager, Statoil



not continue to work in a changing market. The floor and ceiling model is disliked by Mr. Diab because of the fact that oil and gas service prices are similar. This entails that an oil well would simply be wholly more advantageous for the investor to drill than a gas well, despite the fact that Egypt, according to Mr. Diab, was in need of the gas well. He relayed his understanding of the political pressures pushing the government to adopt such practices, but claimed that they were counter-productive because they were effectively replacing the economic advantage made through this pricing policy with the costs of petroleum products which in the end amount to multiples of the former. A deregulated market with a link to the Gulf of Suez mix price would've allowed the market to balance itself out, according to Mr. Diab, and he called for such a system to be put in place. There were stringent

opponents of deregulation to be found in the discussion as well, however.

Mr. Hamed Al-Ahmadi, Chairman of IEMS, saw that not only were a minimum and maximum gas price necessitated, as was a link to the Gulf of Suez mix price, but that gas prices in Egypt should be somewhat normalized.

The concept of pegging gas prices to Gulf of Suez mix, or at least linking them together in any manner, was shot down by Geol Mahfouz Al-Bony, First Undersecretary for Agreements at the ministry of petroleum. Mr. Al-Bony provided the prices of natural gas according to the Henry Hub index and their deviation from Brent prices 4-5 years ago to support his claim that such concept was simply not feasible.

Mr. Al-Bony stated that gas pricing was not magic, and that there was in fact a

very simple formula for calculating gas prices if certain variables such as production profile and cost are available. He did not share or empathize with the concerns of many of the investors regarding fixed gas prices or gas price limits. He did, however, recognize that gas pricing was indeed complex in deepwater exploration and production.



"its very difficult for operators to keep on investing in infrastructure and in well development if they don't have access to those investments after the expiry of the license"

Jeroen Regtien
Shell Egypt Chairman

The Mediterranean Prospect

Geol. Al-Bony pointed out the fact that there is a myriad of factors affecting gas prices in deepwater areas, and that in these areas, a discovery must be confirmed before a decision is made as to how to share its development. The uniqueness of deepwater development, and the case of Mediterranean deepwater development in Egypt, was recognized by others around the table.

BP's Vice President for Exploration, Mr. Ahmed Haggras, acknowledged the need for appraisal before a gas price can be determined in the case of deepwater discoveries, unlike onshore and shallow projects, owing to the fact that the economic threshold in deepwater cases is unknown.

Some of the foreign investors in attendance did not warm to the conception of post-discovery pricing in deepwater areas, however, referring to similar disadvantages to the enormous investment required and the guarantees such an investment necessitates. Mr. Jean Pierre Dolla,

Managing Director of Total E&P Egypt, argued that it was not possible to ask an investor to invest an amount in the region of \$200 million in a deepwater well with no knowledge of the potential returns of the endeavor.

Dr. Al-Banbi supported this position; he judged it unreasonable to ask an investor to part with such huge sums with no notion of what will happen in case of success. Dr. Al-Banbi proposed that some reference, such as the average of 3 market prices, be offered to the investor. He relayed the fear of a potentially 'cowardly' manager who would prove troublesome to the investor at the time of negotiating a gas price. Geol. Mahfouz Al Bony attempted to address Dr. Al-Banbi's concern by proposing similar discoveries and previous development plans as a reference.

The specificity of the deepwater prospects and of Egypt's Mediterranean prospect, as reflected by the gas pricing discussions, were recognized and voiced by all participants. Geol. Abu Bakr Ibrahim deemed it necessary to remind the attendees that the Mediterranean presented exceptional challenges due to high pressure and high temperatures. Mr. Ahmed Haggras added 'extremely expensive' to the list of challenges, along with his claim that the technology to develop some of the Mediterranean's deepwater resources was not even on the market yet.

Nonetheless, the brimming potential of the prospect was given its due as well. Mr. Haggras informed the audience that all of Egypt's new resources were in fact in deepwater targets, and Geol. Mostafa Al-Bahr made the claim that 'deep targets are the future'. As Geol. Al-Bahr went on to say, however, exploiting these resources requires big investments and so big companies. The necessity of attracting big investments to the Mediterranean was not in doubt by all present, which prompted several of the experts to suggest policies conducive to doing so. Geol. Al-Bahr was of the opinion that current concession agreements may be discouraging investors from developing deepwater and marginal reserves gas, insisting that deepwater and ultra-deep prospect must include special conditions and incentives in their bid rounds in order to draw investors.

Both Mr. Haggras and Dr. Al-Banbi shared this viewpoint, recommending that extra incentives be added to the bid rounds to render investment in the deepwater Mediterranean uniquely appealing. Mr. Haggras viewed it as a necessity mandated by the need to balance the money that international oil companies were required to pay in order to participate in the the development of the area's

resources.

Geol. Al-Bahr presented a proposal which found some popularity on the table, namely that contractors be offered the option of selling their profit share as well as any excess gas to the local market. The gas would be marketed in conjunction with EGAS and sold at free market prices, and would use the national grid to reach consumers.

Dr. Al-Banbi in particular welcomed the idea; he favored the notion that the ministry would make a profit by charging the use of the national grid, rather than having to buy and subsidize the gas. He added that the ministry of industry would most probably be willing to buy portions of the gas.

The foreign perspective on the matter was not as optimistic. It is highly improbable that investors would shun the offer of selling gas to the local market, but Mr. Dolla of Total clarified that the companies did not sell gas to the local market because the rules were simply not clear. In the context of a lack of clarity, any extra incentive offered to investors is stripped of its value. Investors also complained of the agreements model not being particularly compatible with deepwater Mediterranean investments. Shell Egypt's Mr. Jeroen Regtien claimed his company has had to relinquish several of its concessions due to the fact that the current agreements model is simply unsuitable for deepwater areas and so for the deepwater Mediterranean prospects.



"Inevitability the market changes, less frontier areas now exist. Thus, the spirit of the PSA needs to move dynamically to cope with the changes of the market"

Salah Hafez
Chairman, Petzed



"For deepwater, without appraising these discoveries, it's tough to tell what kind of price we're going to need to develop these resources."

Ahmed Haggras
BP Egypt, Vice President for Exploration

"Whenever an agreements model is fit to run the business properly, we are very much open to discussing and evaluating the potential of its utilization"

Mostafa ElBahr

Vice Chairman for Agreements and Exploration for EGAS



Deepwater Exploration and development is a new frontier that necessitates the adoption of new terms and provisions in the current agreements model.

Evaluating the extant agreements model adopted in Egypt instigated a heated discussion among the roundtable participants. Representatives of international oil companies (IOCs) presented their justifications for why the current model is in need for amendments. Furthermore, they proposed their visions as to the modifications that could be applied to make the model more attractive for their investments.

Government representatives listened attentively to the various ideas presented, their retorts, however, varied from concurring with some of the points made while objecting to others. Moderating the entire symposium, former petroleum minister Dr. Hamdy ElBanby initiated the topic stating that Production Sharing Agreements (PSAs) is the "name of the game," however emphasized that "different geographical areas can have different tender models to suit their characteristics."

Defending the viability of the current model, Eng. Adel Said, the EGPC's Deputy Chairman for Agreements, explained that under this model, 426 agreements have been concluded so far, of which 149 are currently in place. In addition, he highlighted the merits of the model, mentioning advantages such as the possibility of license extension, stabilization clauses and tax exemptions.

However, he reiterated Dr. Banbi's point that "there

"Even small players like us are looking to see what other countries are offering... every penny invested outside Egypt is a dollar lost for Egyptian investment"

Tawfik Diab

Managing Director of PICO International



"There is a need for a productive mechanism that protects operators against major delays of payments"

Jean-Pierre Dolla

Managing Director of Total Egypt



are cases where the model of the PSA is not the most suitable."

Originally, PSAs were created for large companies, according Mr. Salah Hafez, Chairman of Petzed Petroleum. But over the course of the time, smaller companies joined in and started operating under the same model of agreements.

Mr. Tawfik Diab, the Managing Director of PICO for International Petroleum Services, had a different take on the matter. He explained that the Ministry of Petroleum should be thinking outside the box and attempt to adopt models that "create incentives for operators in order to keep them interested in investing in Egypt."

