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Brad Hook
Commercial Director
sales@futureenergyafrica.com
+27 11 783 7250

Lucy Kamau
Senior Project Manager
sales@futureenergyafrica.com
+971 (0)4 248 3221

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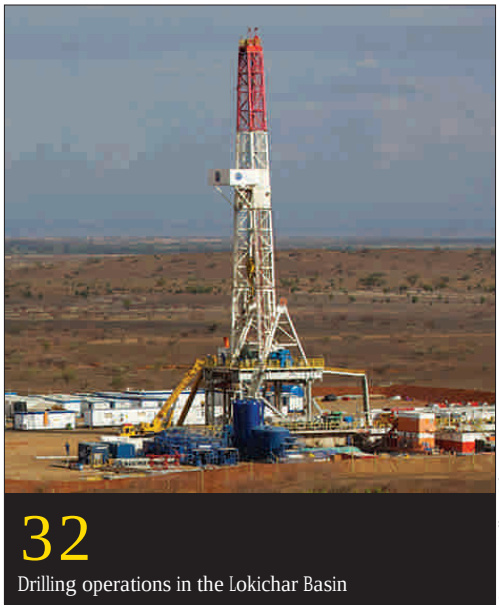

Source: Tullow Oil

ON THE COVER

Source: Abengoa Solar

DEPARTMENTS

UN Supports Women of the Sahel Region

Ambassador Nikki Haley, U.S. Permanent Representative to the United Nations, delivered remarks at a UN Security Council briefing on Women, Peace, and Security in the Sahel region.

"Here at the United Nations, we have combined this passion for amplifying women's voices with a belief that human rights issues – including the rights of women and girls – are a critical element for peace and security. When women's voices are silenced – either through violence, lack of political rights, or lack of education – entire communities suffer, and that suffering leads to conflict.

Source: UNFPA/Olivier Girard

UN Deputy Secretary-General Amina Mohammed (2nd from right) stands with (to her right) Margot Wallström, Minister for Foreign Affairs of Sweden; and Bineta Diop, AU Special Envoy for Women, Peace & Security, at the National Fistula Center in Niamey, Niger.

"The United States is strongly committed to empowering women in developing communities from the ground up. We work to ensure that our assistance goes directly to the kinds of women I meet with on my trips abroad: the mothers struggling to feed their families, educate their kids, and create a future for their families and their communities. The women pushing through barriers to have equal political representation. The entrepreneurs, pioneers, goal setters, and other extraordinary women changing the face of society. Across Africa, the U.S. is helping to build the capacity of regional organizations and the African Union to support women's political participation.

"The thread that runs through all of these efforts is that when we bring together women with power and resources, we create deeper, more sustainable prosperity. And that stability and prosperity protects human rights and promotes security."

Eritrea and Ethiopia Agree to Restore Diplomatic Ties

A July 9 meeting in Asmara between Ethiopian Prime Minister Abiy Ahmed and Eritrean President Isaias Afewerki, the first such meeting between any leaders of the two East African nations in nearly 20 years, saw the pair make a joint announcement that they would restore diplomatic ties.

Following the announcement, leaders around the world praised the move toward greater peace and stability in the region. The United States said it welcomed the pair's commitment to peace and security, effectively ending 20 years of conflict.

A statement released by the US Department of State, in part, said: "The United States stands ready to support this process, and encourages all parties to continue working with transparency and confidence in the coming days. Peace between Ethiopia and Eritrea will further the cause of stability, security, and development in the Horn of Africa and Red Sea."

Meanwhile from Germany, a Federal Foreign Office spokesperson said in a statement:

"The German Government would like to encourage both sides to continue on this path and thus to create new opportunities for their countries" adding, "The German Government will support both countries on their further path to détente and explore ways to foster the peace process."

Fears Persist Ahead of Zimbabwe Elections

Although Robert Mugabe, president of Zimbabwe from 1987 to 2017 is not featuring in the upcoming Zimbabwean elections, citizens of the country are still worried that the Zanu PF party are carrying on in the tradition of the former 94-year old dictator with voter intimidation.

Leading the race for the ZANU-PF, Mugabe's party, is Emmerson Mnangagwa, who worked closely with the former president for many years. He is tagging himself as a Beacon of Change, but at 75 years old, the people are doubtful he can change his ways.

According to We the People, a call center set up by civil society agencies, more than 500 reports have streamed in from all of Zimbabwe's provinces since mid-June, with just under 10% consisting of violence claims. Nearly all reports of intimidation and violence were attributed to Mnangagwa's party.