While the economics of the various agreement models may not greatly differ, there is a great benefit to seeking alternative options. Mr. Diab strongly encouraged the adoption of the Royalty Tax model as a way to deregulate the market. Under this model, he illustrated, the "traffic between the operator and regulator is substantially reduced." Therefore, the operator is not restrained by continuously seeking approvals from the EGPC, which often have a long turnaround time. By doing so, more time can be invested boosting production rates.

Responding to Mr. Diab's comment, Geologist Mostafa ElBahr, Vice Chairman for Agreements and Exploration for EGAS, explained that while the current model is indeed prevalent, its not the only being used in Egypt. He gave the example of British Petroleum's operation in North Alexandria, where the company was given the full rights over production, while agreeing to Egypt buying all of its gas output from the block.

Deliberating the ins and outs of the Royalty Tax system, the discussion gradually shifted to the aTotal's Managing Director, Mr. Jean-Pierre Dolla directed the attention to the absence of an abandonment clause in the existing model, a point that he considered to be of great importance. He regarded the matter as "something that needs to be thought about upfront." He advised that "clauses

should be made in the contract in order for us [IOCs] to be able to make provisions with cost recovery in due time to help with decommissioning."

Another point that Mr. Dolla emphasized is that agreements need to be more specific when it comes to using existing facilities to help new players to the market.

Interposing, Geologist Mafouz ElBouny, Ministry of Petroleum's First Undersecretary for Agreements, stressed that the agreements model is just a model and "it cannot factor in the characteristics of each area," exclaiming "no model fits all!"

Addressing the strong tide of propositions made in favor of amending the current model, Mr. Abu Bakr Ibrahim explained that amending the preexisting agreements requires seeking an addendum from parliament, which is quite a hassle given the volatility of the political status quo. However, he proposed that if a clear statement is added to the contract that stipulates the usual execution of the agreement "unless a special agreement between the EGPC and the Contractor is in place," it will allow room for more flexibility without going back to the parliament.

Another issue that was raised by Mr. Dolla was the delay of payments predicament, which happens to be a major concern to many of the IOCs operating in Egypt. Mr. Mostafa ElBahr cleverly handled the issue by explaining that modifying the contract to allow the operator the choice of marketing his own share of production will have a direct impact on alleviating the issue of the outstanding payments owed by the government to the IOCs.

The issue of the amending the current agreements model was passionately debated. While some of the proposed solutions were more drastic than others, there was a general consensus on the urgent need for several amendments to the model in place.

Cost Recovery of New Technologies:

Will the Government Realize the Merit of Quality over Price?

Cost recovery has always been an impediment to the organic growth of the sector. Employing cutting-edge technologies in exploration and development operations requires massive investments, which IOCs are often reluctant to pay due to the uncertainty of recovering their cost. But as we look to the future of sector, we must take in consideration the relative depletion of our main basins, and come to

terms with the fact that our remaining resources are situated in deepwater. Thus, the option of employing inexpensive technologies is no longer available.

The shared discontent among IOCs for the high risk they're forced to assume in employing the technologies, coupled with market's unfortunate characteristics – being entirely

price-driven rather than quality-driven – is an issue that was hotly

pondered in the discussion. Commenting on this issue, Dr. Hamdy ElBanby urged IOCs to seek an open dialogue with the government and work on receiving the needed approvals to avoid the complications that might arise when utilizing very expensive equipment.

Responding to the issue at hand, Geologist Mahfouz ElBouny stressed, "we do not



Mahfouz El Bony

First Undersecretary for Exploration & Agreements Ministry of Petroleum

"The ministry of petroleum is not against applying any technique that would mitigate the risk for exploration but since we're working with a concession agreement that has a backbone for cost recovery and profit share, we have to respect this concession agreement"



sacrifice any privilege. If there is privilege or merit, we agree with the contractor to use a certain technology whether if it's a rig, or some sort of new technique. But as a regulatory body, we didn't sacrifice any specs, especially if they're technical. If we prove that any technique will save money and has technical and feasibility I think that EGPC, EGAS or GANOPE would not object to approving their use."

Further, Elbouny added that there has been "several cases where the EGPC and EGAS have approved cost-recovery for new technologies." However, he also highlighted the obligation to "respect the terms of the PSC in place when it comes to profit share and cost recovery."

Notwithstanding the approval of a few cases, the issue at hand remains problematic. The growing interest in deepwater exploration and production demands the government's facilitation to the use of advanced equipment, which can only be achieved by guaranteeing operators their cost recovery.

Mr. Salah Hafez, Chairman of Petzed Petroleum, stressed upon this point urging the government to

"give room for companies to allow the identification of the proper technology needed for a certain area."

In support of the aforementioned point, Mr. Ahmed Haggras, British Petroleum's Vice President of Exploration noted that the "EGPC and EGAS should pay more attention to promoting new technologies the same way they focus on cost recovery."



"Data packages are sold by the Egyptian Petroleum sector for a very expensive price, while in other countries, they're available for anyone who wants to get in the business and its completely free of charge"

Shawki Abdeen

General Manager
PICO International

Unconventional Resources Need Unconventional Terms of Agreements



At his opening speech of the NATC conference, His Excellency Minister Abdallah Ghorab stated that "Shale gas has become game changer." Apart from the Mediterranean's copious deposits of natural gas, the prospects of orthodox hydrocarbon exploration and production are progressively diminishing in Egypt. But the uncharted territories of unconventional resources are abundant in the country and if there was ever a time to start exploiting them, that time is now.

Geologist Mostafa ElBahr noted that developing unconventional resources requires different and more expensive processes and facilities, which is a strong indication that the government is receptive to approving the use of expensive equipment for the sake of development unconventional hydrocarbon resources.

Mr. Jeroen Regtien, Chairman of Shell Egypt, was extremely keen on discussing the prospects of unconventional resources and the parameters to be considered for their successful and efficient development. He noted that whether it's "shale gas, light-tight oil and tight gas, what these have in common is large number of wells."

They also share the factor of lengthy development cycles, which necessitate the redefinition of development leases and licenses. In addition the government needs to allow free space to identify the technology needed for exploration and development of unconventional resources.

The government has already taken the initiative of setting up a shale gas committee. Mr. Mahfouz Elbouny even suggested that "if any company has experience with shale gas we [the ministry] would like to receive a template for the model agreement which will help everybody and facilitate the process instead of inventing a new one." Still, the government needs to provide more incentives through adding provisions in the contracts to specifically encourage investors to endeavor on unconventional development.



"The economics of developing unconventional resources are the underlying problem that we have to consider for unconventional development"

David Blanchard

Managing Director, El Paso

"if any company has experience with shale gas we would like to receive a template for the model agreement which will help everybody and facilitate the process instead of inventing a new one"

Mahfouz El Bony

First Undersecretary for Exploration & Agreements
Ministry of Petroleum

"When we put the price on the package we consider how recent the data included in the package. And whatever the price, it will save time and money whenever you're awarded a concession"

Adel Said

Deputy Chairman for Agreements - EGPC

"Its important to look at Egypt's competitors to see what our competitors are doing because at the end of the day, in a global economy you will be competing with other countries as well."

Ian Barden

General Manager - Vegas

"When we talk about gas price, it is tied with the gas itself, its price as a natural resource deposit, production costs, transportation costs, It might also depend on the scarcity and abundance of the resource, therefore the price of gas should be normalized"

Hamed El Ahmady

Chairman - IEMS

"Cost recovery is not the problem of the EGPC, EGAS and GANOPE, the problem is in the law itself because its public money"

Samir Abdelmoaty

Exploration & Agreements Consultant - BP

Towards More Attractive Bid Rounds

As for bid rounds and granting concessions, all the attendees of the roundtable stressed that there should be more clarity regarding license extensions because it's difficult for operators to heavily invest in infrastructure without knowing whether they would have access to such infrastructure after the expiry of the development lease.

Sipetrol's General Manager, Mr. Miguel Vargas, remarked that companies are hindered by long delay of military permits. In response, Mr. Elbouny explained that the government cannot declare a firm and specific date for bid rounds because military approval is one card that is totally outside of their dominion.