"The intimidation is more subtle this time. The modus operandi has changed, but the message is the same as it was under Mugabe: 'If you choose the wrong side, the violence will be terrible'," said Zachariah Godi, of with We the People.

The ZANU PF's main political opposition party, Movement for Democratic Change (MDC), are demanding reforms ahead of presidential elections scheduled for July 30. MDC presidential candidate Nelson Chasima said the party will continue to roll out protests against the Zimbabwe Electoral Commission (ZEC) in an effort to pressure them into assuring the elections are conducted in a free and fair fashion. ZEC is notorious for being pro-ZANU PF.

Nigerian Court Orders Return of Aiteo CEO's UK Property

A July 6 ruling by the Federal High Court in Abuja, Nigeria directed the immediate release of two properties located in the United Kingdom belonging to African billionaire businessman and CEO of the Aiteo Group, Benedict Peters.

Source: Aiteo Group

Benedict Peters

Peters had been the subject of an Interim Forfeiture Order obtained by the Economic and Financial Crimes Commission (EFCC) without notice to him. By this decision, the court has upheld his case that the properties wholly belonged to him; were unconnected to the former Petroleum Minister, Mrs Diezani Allison-Madueke and were unjustifiably included in a list of properties the anti-graft agency tried to seize.

In an application argued on his behalf by Chief Wole Olanipekun, a Senior Advocate of Nigeria (SAN), the court was urged to vacate the orders because EFCC's premise for alleging that the properties belonged to Allison-Madueke was manifestly unfounded and not supported by any shred of evidence. Relying on the contentions that EFCC acted "upon gross misstatements, concealment and misrepresentation of facts," sought and obtained *ex-parte* an interim order of forfeiture of the properties. Chief Olanipekun argued that "that the mandatory condition precedent to the grant of the interim forfeiture order was not complied with and due process of law was not followed in obtaining the interim order of forfeiture."

For the applicants, it was further asserted that concealment of accurate, relevant information from the judge when the order was made was fatal to EFCC's case. The applications were based also on a number of significant legal arguments demonstrating the unsustainability of the order. However, with regard to the property in the US, the judge took the view that the property would remain affected by the order until further, similar and credible evidence was produced to the FCT High Court was placed before the court. The US property was not dealt with in the FCT case.

African Union Development Agency to Emerge

At the recent 31st Ordinary Session of the Assembly of African Union Heads of State and Government in Nouakchott, Mauritania, African Heads of State and Government received several reports, including the status of the implementation of the AU Institutional Reforms presented by President Paul Kagame of Rwanda. President Kagame is the current chair of the African Union and the champion for the AU Institutional Reforms process.

During the Summit in Nouakchott, a decision was officially taken on the transformation of the NEPAD Planning and Coordination Agency into the African Union Development Agency.

The Assembly approved the establishment of African Union Development Agency as the technical body of the African Union with its own legal identity, defined by its own statute. The statute will be developed and presented for adoption at the next AU Summit in January 2019.

The Assembly commended the leadership of Senegalese President, H.E Macky Sall, current Chairperson of the NEPAD Heads of State and Government Orientation Committee, for reinforcing the credibility of NEPAD that has been acknowledged in the international community, including the G20 and the G7.The current reforms at the AU are an affirmation by member states of their commitment to the NEPAD Agency as the Union's own instrument established to champion catalytic support to countries and regional bodies in advancing the implementation of the continent's development vision – as articulated in the seven aspirations and 20 goals of Agenda 2063.

IMF Chief Identifies Some Key Challenges and Opportunities for Egypt

The most important issues that face Egypt over the coming years are tied to a rapidly growing population, the modernization of its economy, and how best to ensure a modern social safety net to protect the most vulnerable in society. IMF Mission Chief for Egypt Subir Lall, identified three key issues. Lall says taking advantage of its growing population is paramount with 3.5 million Egyptians projected to join the labor force over the next five years. "Absorbing these new entrants into the labor market will be a challenge. However, this also creates a tremendous opportunity for faster growth—if Egypt can support the emergence of a strong and vibrant private sector to productively employ this emerging generation of workers."

Lall also stressed the need for Egypt to modernize its economy. "With nearly 100 million people and a geographic location that provides excellent access to important foreign markets, Egypt has immense potential." One of the main issues has been energy subsidies which Lall says have been among the most significant price distortions. He encouraged authorities to price energy correctly and to continue removing subsidies.

Finally and perhaps most importantly, he stressed the need to provide a modern social safety net to protect the vulnerable. "As Egypt begins to modernize its economy and make it more competitive, it will also need to continue to bring down public debt to a level consistent with long-term sustainability. The challenge is to ensure that the most vulnerable segments of society are protected during this process, and that fiscal resources are safeguarded for spending on health and education," Lall offered.