Due process takes time, he added, which is why companies need to have their budgets and other documents ready for when military approvals are granted. Statoil's General Manager, Mr. Anders Kullerud, proposed issuing several bid rounds

each year as done in Norway. ElBouny retorted that issuing more than one bid round a year would create competition between the government's petroleum entities, which is not in the benefit of the country as a whole. However, he admitted that there is an effort that can be done to reduce the cycle time between issuing the bid round and

awarding the block.

Concluding the discussion on bid rounds, Mr. Salah Hafez emphasized that deregulation is necessary not only in the agreements, but also in the undisclosed system of implementing them, which defeats the spirit of production sharing agreements.



Political Obstacles:

The uncertain new ground Egypt finds itself treading following a reboot of the political system presents its own set of unique challenges to the Egyptian petroleum sector. In light of its complete grip on national headlines, it was all but inevitable for Egypt's new post-revolutionary parliament to find its way into the discussion.

In fact, Dr. Hamdy Al-Banbi saw to include the topic in his opening remarks. He predicted that the country's new parliament was certain to apply pressures on the EGPC and the ministry of petroleum, and appealed to government entities to exercise patience in dealing with the new politicians. Dr. Al-Banbi placed the task of educating and explaining the workings and needs of the industry on the minister of petroleum and his assistants.

He deemed this education essential, commenting that the new parliament must stay up to date and be knowledgeable with regards to such a vital industry. The call for patience when dealing with the new parliament was echoed by Eng. Hamed Al-Ahmadi, and Mr. Jean-Pierre Dolla repeated the notion that the country's new legislative body must be educated. The theme of education was not

exclusive to the politicians. Geol Abu Bakr Ibrahim declared that not only the new parliament, but the entire country must be made aware of the oil industry's specifics and what it requires to develop successfully. Mr. Jeroen Regtien similarly advocated the education of the new parliament as well as "a large part of the population," in order to avoid the pitfall of having proposals and rejections for the betterment of the sector constantly rejected.

Dr. Al-Banbi advised that the legal framework be changed in order to make room for the classification of different areas (deepwater, shallow, etc.) for the sake of justifying the differences between different areas. This will save the trouble of having to explain to the energy committee of the new parliament the anomalies present in what is offered in different areas, which are necessitated by their different geographies. The integration of the idea into the legal procedure will sidestep this complication.

Dr. Al-Banbi was not entirely pessimistic regarding the new parliament, however. He assured investors and government officials alike that it will not be a problem due to the high level of awareness

already present in Egypt regarding the oil business. He went on to suggest that presentations and invitations to visits and trips should be extended to the energy committee.



"The main challenge for the petroleum sector now is how to get people aware, in the new parliament and in the whole country."

Abu Bakr Ibrahim

Vice Chairman for Agreements and Exploration, GANOPE

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A Roadmap to the Renaissance of Petroleum Agreements

In times of political instability, such as those currently rocking Egypt, solid ground is needed in order to weather the storm. One of the few remaining patches of solid ground in the Egyptian economy is the country's petroleum sector, which has fared far better than other sectors in dealing with last year's tumultuous events. Therefore, taking advantage of the sector's relative stability could be instrumental in alleviating some of the pressure straining Egypt's ailing economy. In order for the sector to fulfill this role, further development of its various aspects is necessary.

By EOG Team



The key to catalyzing growth in the sector is increasing Foreign Direct Investment via formulating effective strategies aimed at improving Egypt's competitive advantage. To this end, a review of the entire framework within which agreements with foreign investors are inked is essential in rendering the sector a more attractive prospect for said investors. While the extant system is not a complete calamity, there is definitely room for improvement; certain adjustments and optimizations, if applied swiftly, could go a long way to successfully steering Egypt's petroleum sector through these difficult times, as well as increasing its efficiency in the long term.

The extant mechanism of concession is bid rounds is supposed to guarantee efficiency through competition, allowing investors to freely compete for concessions by attempting to meet the government's criteria. However, the effectiveness of the mechanism is marred by the fact that the government's criteria are often ambiguous. The selection criteria attached to any given bid round is not made clear to investors, which limits their ability to accurately assess the potential of their investment. Therefore, the government must clearly relay its requirements so as to remove unnecessary obstacles from the investor's path.

Streamlining entry into the Egyptian petroleum sector is central to increasing the sector's competitive edge, but a reassessment of some of the policies adopted in drafting fiscal agreements is equally important. The relinquishment of exploration acreage by the investor, that is to say, the government's reclamation of all acreage deemed unusable by the investor is commonly required at the end of the exploration period.

The length of such period typically offered to contractors operating in Egypt is in the range of 8 to 10 years, which is a relatively long timeframe for exploration operations, and is accompanied by the possibility of generous extensions. This policy may seem beneficial, as it is an attraction point for investors. The effect it could have in the long-term should not be neglected, however, as it may impede the sector's pace of development by slowing down exploration activity.

The government should look to offer more balanced agreements, combining attractive timeframes with optimal exploratory efficiency, in order to maximize exploratory activity. Heightened exploratory activity raises the potential for heightened output for the petroleum sector as a whole, which in turn makes the sector more attractive for investors.

The way in which government take (the government's share of production) is organized within the agreements could similarly be geared towards maximizing competitive advantage. The continued instability currently characterizing the Egyptian political arena coupled with the uncertainty that engulfs the country's political future are understandable sources of anxiety for investors. In such environment, investors will consider long-term returns on their investments to be impossible for any authority to guarantee. Consequently, investments that bring quicker returns and thus are more immune to political turbulence will seem more favorable.

The concept of government take in Egypt could be modified to lean towards increasing investor take in the earlier stages of the contract. This would necessarily entail that government take in the earlier stages

would decrease, but it would provide a sense of security for the investor and counterbalance the fear of political instability. It should be noted that the government's share in the investments is no more secure from political volatility than that of the investor. Should this model be implemented, the government could end up suffering the same fate it is trying to protect investors from if the political situation takes a turn for the worse. Nevertheless, this is a risk that should be considered, if only to counter the negative effect of the political situation on the sector's attractiveness.

The competitive nature of the petroleum industry inherently compels market players to engage in competitive drilling campaigns, and amid the race for expansion and acquisition of a larger market-share. Petroleum companies are always in a perpetual search for efficient methods to maximize output as a way of increasing their profit margins. However, as drilling continues to sprout across Egypt at a rapid rate and the progressive depletion of most of the country's onshore basins, the prospect of cross-lease complications due to a shared reservoir becomes inevitable. A common remedy for this type of conflict of interest is the process of reservoir unitization.

Unitization is the joint, coordinated development of a petroleum reservoir that extends across more than one development lease by all the parties with vested interest in said reservoir; it is the best mechanism for assuring the maximum recovery of hydrocarbons in the most efficient manner.

Granted there hasn't been a significant number of domestic cases where two (or more) development leases shared a common hydrocarbon reservoir; that does

not, however, negate the inevitability of such problem becoming more prevalent in the future.

The essence of the problem lies in the absence of clear legal guidelines to regulate this obstacle if or when it arises in Egyptian contractual agreements. Instead, all the legal statutes pertaining to unitization barely brush on the core issue; the only clear legal provision relating to the matter of unitization or joint-production agreements only cover the case of adjoining an exploratory well to a development lease located in the same concession owned by the same contractor.

In any other case, Egyptian legal statutes are often vague in regulating the issue, particularly in the case of a shared hydrocarbon reservoir between two competing operators. Even when the case concerns the development of a reservoir extending into a non-leased area, the agreements lacks a clear mechanism to manage the case in a method that maximizes potential outcome while balancing the investor's satisfaction.

Consequently, when the problem is actually encountered, the parties involved resort to forming a customized agreement in order to preserve their respective interests, especially due to the fact that IOCs are only subject to labor laws and not the entirety of Egyptian law. However, the extant agreements model adopted in Egypt is devoid of the suitable provisions to meticulously regulate the problem production allocation in the case of cross-lease reservoirs.

The discourse is further complicated in offshore cases, where lease demarcation is more difficult to define. In addition to the abundance of stranded natural gas formations offshore that stretch horizontally for lengthy distances, naturally raising the probability of extending beyond one geographical lease.

If a mutual satisfactory agreement cannot be reached between the parties involved, the EGPC attempts to mediate. Failing to do so, the dispute is escalated to international arbitration.