CONTACT US

Deputy Editor
Jennifer Nickle
jnickle@petroleumafrica.com

Senior Correspondent
Mark Pabst

Operations Manager
Alan Younes

Art Director
Mario Saad

Client Relations and Digital Media Manager
Frederick Caccamo Jr.

Circulation Manager
Silvia Rafaat

Distribution Coordinator
Amira A.Wahab

Database Coordinator
Olabisi Ijeh

Senior Accountant
Said Adly

Advertising/Sales
Jina Sellers

IT and Social Media
Farrah Younes

Administrative Assistant
Dalia Abd El-Wahab

Africa Headquarters
10G Ahmed Abd El-Aziz St.,
New Maadi, Cairo, Egypt
Tel/Fax: +2 02 2517 7454
egypt@petroleumafrica.com

Advertising Representatives

Austria, Germany, Switzerland
Eisenacher Medien
Erhardt Eisenacher
Tel: +49 0228 2499 860
info@eisenacher-medien.de

Ghana
RDFC Ltd.
Ama Boakye-Lartey
Tel: +233 302 767 919
ghana@petroleumafrica.com

Italy
Ediconsult Internazionale
Anna De Bortoli
Tel: +39 02 477 100 36
energia@ediconsult.com

Middle East/North Africa
Alan Younes
Tel/Fax: +2 02 2517 7454
egypt@petroleumafrica.com

Nigeria
Jina Sellers
Tel: +1 713 867 9394
advertise@petroleumafrica.com

North America/Global Inquiries
Farrah Younes
Tel/Fax: +1 713 867 9394
fyounes@petroleumafrica.com

Rest of Sub-Sahara Africa
Farrah Younes
Tel: +254 20 243 0825
fyounes@petroleumafrica.com

United Kingdom
Jina Sellers
Tel: +1 713 867 9394
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MESSAGE
FROM THE EDITOR

Many of us held high hopes for the African squads during the 2018 World Cup in Russia, but it was not to be, with the five countries leaving Africa's worst result since 1982. The North Africans specifically – Egypt, Morocco, and Tunisia – did not have a good run, losing hope before their final matches were played. In Egypt's defense, Liverpool superstar Mohamed Salah was unable to play due to an injury sustained in a Champions League match prior to the start of this tournament. The other two teams, Nigeria and Senegal, did give their fans some excitement however.

Nigeria's Super Eagles managed to win Iceland, and put up a fight against Argentina, losing 2-1, while being walked over by Croatia losing 2-0. The real heartbreak came with Senegal's Lions of Taranga. The Lions played very well overall, narrowly losing a trip to the round of 16 in their third match against Japan. A draw at 2-2, resulted in the tightest of FIFA Fair Play Tiebreaker's going to Japan. Along the way Senegal won Poland 2-1 and lost to Columbia 1-0.

The 2018 World Cup was a sincere heartbreaker for Lions fans, but we wish them much success moving forward. We will get a chance to cheer them on once again when the African Cup of Nations group rounds kick off in September. Senegal will meet Madagascar, while Egypt will take on Niger, Tunisia faces off against Swaziland, Nigeria drew Seychelles and Morocco will go up against Malawi.

Now on to this issue…In the Oil Security section Mark Pabst lays out the latest in brewing security situations coming out of Mozambique's Cabo Delgado province. Just how will the government handle the unrest in front of planned 2019 investment decisions by oil firms for natural gas production? Kenya has made some inroads and is now a small-scale producer gearing up for large-scale production, learn more in our African Focus feature. As always, your comments and suggestions are welcome and can be sent to *info@petroleumafrica.com*.

Dianne Sutherland
Chief Editor

NOC of Libya has restructured the management committee of the **Arabian Gulf Oil Company**, or **Agoco.** Following the restructuring **Mohamed Belqacim** will continue in his capacity as chairman of the management committee, and **Fadlalla Issa Ahtita Qataani** as a committee member. The committee will receive the following new members; **Ashraf Mohamed Abdelsalam Abbar, Faraj Massaoud Hamad Mashay,** and **Abdel Motalab Salah Adam Abu Sakhra el-Baraasi.**


Sameh Sabry


Thomas Radwitz

DEA Deutsche Erdoel AG has named **Sameh Sabry** as the new General Manager of **DEA Egypt**. He will take over the responsibilities as of August 1. He replaces **Thomas Radwitz** who held the position for nearly three years. Sabry joined DEA 10 years ago and has assumed different managerial roles mainly in North Africa and Europe. He gained experience in leading positions such as the GM of DEA's branch in Algeria and as deputy GM of DEA Egypt branch for extended periods of time. Radwitz will be assigned Board Advisor in DEA's head office in Hamburg.

Puma Energy announced that **Pierre Eladari** is stepping down as CEO and leaving the company. Eladari has been with the company since 2004, originally as part of **Trafigura**. The board of Puma Energy is commencing a search for a successor. In the meantime, Eladari will continue in his role and the plan is that he will transition his responsibilities to the new CEO once s/he is on board..

Neptune Energy Group has named **David Hemmings** as VP Business Development. Hemmings' appointment started in early July. He joins the company from **Rothschild & Co** where he most recently held the position of Managing Director in the Energy and Power Team.

Malcom Farrant, VP of human resources at **ExxonMobil** will be retiring from the company effective August 1. Farrant has been with the oil major for 35 years. **Tracey Gunnlaugsson**, president of **SeaRiver Maritime**, an ExxonMobil marine affiliate, has been elected to replace Farrant. In addition, ExxonMobil revealed that **Michael J. Dolan**, senior VP, has also chosen to retire effective August 1 after 38 years of service with the company.


Samaila D. Zubairu

Africa Finance Corporation appointed **Samaila D. Zubairu** as its third president and CEO. Zubairu succeeds **Andrew Alli** who comes to the end of his tenor, having successfully served in the position since 2008. Zubairu has 29 years of professional experience and has served in a number of executive positions, including the first CFO of **Dangote Cement**.

Alessa Popovic, previously Manager at **EY's** EMEIA Oil & Gas Advisory Center, has joined blockchain technology firm **BTL Group** in their London office as Senior Business Development Manager.

Kreuz Subsea appointed **Jerry Starling** as director of diving and ROV operations. Starling, who will be based at the company's Singapore headquarters, brings more than 25 years of oil and gas experience to the business. He most recently held senior diving roles at **DOF Subsea** and **DeepOcean**. The announcement comes as Kreuz recently appointed **Stephen Poulson** as senior project manager. Mr Poulson has more than 25 years subsea experience and most recently worked as an energy consultant for a number of oil and gas clients. Prior to this, he held several project manager roles at **McDermott International**.

John Gugel has been appointed president of **Honeywell UOP**. Gugel has more than 25 years at Honeywell UOP serving in numerous roles. He succeeds **Rebecca Liebert**, who had been president of Honeywell UOP since 2016.

Egypt's Minister of Petroleum **Tarek El Molla** has appointed **Akram Mohamed Ibrahim Badawy** as the head of **Sinai Petroleum and Mining Services Company (SSCO)**.


Eskil Jersing

Wentworth reported that **Eskil Jersing** has now joined the company as CEO. He was appointed to the board with effect from June 27. Jersing was previously head of **Sterling Energy**.

Chevron named geologist **Mariano Vela**, to oversee its operations in Brazil. Chevron's former Brazil country manager **Javier La Rosa** on June 19 said Vela would take the Brazil position at the beginning of July.

Wellsite Fishing and Rental Services promoted **Jessica Roger** to VP of administration. She will be located at the corporate office in Broussard, Louisiana. Roger previously served as secretary and treasurer.

Global OEM **HTL Group** appointed **Marc Gerrard** as Regional Director for their HTL Group Scotland arm. He joins the company with 22 years' background in equipment rentals, sales, maintenance and management within the oil and gas arena.


Brian Hall

The chairman of **Aminex**, **Brian Hall**, has informed the company that he intends to stand down from the Board of Aminex during 2018. The company intends to appoint a new chairman shortly and, accordingly, the effective date of Hall's departure will be announced in due course.

Zach Dailey has assumed the role of Advisor to **Lee Tillman,** the president and CEO of **Marathon Oil Corp**. In addition to Dailey's appointment, the company also announced that **Guy Baber** joined Marathon Oil as VP of Investor Relations.

HydraWell has appointed decommissioning expert **Tom Leeson** to the newly created role of Chief Commercial Officer. Leeson has close to 30 years' experience in the oil industry, working for both operators and oil services companies in the North Sea, Middle East, SE Asia and Brazil. He joins HydraWell following a period as Interim CEO of UK trade body **Decom North Sea**.

DNV GL has appointed **Neil Jamieson Fraser** as its new head of **Noble Denton** marine services in the UK and West Africa**.** Fraser has worked with DNVGL for more than 25 years and has held a number of senior positions within the company in the UK, West Africa and most recently, in South America.

Highview Power revealed that Dr. **Javier Cavada Camino** is joining the company as CEO and president. Current Highview Power CEO **Gareth Brett** will become Vice Chairman when Cavada joins the company in September 2018.