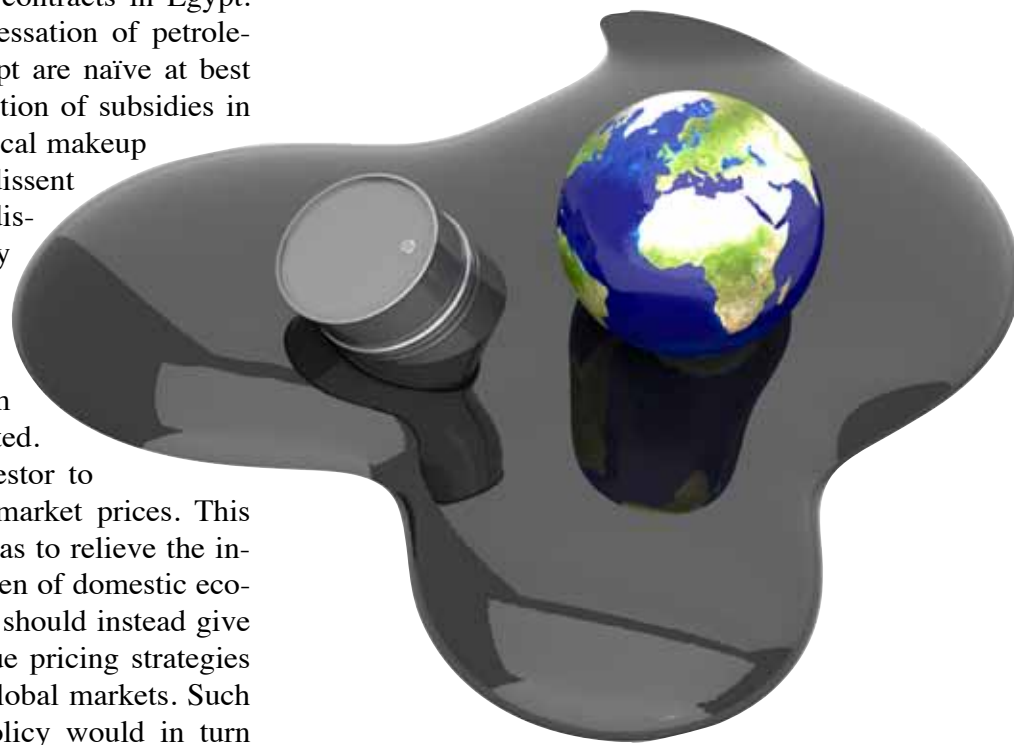
What is evident from the strategy currently employed to tackle the issue is the absence of visionary planning for the future of petroleum development, an unfortunate aftermath to years of employing contractual agreements that are rather inflexible, ones where room for modifications and amendments to cope with the inherent changes of the market is nonexistent.

An oft-mentioned impediment to the sector's growth is the issue of subsidization, a policy that dissuades potential investors from seeking contracts in Egypt. However, calls for a complete cessation of petroleum product subsidization in Egypt are naïve at best and dangerous at worst. An abolition of subsidies in a country with Egypt's sociopolitical makeup would trigger rampant popular dissent and thus could potentially have disastrous ramifications, particularly during the economic turmoil the country is currently undergoing.

A more prudent solution would be a reassessment of the system by which subsidies are implemented. Extant agreements force the investor to sell gas at subsidized domestic market prices. This policy should be discontinued so as to relieve the investor of having to share the burden of domestic economic problems. The agreements should instead give the investor the freedom to pursue pricing strategies consistent with those of mature global markets. Such an amendment to the current policy would in turn

boost the sector's competitiveness while sidestepping potential political complications that would arise from the removal of subsidies.

The legal and regulatory framework that governs relations between the Egyptian government and foreign investors in the petroleum sector is neither terminally flawed nor loss-inducing, but the potential for improvement and optimization is clearly there. Modifications could facilitate the process of investment, maximize output, and create a more investor-friendly milieu, all of which would provide Egypt with the competitive edge it needs in order to realize the sector's full potential.



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Walking the Fault Lines

Avoiding Conflict through Forced Cooperation

International conflicts waged due to territorial disputes often veil a scramble for hydrocarbon resources. In many cases, the problem lies in the overlapping of resource reservoirs with interstate borders, triggering bouts of competitive exploitation and/or confrontation between states. Cooperation in resource development, in the form of Unitization or Joint Petroleum Development, can potentially minimize the probability of conflict if properly integrated into the international legal order.

By Ahmed Maaty



For as long as man has recorded history, nations and empires have fought and conquered for the resources vital to their sustenance and superiority. In modern times, Hydrocarbon resources are the strings of power, and are thus often at center of both political and military conflicts. Oil, and to a lesser extent natural gas, are the cogs which keep the wheel of the global economy spinning; domination and exploitation of these resources often drives states into headlong political collisions due to the value of the resources and the political factors this value entails.

Conflicts over resources are most likely to reach deadlock in cases involving border disputes and condensations of natural wealth in border areas. Conflicting claims of right over resources leads to an ambiguous legal, moral, and political situation. Border demarcation, particularly maritime borders, is by nature imprecise, which only serves to exacerbate the problem.

Cases in which a single reservoir of petroleum resources lies under land separated by national borders are particularly problematic. When petroleum deposits overlap borders, resources on one side may often be exploited to varying degrees by the other side. Development of resources is thus either put on hold or is exercised by some or all parties in competitive fashion, producing costs for all parties in lost potential resources and in some instances triggering military conflict as a result of these costs.

In order to minimize geopolitical tension and the probability of military confrontations, a mechanism for resolving such disputes and anomalies must be developed through legitimate channels. This mechanism must provide an attractive alternative to conflict and confrontation, one which presents to the involved parties a cost-benefit scenario preferable over both a non-resolved status quo and resolution through armed force.

Nation states must be offered viable, guaranteed economic gain, along with the least possible amount of political loss. Borders and national wealth are both issues of sovereignty, a volatile and invaluable element in international relations and one which stands as the foundation supporting ruling regimes and entire states. It is instrumental to remove sovereignty from the equation, at

least as a zero-sum element, by placing the issue in the realm of 'forced' cooperation via international law.

The concept of unitization, often employed between oil companies within the borders of any given state, can and has been implemented in interstate cases. Unitization is a practice through which a single reservoir of resources that overlaps several leases is conjoined as one production unit. Rather than pursuing competitive drilling, the lease-owners use their assets (wells, etc.) in coordination in order to maximize petroleum recovery from the reservoir, dividing the production itself amongst them. In the case of states, its implementation is a possibility when clearly defined borders divide a single petroleum deposit.

Joint petroleum development is a similar concept, applied exclusively in interstate cases and similarly involving optimization of a petroleum reservoir in order to function as one production unit and achieve the highest possible output. Joint development is only different in that it is implemented in the gray areas of international law, namely in cases where the national borders themselves are disputed or two or more states are legally entitled to the same territory.

The incorporation of these concepts into international law in some form is likely to prove helpful in diffusing political standoffs or sidestepping them altogether. Both practices are widely applied in stable situations in which relations between the involved states are amicable and the petroleum reserves in question are not substantial enough to warrant conflict. In more volatile scenarios, however, dispute and conflict often erupt in place of unitization and joint development.

This due to the absence of set rules governing the issue, which leaves political points at stake in the case of failure to secure maximum resources. This is particularly true when the states involved have tense or confrontational relationships on which their domestic and global legitimacy depends. This is demonstrable in the case of the East Mediterranean dispute. In the struggle for Mediterranean petroleum resources, Israel is unlikely to cede ground to either Lebanon or an increasingly hostile Turkey, and the opposite is certainly just as true, not solely for the value resources in place but

because of the political consequences it would entail for these states in both the domestic political scene and the international arena.

The ruling regimes of these countries cannot afford to be seen as cooperating in the development of these resources with a non-friendly state, lest it be perceived as a concession of sovereignty. The Eastern Mediterranean's Levant Basin Province houses an estimated 3.4 trillion cubic feet of natural gas as well as roughly 1.7 billion barrels of recoverable oil. Cyprus and Israel have already begun attempts at extracting resources in their claimed territory, prompting a furious diplomatic response from Turkey. Lebanon's unilaterally demarcated border with Israel does not recognize Israel's right to these resources. The situation is slowly simmering in the background of international relations, escalating towards more significant altercations.

All parties involved are likely to pursue unilateral, confrontational policies as a result of the lack of alternative that diminishes political costs and guarantees economic gain. The assimilation of unitization and joint petroleum development into international law would provide this alternative.

The lack of a legal framework also allows plenty of maneuvering room for states looking to attain optimum economic gain regardless of the principles of international law and the modern international community. A prominent example from recent history is the conflict of the Gulf War of 1991, between Iraq and Kuwait.

The Iraqi regime of Saddam Hussein blamed Kuwait of using slant drilling techniques to extract oil from the Iraqi side of the Rumaila oil field, one of the largest in the world, the vast majority of which lies on the Iraqi side of the border. Regardless of the accuracy of the accusations and of who the culprit is, military conflict ensued because it was determined as the most advantageous course of action by the Iraqi regime in the absence of international legislation that organized resource development in the territory.

Kuwait would not have been afforded the chance to plunder Iraqi oil, nor would Iraq have been given a window of opportunity to attack Kuwait on such pretenses, had there been an obligation by both sides to unitize the

field's production. Iraq would have been contractually guaranteed the lion's share due to the fact that most of the reservoir lies under its land, maximum oil extraction would have been achieved, and the costs of the war for both countries and their oil industries would have been avoided.

As it currently stands, international law prohibits theft of natural resources from other states, and actively encourages cooperative development of joint or disputed resources. The concept of territorial sovereignty over natural resources does not apply to 'fluid' resources like petroleum in the same way it applies to 'solid' ones like gold. States are obligated by international law to respect and not exploit the natural wealth of neighboring states, and thus there it is argued by some experts that there is a de facto obligation to develop resources are disputed or overlapping in collaboration. Several United Nations General Assembly resolutions back this notion through their stressing of cooperation in exploiting such resources.

It can therefore be argued that unitization and joint petroleum development are tenets of customary international law. But the issue is volatile enough to warrant a solution that puts an end to all argumentation. Primary rather than secondary sources should assert the notion of mandatory unitization and joint petroleum development between states whose borders are disputed as well as those whose petroleum reservoirs cross borders. Ideally, an international treaty should be drafted to clearly outline said obligation.

Cross-border unitization and joint petroleum development are both extensively complex processes. Reaching agreeable terms for all parties involved, including separate agreements for lease-owners in the

case of unitization can be exceedingly difficult and may dissuade states and corporations from currently adopting these practices more frequently. Furthermore, inducting them into the international legal framework will not guarantee adherence since international law, while legally binding, lacks any mechanism of effective enforcement.

States cannot be forced to comply, nor can they be forced to sign into treaties they perceive to be not to their advantage, and international treaties are only binding towards signatories. Creating international legal obligations in the international community does create political pressure on countries to comply, however. Political costs will also be minimized due to the fact that sovereignty will not be substantially compromised. Rather than conceding its claims over territory and resources to the opposite party by agreeing to jointly produce resources, a state will simply be bowing down to international law, which is a partial surrendering of sovereignty expected of and accepted from any modern state. Economic gain, while potentially lower, will also be guaranteed.

The risk of new disputes arising as a result of reinforced legal rights is virtually non-existing in this scenario, owing to the fact that non-disputed, clearly demarcated borders are not open to renegotiation or change under any circumstances, according to the rules of international law.

As stated, there is no way to truly keep nation states in line regardless of the amount of international legislation instated. There is, however, a historically unique opportunity in the modern era to reduce the amount of conflict over resources simply because violence for the sake of gain at the international level has lost most if

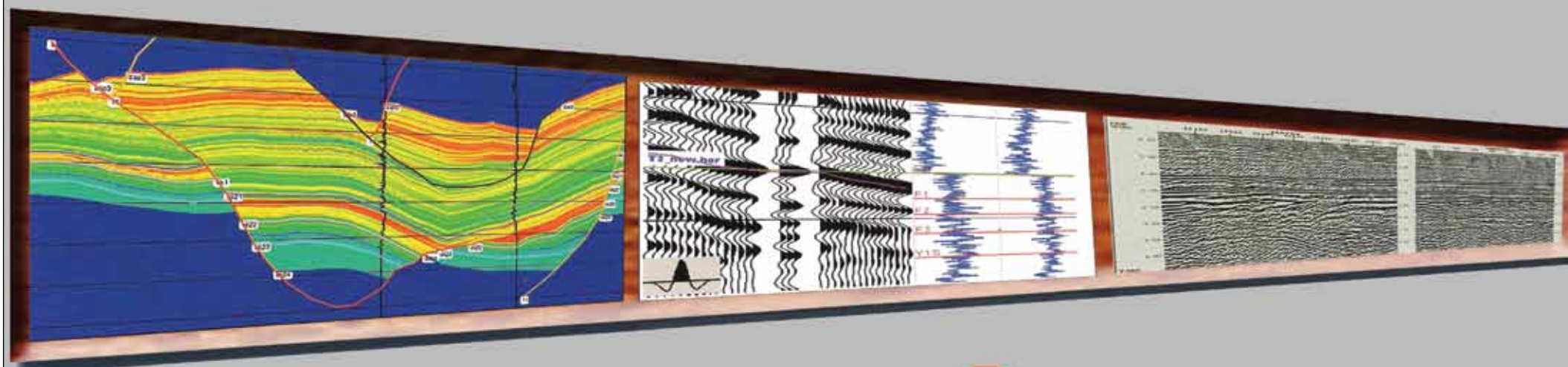
not all credence in the mainstream discourse. Creating the proposed legal boundaries will further marginalize the legitimacy of war while simultaneously producing economic gain and development.

This will diminish the probabilities of military and political conflict and reinforce global security and geopolitical stability, but it is not exclusively an issue of security. It is also good business sense. The Rumaila oilfield ceased production for six years due to the Iraq-Kuwait dispute. Resource development in the East Mediterranean has placed several states on a collision course that is bound to affect production. Border disputes between the Republic of Sudan and the newly seceded South Sudan are almost entirely oil-centered, and have prompted the government of South Sudan to halt oil production despite the fact that the overwhelming majority of the country's resources come from the industry.

Disputes resolved through force may eventually be beneficially to the winning side, but unresolved disputes serve no one, including petroleum companies. This is precisely where the initiative may potentially rise. If the big companies realize it is in their economic interest to promote stability in volatile areas in order to exploit resources, nation states may follow suit with the necessary legislation and practices.

It is impossible to successfully regulate the international community according to an unchanging legal or moral code, but in an age in which economic interest often trumps political rivalries and violence must be legitimized, cooperation for the sake of guaranteed gain presents unprecedented opportunities. If unitization and joint petroleum development are mandated by international law, security and economic development (both goals of all rational statesmen) will be boosted on a global scale.

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DwC Technology, Defyer Bits, OverDrive System with TorkDrive Tool Set Casing at Planned Depth in one trip, Mitigate Losses

By Weatherford

New Weatherford technology allows the operator to set casing at planned depth and thus avoid the additional drilling and casing costs associated with using contingency casing strings. In previous wells in this field, the operator encountered problems reaching total depth (TD) while running 13 3/8-in. casing conventionally in a 17 1/2-in. hole section.

It provides an effective solution for casing to reach TD and minimize delays before cementing, and allows for the reduction of hole size from 17-1/2 in. to 16 in. to reduce wellbore drilling-fluid requirements. The goal was to minimize loss circulation in the remote desert drilling location.

Weatherford's total depth team evaluated formation strength, drilling viability, bit hydraulics, and torque and drag before installation. The recommended solution consisted of the OverDrive system with the TorkDrive compact casing running and drilling tool to deploy a 13 3/8-in. casing Defyer DPA8416 drillable casing bit, and specifically designed SpiraGlider centralizers in a string of 13 3/8-in. L80, 72-lb/ft DINO VAM to the planned casing-setting depth.

A 20-in. casing string was set in the upper

section to isolate severe loss circulation in the shallower hole. The operator continued drilling using the 13 3/8-in. casing string equipped with the Defyer DPA8416 drillable casing bit to the target depth.

The operator used an average rate of penetration (ROP) of 20 ft/hr (6.4 m/hr) with a maximum on-bottom torque of 10,000 ft-lb (13,558 N□m), while controlling wellbore instability commonly caused by brittle shale cuttings. The DwC technology provided an accurate casing setting depth across the next formation at 3,618 ft (1,103 m) while maintaining wellbore stability, minimizing the number of trips across the section and reducing the size and rate of the cuttings generated.