To include a corporate personnel announcement in Moving On, write to *info@petroleumafrica.com*. Preference will be given to Africa-specific appointments and to those companies who have interests within the continent; all others will be included on a space available basis.

TechnipFMC and Subsea 7 Awarded Zinia Work

TechnipFMC was awarded a contract for work offshore Angola. The contract comes from Total E&P Angola for the Zinia Phase 2 field development.

TechnipFMC's contract covers the EPC of subsea equipment including nine subsea tree units as well as wellheads, subsea control systems, connection systems and associated equipment. This contract also covers support services, performed by TechnipFMC in Angola, for the assembly, test, mobilization and installation.

Source: Total

Pazflor FPSO

This is the second recent award announcement for work on Total's Zinia field development. The first contract went to Subsea 7 to provide the engineering, procurement, installation and commissioning of the subsea flowlines and umbilicals for the Zinia Phase 2 project.

The contract follows Total and its partners on Block 17, where the Zinia is located, taking the FID in May. Total's partners on Block 17 are Equinor, ExxonMobil, and BP. Sonangol is the concessionaire. The block is home to four FPSOs including the Girassol, Dalia, Pazflor, and CLOV. Production from the Zinia Phase 2 will be sent to the *Pazflor FPSO*.

Sonatrach/XOM Shale Deal Expected by Year End

Sonatrach says it expects to sign a shale development agreement with ExxonMobil by the end of 2018. The news was revealed by the company's chief executive Abdelmoumen Ould Kaddour.

"We're looking at their experience in shale and would like them to be involved with us," Kaddour told Reuters on the sidelines of the World Gas Conference in D.C.

Kaddour and ExxonMobil started talking six months ago about a potential partnership. Seven ExxonMobil employees are in Algeria inspecting the country's geology and other factors for a possible agreement, Kaddour said.

"We'll probably see an Exxon agreement soon, before the end of the year," he said.

Saipem's Work on Zohr Continues

Even after performing a host of work to bring the Zohr development to fruition, Saipem still has more work to do on the massive gas development off Egypt's coast. The company, in consortium with Petroleum Marine Services (PMS), was awarded the contract for life of field operations in the framework of Petrobel's Zohr Deepwater Field Development, for which the vessel *DP2 Ahmed Fadel*, mobilized by PMS, will be deployed.

Saipem's operations will be conducted mainly by Sonsub, the Saipem business line specialized in management and maintenance services of subsea fields and in underwater technology and robotics, targeted at enhancing the operational efficiency and ensuring the integrity of subsea assets.

Algeria Boosts Flows at Alrar Field

Algeria saw an increase in production from its Alrar gas field. According to Sonatrach CEO, Abdelmoumen Ould Kaddour, the field is now producing at a rate of 24.7 Mmcm/d. The Alrar field is located near the Libyan border.

The field was previously producing at a rate of 16 Mmcm/d. The cost of the extension at Alrar, completed through contracts with foreign firms Petrofac and Bonatti, was $545 million.

NNPC Finalizes Deal with Schlumberger and First E&P

Nigeria's state-run oil and gas firm, NNPC, has finalized its crude oil financing deal negotiated with oil service firm Schlumberger for the Anyalu and Madu oil fields under OML 83 and OML 85, offshore Nigeria.

According to reports, the deal was given the greenlight with the execution of the final contractual agreement between it and the company under a joint venture agreement it has with First E&P.

According to a NNPC statement, the approval came one year after a tripartite term sheet for the financing and technical services arrangement was signed between the NNPC, First E&P, and Schlumberger.

Under the agreement Schlumberger will provide $724.14 million out of the required project cost of $1.082 billion while the balance of $358.79 million would be funded with cash flows generated by the project.

The Anyala and Madu fields were projected to have a production plateau of 50,000 bpd along with 120 Mmcf/d of natural gas.

The statement quoted the Group Managing Director of NNPC, Maikanti Baru, to have said at the signing ceremony that in arriving at the innovative alternative funding package, the corporation was guided by the need to instill transparent and accountable processes.

Baru added that NNPC also followed strict compliance with all extant laws, regulations and established governance protocols as well as overriding national interest and drive to achieve competitive market pricing for such greenfield project.

He said the Schlumberger financing package covers pre-FID funding, 100% of capital expenditure for three years, and pre-production operating expenses.

Egina FPSO Ready to Sail

The FPSO for Nigeria's Egina deep-water oil project will be heading toward the field by the end of July or early August. The $3.3-billion FPSO arrived in January from South Korea and has been undergoing final installations.