The casing string was cemented immediately using a six-bladed conventional PDC bit. The Defyer DPA8416 drillable casing bit was drilled out to the next 12 1/4-in. section in the same trip. The Defyer drillable casing bit was drilled out in less than 8 minutes.

Weatherford's total depth technologies were deployed, and the TorkDrive compact tool was used to run 2,368 ft (722 m) of casing and to drill 1,250 ft (381 m) with the Defyer DPA8416 bit. More than 87 connections were made during

57 hours of running and drilling operations with no lost time or safety incidents. Average casing-running speed was 8 joints per hour. Overall, the operator achieved a total depth of 3,618 ft (1,103 m) without nonproductive time (NPT) incidents. Using Weatherford's DwC technology with Defyer drillable casing bits and the TorkDrive tool presented the operator with many advantages. The operator was able to set the casing at the planned depth to avoid drilling hazards such as wellbore instability in the drilled formation. Weatherford's total depth technologies also helped the operator obtain results in one trip without the NPT incidents traditionally associated with this formation type, saving the costs associated with additional drilling and casing running trips.

Additionally using the OverDrive system allowed the operator to save two in and out drillpipe trips and remove personnel from hazardous areas during casing-running operations, enhancing overall safety.

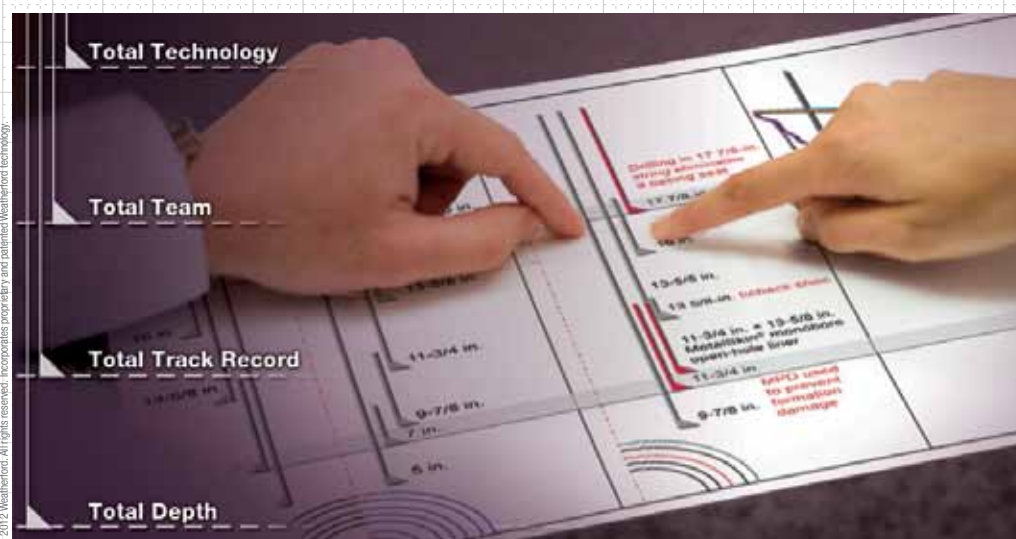
Furthermore, The TorkDrive compact tool enabled the operator to reciprocate and rotate the casing string while simultaneously circulating through tight spots and trouble zones without needing a check trip, saving significant time and costs.



Weatherford's 13 3/8 - x 16-in. Defyer DPA8416 drillable casing bit and the TorkDrive compact casing running and drilling tool enabled the operator to set the casing at planned depth, avoiding increased costs associated with using contingency casing strings.

Location Oman	Average ROP 20 ft/hr (6.4 m/hr)
Formation Fiqa Shargi	Casing 13 3/8-in. L80, 72-lb/ft DINO VAM
Well Type Onshore appraisal, oil producer	Products/Services • Total depth technology • DwC technology • OverDrive system • TorkDrive compact casing running and drilling tool
Hole Size 16 in.	• 13 3/8-in. x 16-in. Defyer DPA8416 drillable casing bit • 13 3/8-in. x 15 3/4-in. SpiraGlider HD centralizers
Depth • In: 2,368 ft (722 m) • Setting: 3,618 ft (1,103 m) • Run length: 1,250 ft (381 m)	

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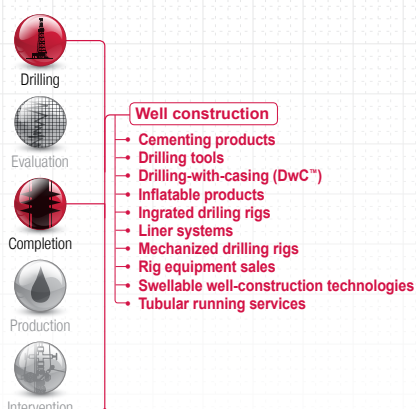
Oman – Our drilling-with-casing (DwCTM) expertise and OverDrive system helped mitigate severe drilling fluid losses and hole instability issues by using a drillable casing bit to clear the way to total depth (TD).

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Agiba Gas Generation Plant in Raml Field



Agiba has succeeded in completing a 2.4 MW gas power generation plant project in the Raml field. The project was undertaken with the aim of simultaneously boosting cost-effectiveness of power generation and efficiency of power generation.

Prior to the project's implementation, Agiba had more than 30 scattered production wells in the Raml field, some operating via electric submersible pumps (ESP), others using sucker rod pumps driven by elect motors. Each motor was powered by a standalone diesel generator operating in harsh environmental conditions.

The company was suffering in terms of wasted potential production, in addition to bearing high operating costs resultant from high diesel fuel prices, maintenance and repair costs, top and major overhaul costs and the costs of maintaining the large labor force mandated by the installations. The company's resources were further drained by the downtime and unreliability of diesel engines, the logistics required to operate them, and the long travelling distance and repair time. These costs were compounded by the fact that the burning of flare gas produced high emissions.

In order to sidestep these complications, Agiba took the decision to replace the diesel power generators, which amounted to more than 30 units, with a central gas power generation plant and a new electrical grid covering all wells in the field.

The plant offers the company the ability to utilize extant associated gas as fuel at no extra charge, and increases prime movers availability and reliability, simultaneously cutting down on emissions. Agiba tendered the project and the contract was subsequently awarded to the Alexandria Petroleum Maintenance Company (Petromaint).

The plant project succeeded in reducing costs for Agiba, and in providing more reliable power generation with fewer emissions. Oil production was also increased, producing an overall successful project for the company.

The project faced several technical

challenges. The associated gas has a low methane number, which necessitated a special gas engine. The fuel gas also had to be treated upstream of the gas generators using a gas treatment unit. This was in addition to time constraints, as the project was given to Petromaint in Jun 2010 with a targeted completion time of only 6 months.

Petroleum services company Professional Engineering Services (Proserve) was charged with providing two gas treatment units, three containerized gas power generation units, preventive spare parts for two years, installation and commissioning, as well as on the job training for the project. Proserve is the official dealer for Spanish company Guascor Power in the Middle-East.

The gas treatment plant consisted of 2 units, each housing one water chiller and one gas-water cooler. Both chillers were installed with the capacity to individually handle the total gas demands of the gas generator sets (850 m³/hr). Only one of the units is to be in service at any given time with the other remaining in standby, in order to ensure that the gas treatment plant stays operational at all times. Both units are equipped with local and remote monitoring and power saving, in addition to microprocessor controllers.

The purpose of the gas treatment unit was to cool down gas incoming from the wells, which could reach a temperature of 50°C, in order to remove all water contents and condensates which could harm the gas engine.

The gas generator sets used in the project, produced by Guascor, are fueled by low methane gas (N° 46,1). They have a maximum mechanical power capacity of 725 kWb (1), and are water-cooled by two external circuits. The sets are capable of operating 24 hours per day, producing no emissions. Powering the gas generator sets are turbocharged and after-cooled SFGLD480 engines.

The Guascor SFGLD480 engines have a cycle type of Otto 4 Strokes and an aspiration type of Ta. The engines work at a speed of 1500 rpm (50Hz) with a

cylinder number of 16 in. 'V', a bore of 152 mm and 165 mm. They have a capacity 47,90 liters and a compress ratio of 9,3:1. They consume lube oil at a rate of <0,30 G/Kwh.

The alternators used in the module are manufactured Leroy Somer, operating at a voltage of 400V rated with an apparent power of 875 KVA. Isolation for the alternators is Class H, and heating is Class F. The alternators have a protection level of IP23, and their excitation is electronically controlled. Accuracy of voltage is +/- 1.5%, with voltage adjustment of +/- 5%. The control panel of the Guascor module allows for complete control, both manual and assisted, of the module's operations. The control panel displays all basic variables for both the engine and the accessories, and displays all alarms and a record of all previous alarms on the operator's TFT touch control screen. In addition, it provides comprehensive protection for the engine and the alternator, with built-in shutdown functions for emergencies, and offers PLC control over power generated by the set based on specified power settings.

The module's power panel consists of one Masterpact Merlin Gerin NW circuit breaker, three class 5P10 current transformers for protection, three class 0.5 current transformers for measurement, one copper bus bar, and a thermostatically controlled heat extractor.

The weather and sound proof container utilized in the project holds an axial ventilation fan for air circulation, sound baffles made of perforated steel panels and filled with sound attenuating materials, as well as sound baffles on the inside of the container structure to absorb engine noise. The project has allowed Agiba to substantially decrease operational costs in the Raml field. Agiba had a total of 25 running diesel generator sets in the field, averaging 60kW of power consumption per set, with a total fuel consumption of 12,600 liters per day. With 350 working days a year, 42,032,000 liters of diesel fuel were consumed annually, costing the company a total of 15,435,000 L.E. at 3.5 L.E. per liter. The gas generating plant of course does not require fuel, as it is fueled by associated gas.

Furthermore, maintenance costs were at 4,600,000 per year for the diesel units. Maintenance for the two gas generator units amounts to 700,500 L.E., saving the company 3,900,000 L.E. in maintenance costs.

The project proved to be a highly beneficial venture for Agiba and its operations in the Raml field. Costs were curtailed significantly, with roughly 15,000,000 in fuel costs alone neutralized, in addition to drastic reductions in repair and maintenance costs. The labor force required for maintenance of the units was also reduced, further driving down costs. Both the reliability and the availability of power generation were improved in the

field as well, and burning of flared gas was reduced by more than 60%; emissions resulting from power generation were also cut down by more than 50%. Last but not least, oil production was boosted.



Project Components:

- Gas treatment plant
 - o 2 X 850 M3/Hr Chiller type
- Power generation
 - o 3 X 500 kWeGuascorContainerized Gas Gen sets
 - o 2 X 400 kWeWaukesha containerized gas gen sets
 - o 1 X 1200 kWeCat Diesel Power generator " S.B."
- Switch Gear
 - oLow Voltage 0.4 kV "
- 6 Incomers "5 X 1600 A & 1 X 2000 A"
- Bus Coupler -4000 A
- 7 Outgoing "2 X 3200 A & 3 X 125 A & 2 X 400 A"
- oMedium Voltage 11 kv
- Incomers 2 X 630 A
- 1 Bus coupler 630 A
- Outgoings 4 X 630 A
- Transformers
- Step up transformers 2 X 2 MVA -0.4/11 kV
- Overhead
 - oMedium Voltage with approx length of 25 Km



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STANDARD:
API 5L, 44TH ed., 2007.

GRADE OF STEEL: GR-B N PSL-2 **Origin:** Croatia **W.T:** 7.11 MM



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STANDARD:
API 5L – X52 PSL-2 43RD ed.

GRADE OF STEEL:X52 **Origin:** India **W.T:** 8.18 MM



59 Km 5111 Joints

12 3/4" COATED LINE PIPE SCH 40

ERW LINE PIPE, CS COATED (EXTERNAL 3 LAYER POLYETHYLENE COATING ACCORDING TO DIN 30670 N FOR LINE PIPE ERW, CS. BARE PIPE, NONE EXPANDED, AS PEP ANSI B16.10, BE. AS PER ANSI B16.25, DRL (11 TO 12 MT. LONG), WITH PROTECTED END CAPS. DITTO BUT BARE PIPE.

STANDARD:
API 5L 44TH ed.X52 PSL-2, ITP 74/08 REV.0

GRADE: X52M **Origin:** Greece **W.T:** 10.31 MM



44.4 km 4387 Joints

16" COATED PIPE LINE SCH40

ERW LINE PIPE, CS COATED (EXTERNAL 3 LAYER POLYETHYLENE COATING ACCORDING TO DIN 30670 N FOR LINE PIPE ERW, CS. BARE PIPE, NONE EXPANDED, AS PEP ANSI B16.10, BE. AS PER ANSI B16.25, DRL (11 TO 12 MT. LONG) , WITH PROTECTED END CAPS.

STANDARD:
API 5L 44TH ed – X52 PSL-2, ITP 74/08 REV.0

GRADE : X52M **Origin:** (Greece) **W.T:** 12.70 MM



50 Km 4345 Joints

More details:

- Full package of original manufacturer's data available with certificates.
- All quantities are stock items and subject to availability.
- Subject to order, prices may be negotiable, Ex Work (IncoTerms 2010).
- Third party inspection is on buyer's account.

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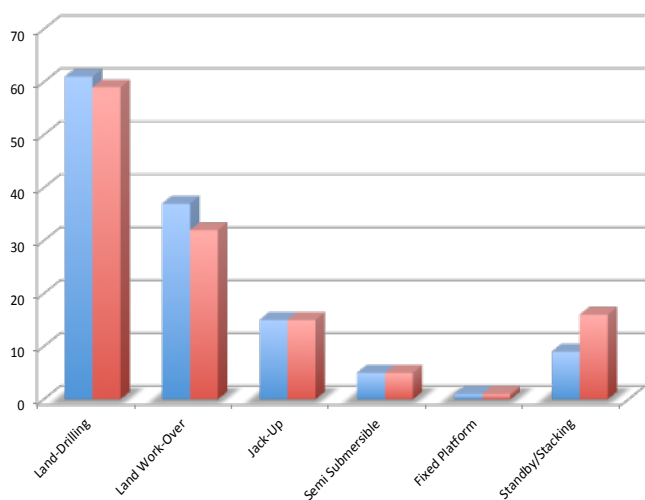
Egypt Statistics



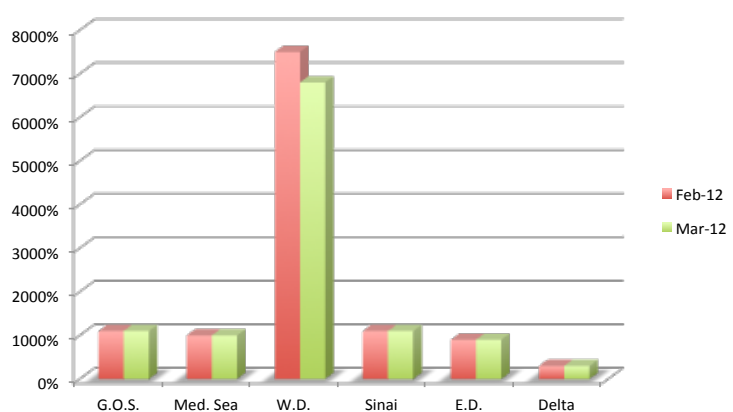
Table 1 Egypt Rig Count per Area - March 2012

RIG COUNT			
Area		Total	Percentage of Total Rigs
Gulf of Suez	11	11	10 %
Offshore			
Land	10	10	9 %
Mediterranean Sea			
Offshore	68	68	61 %
Land			
Western Desert	68	11	10 %
Offshore			
Land	11	9	8 %
Sinai			
Offshore	9	3	2 %
Eastern Desert			
Land	3		
Delta			
Offshore			
Land			
Total		112	100%

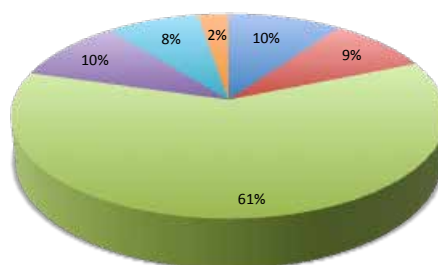
Rigs per Specification February - March 2012