The Deputy Managing Director for Deep Water at Total Exploration and Production Nigeria, Ahmadu-Kida Musa, disclosed this at the Nigeria Oil and Gas Conference and Exhibition (NOG) held in Abuja.

Musa said that the FPSO, which had the detailed engineering of its topsides executed in-country after it arrived from South Korea by Samsung with a consortium of Nigerian engineering companies, will sail away to Egina field, which he noted, is located in OML 130.

The Egina field is the deepest offshore development carried out in Nigeria to date. The project is in water depths of 1,500 meters and is designed to produce 200,000 bpd at plateau. The field will also re-inject associated gas into the reservoir to maintain reservoir pressure and partly channel to supply the domestic gas market.

Bahr Essalam Phase 2 Starts Production

ENI and Libya's National Oil Corp. (NOC) saw the start of production from the first well of the offshore Bahr Essalam Phase 2 project. The start of production from Phase 2 comes just three years after the FID for the project was taken.

The field is operated by Mellitah Oil & Gas, a 50/50 JV company belonging to the two firms.

Source: NOC

Bahr Esalem

Two further wells were to begin production shortly afterward. An additional seven wells will come on-stream by October of this year.

Phase 2 of the project completes the development of the largest offshore producing gas field in Libya, increasing production potential by 400 Mmcf/d. Phase 2 will be completed between September and October, bringing total field production to 1,100 Mmcf/d.

Production from the Bahr Essalem is delivered through the Sabratha platform to the Mellitah onshore treatment plant before principally being used to supply the national network.

Tullow Loses West Leo Case

The case brought against Tullow Oil subsidiary, Tullow Ghana, in a British Commercial Court by Seadrill Ghana Operations did not go in the company's favor. The UK firm announced that the court ruled that Tullow was not entitled to terminate its contract for the *West Leo* rig with Seadrill.

Tullow had invoked the contract's *force majeure* provisions on December 4, 2016 but the court disallowed the provision. Tullow is now required to pay Seadrill a contractual termination fee and other standby fees that accrued in the 60 days prior to the termination of the contract.

These fees amount to approximately $254 million. Tullow expected to be able to pay these fees within a two-week timeframe with Tullow being liable for a net amount of around $140 million, which compares with the provision of $128 million made in the 2017 Annual Report and Accounts.

The company said it was "disappointed with the decision" and it maintains "the view that it was right to terminate the *West Leo* contract for *force majeure*." Tullow will now examine its options, including seeking leave to appeal the judgment.

As disclosed in a recent trading statement, Kosmos is disputing separately, through an arbitration against Tullow with the International Chamber of Commerce, its share of the liability (c. 20%) of any costs related to the use of the *West Leo* rig beyond 1 October 2016. The arbitration tribunal's decision is expected shortly.

Sharara Shut-In as Safety Precaution

The National Oil Corporation (NOC) of Libya in a statement on its website reported that unknown armed assailants entered the facilities of Station 186 of the Sharara oil field. Four of the station's staff were initially kidnapped but two of them have been since released.

NOC Board Members are closely monitoring developments with the management of Akakus. The chairman of Akakus and the general manager of operations were instructed to be on-site. The corporation is liaising with appropriate authorities to resolve the issue and ensure employee safety.

Akakus is a joint venture between NOC, and a consortium of Total, Repsol, Statoil, and OMV. Oil wells in the surrounding area have been shut down as a precaution, and all other workers evacuated. Expected losses to daily production are 160,000 bpd.

Opuama-9 Flows Beyond Guidance

Eland Oil & Gas reported that its Opuama-9 well is testing at a rate beyond the upper end of its previous guidance. The well, a dual completion, with the short string producing from the D1000 reservoir and the long string from the D2000 reservoir, was tested on variable chokes to determine the optimum production rate. As an indicative interim production result from the MER test, the short string is being produced on a 36/40" choke at 3,200 bpd and the long string on a 40/64" choke at 3,800 bpd.

Eland said it was encouraging that the combined total of 7,000 bpd is beyond the upper end of previous gross guidance of 4,000 - 6,000 bpd.

Following completion of the Opuama-9 well the OES Teamwork Rig moved to and spudded the Opuama-10 well. The well had reached a depth of 3,599 ft, where the 13 3/8" casing has been run and cemented. The rig was set to drill the 12 ¼" hole to a measured depth of 10,200 ft, with primary targets in the D1000 and D5000 reservoirs and secondary targets in the D3500 and D4000 reservoirs. Initial gross production is expected to be between 4,000 and 6,000 bpd.