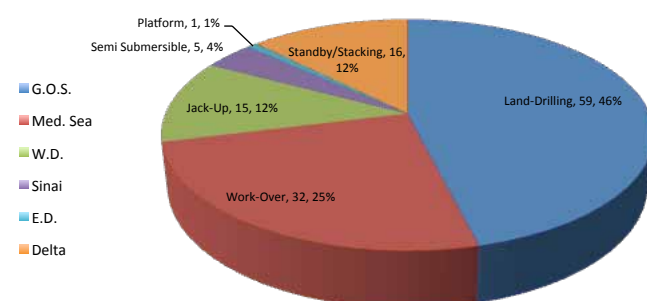
Rigs per Area February - March 2012



**Rigs per Area March 2012
(Total of 112 Working Rigs)**

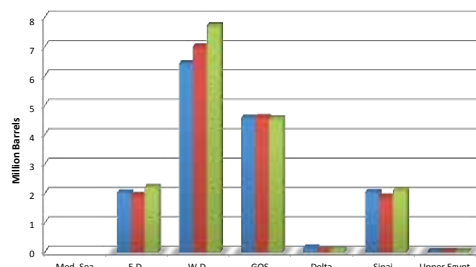


Rigs per Specification March 2012

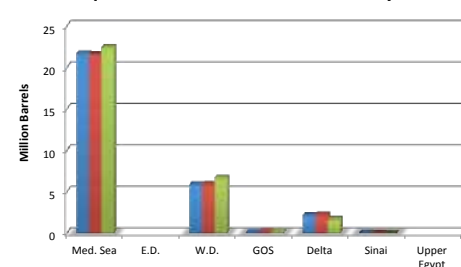


	Oil			Equivalent Gas			Condensate			Liquefied Gas		
	Barrel			Barrel			Barrel			Barrel		
	February-10	February-11	February-12	February-10	February-11	February-12	February-10	February-11	February-12	February-10	February-11	February-12
Med. Sea				21686429	21599821	22445000	1448263	1380243	1248596	393293	435345	476952
E.D.	2028607	1935297	2209736									
W.D.	6420504	6993638	7709487	5891964	5925893	6672143	1475518	1502912	1610401	497436	518880	728771
GOS	4568603	4582713	4539103	132500	206786	181786	51159	62100	58028	123067	171791	170690
Delta	146226	81027	89993	2153750	2232857	1706964	184397	187821	161622	83829	97046	100164
Sinai	2044674	1882615	2104394	79821	26071	1429	51058	24470	32305	71105	76130	81937
Upper Egypt	18106	20143	14784									
Total	15226720	15495433	16667497	29944464	29991428	31007322	3210395	3157546	3110952	1168730	1299192	1558514

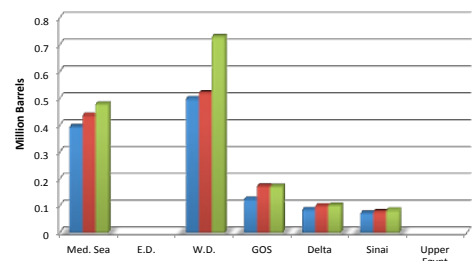
Oil Production February 2010 - 2012



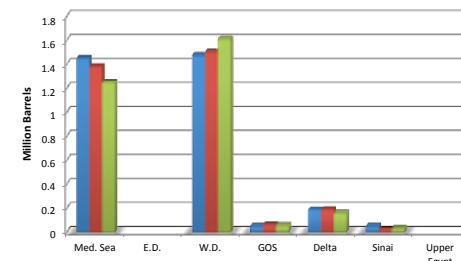
Equivalent Gas Production February 2010 - 2012



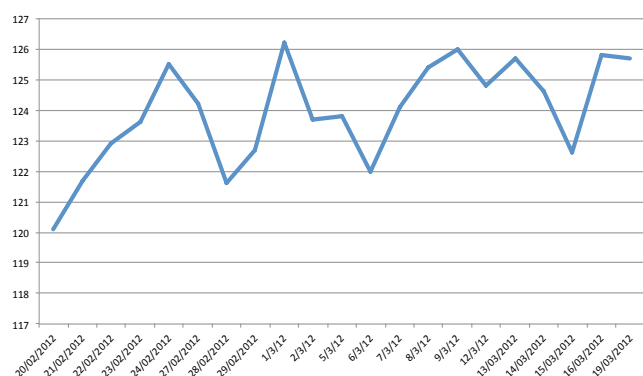
Liquefied Gas Production February 2010 - 2012

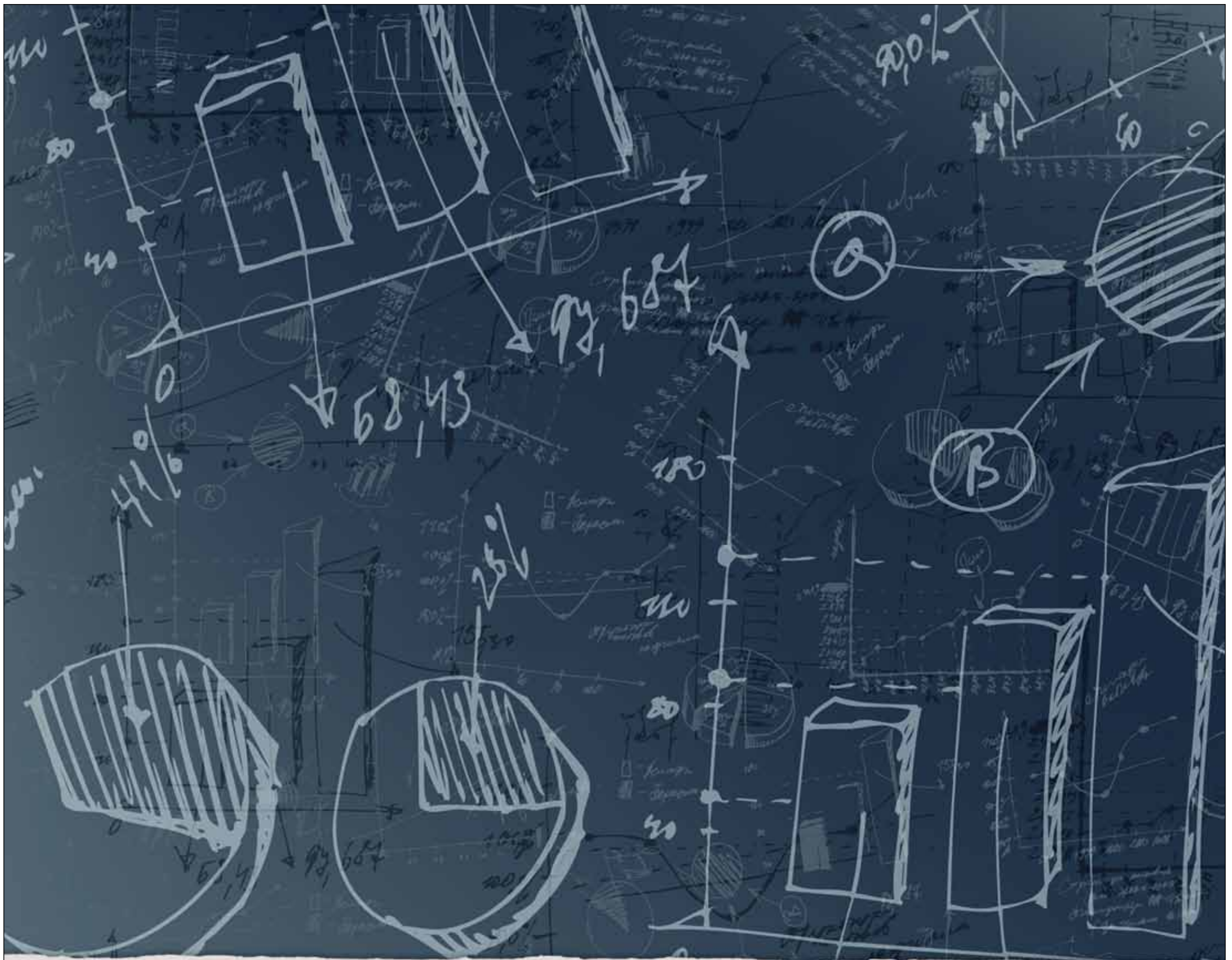


Condensates Production February 2010 - 2012



Brent Price





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