The Opuama field is currently producing at around 25,000 bpd, an all-time record for OML 40. This includes both strings of production from Opuama-9 which has just been brought onstream at higher levels than anticipated. The company has seen an increased water-cut from Opuama-7 and is now taking remedial action to rectify this. A re-entry of Opuama-7 is expected to take place during the coming month. Production is still expected to be in excess of 30,000 bpd from Opuama upon completion of the Opuama-10 well.

Force Majeure Lifted on El Feel

Libya's state-run oil company, National Oil Corporation (NOC), lifted the *force majeure* at the El Feel oil field. The *force majeure* had been in place since late-February.

The dispute caused by the local Petroleum Facilities Guards' (PFG) demands regarding pay and benefits was brought to an end and pumping at the field was expected to resume to 50,000 bpd within a couple days, and to 72,000 bpd shortly thereafter.

The field is operated by Mellitah Oil and Gas Company, a joint venture between Italy's ENI and NOC. Negotiations succeeded in guaranteeing an unconditional return of Fezzan Branch PFG to their previous locations.

Mustafa Sanalla, NOC chairman commented: "We are happy to announce the return to production at El-Feel. Bringing El-Feel back online will help us swiftly return to maximum production levels."

ENI Knocks Out Second Discovery in Faghur Basin

ENI made its second light oil discovery in the Egyptian Desert's Faghur Basin. The discovery well, the SWM B1-X, is located on the South West Meleiha license.

SWM B1-X was drilled to a total depth of 4,523 meters and encountered 35 meters net of light oil in the Paleozoic sandstones of Dessouky Formation of Carboniferous age and in the Alam El Bueib sandstones of Cretaceous Age.

The well has been opened to production in the Dessouky sandstones and delivered 5,130 barrels of oil per day (bopd) of light oil (37° API) with low associated gas.

According to ENI, the discovery confirms the high exploration and production potential of deep geological sequences of the Faghur Basin. The company plans, in the near term, the drilling of other exploratory prospects located nearby the A2-X and B-1X discoveries to consolidate what can result as a new productive area for ENI in Egypt.

The production is expected to be routed to already existing infrastructures and then shipped to El Hamra Terminal through existing pipelines, after Development Plan approval by Ministry of Petroleum and Mineral Resources.

Rockhopper Forges ahead with Egypt Exploration

Rockhopper Exploration updated its activities in Egypt on the Abu Sennan concession and the El Qa'a Plain concession. At Abu Sennan, the development well Al Jahraa-6 on the Al Jahraa field is set to spud imminently. The primary objective of the well is the producing AR-C reservoir, at the crest of the structure. The well has an additional exploration target in the deeper Bahariya Formation sands which are productive in adjacent licenses. This well is expected to take approximately 60 days to drill and will be immediately followed by a second development well in the field the Al Jahraa-10.

The water injection program in Al Jahraa is progressing to schedule and injection is expected to commence in mid-July. The third and final well in the 2018 Abu Sennan drilling campaign is an exploration well targeting Prospect S.

On the El Qa'a Plain the exploration commitment well, the Raya-1X, reached TD on June 30. At the primary Nukhul Formation objective, wireline logging confirmed the presence of good porosity sands, although no hydrocarbons were encountered. The well has been plugged and abandoned.

Shell Lifts Bonny Light Force Majeure

Royal Dutch Shell has confirmed that it lifted the *force majeure* declared May 17 on exports of Nigerian crude Bonny Light following the repair and reopening of the Nembe Creek Trunkline.

Bonny Light is one of Nigeria's key export grades, with production of 200K-250K bpd, and is popular with global refiners.

Bonny Light was under *force majeure* earlier this year and three times last year due to pipeline leaks caused by attacks from militants.

New Nooros Development Well Drilled

A new development well on the Nooros gas field has been drilled. The Nooros field is located offshore Egypt in the Nile Delta.

The well, the Nedoko, is the fifteenth well drilled on Nooros to date. According to the country's energy minister, Tarek El Molla, the well will be able to produce an estimated 5.09 Mmcm/d of gas.

The well will help maintain the output from the Nooros field at 34 Mmcm/d, which is currently the highest production rate of any of Egypt's fields.

ENI and Sonatrach Strengthen Partnership in Algeria

The chairman of the Algerian state company Sonatrach, Abdelmoumem Ould Kaddour, and the CEO of ENI, Claudio Descalzi, signed an agreement that represents a further step towards the strengthening of their partnership in the Berkine Basin. In combination with the existing assets of BRN (block 403) and MLE (block 405b), the aim is to create a gas hub in the area.

The agreement, which is part of the Framework Agreement signed last April at the "Technical Scientific Days" event in Oran, aims to develop an ambitious program to relaunch exploration and development in the area, by optimizing existing infrastructures and putting them in synergy with the ones newly built: a 180 km line that will quickly connect BRN with MLE's assets, transforming it into the Berkine Basin's main gas hub.

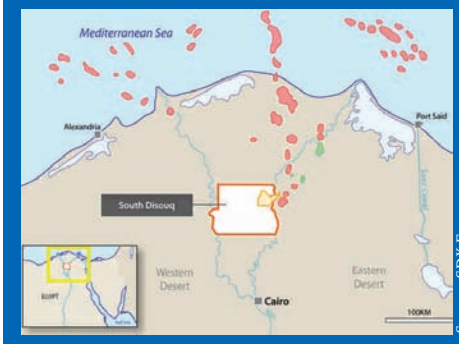
ENI and Sonatrach also agreed the commercial conditions for the 2018-19 fiscal year, in line with the gas market. Additionally, as part of a strengthening of their cooperation and partnership, the two companies have agreed to begin a negotiation to look into extending the gas supply beyond the contractual deadline of 2019.

Descalzi, commented: "This is a further step forward in the strategic expansion of our upstream activities in Algeria and in ENI's renegotiation of long-term gas supply contracts. It also demonstrates a strong spirit of collaboration between Sonatrach and ENI, from exploration to the development of new projects in gas and renewable energy."

The two firms also agreed to further strengthen their cooperation in petrochemical, renewables, and offshore projects in Algeria and in other international cooperation opportunities.

SDX Spuds and Appraises South Disouq

SDX Energy spud its SD-3X appraisal well on the South Disouq in Egypt. The SD-3X well is the second of two appraisal wells in the company's 2018 drilling campaign at South Disouq.



Source: SDX Energy

South Disouq Concession

The well is anticipated to take up to 30 days to drill and if successful, will be completed, flow tested and connected to the infrastructure being developed at the SD-1X discovery location.

In addition, SDX Energy announced that a successful production test has been conducted at its SD-4X appraisal well, also at South Disouq. The well flowed at a maximum rate of 30.4 mmscf/d during an eight-hour clean up period and was then shut in for eight hours, during which time no pressure decline was observed. Following this, by varying choke sizes the well was flowed for two successive 12-hour periods at average rates of 5.4 mmscf/d, 8.6 mmscf/d respectively and one extended flow period of 24 hours at an average rate of 10.5 mmscf/d.

The SD-4X well was subsequently shut in for a pressure build-up of 120 hours, which is currently on-going. At completion of the build-up the downhole pressure gauges will be retrieved and the well suspended prior to being connected to the local production facilities. During testing a total of 23.38 mmscf of conventional natural gas was produced.

Sankofa Sees Associated Gas Production

Production of natural gas from Ghana's Sankofa field on the Offshore Cape Three Points (OCTP) Integrated Oil and Gas Project operated by ENI has begun. The field will provide 180 mmscf/d for at least 15 years, enough to convert half of Ghana's power generation capacity to gas supplied.

Source: ENI via Flickr

Production started from two of the four deep-water subsea wells connected to the FPSO *John Agyekum Kufuor*. After the final steps of commissioning of the offshore facilities, production will gradually flow via a dedicated 60-km pipeline to the Onshore Receiving Facility (ORF) in Sanzule, where gas will then be compressed and distributed to Ghana's national grid.

OCTP is the only deep offshore non-associated gas development in sub-Saharan Africa entirely destined to domestic consumption and it will guarantee stable, reliable, affordable gas supplies to Ghana.

The project was developed with the support of the World Bank, and it has a strategic relevance: gas from OCTP can help Ghana shift from oil-fueled power generation to a cleaner power source, with financial as well as environmental benefits, and contribute to the country's sustainable economic development.

DRC to Open Virunga and Salonga to Drilling

Environmentalists are up in arms over a decision to explore for oil in environmentally sensitive areas recently taken by the government of Democratic Republic of Congo (DRC). According to reports, the cabinet decided to open up parts of Virunga and Salonga National Parks to oil drilling. The national parks are home to a host of rare species as well as the mountain gorillas and bonobos.

The cabinet said in a statement that it had approved the establishment of an inter-ministerial commission charged with preparing plans to declassify sections of the parks.

Proposals put forth earlier to allow exploration met with resistance and anger from environmental activists. The activists contend that any drilling in the park would endanger the lives of the wildlife.

The DRC government has defended its right to authorize drilling anywhere in the country and said it is mindful of protecting animals and plants in the two UNESCO World Heritage Sites.

Poly-GCL Starts Production in Ethiopia

China's Poly-GCL is rumored to have started producing hydrocarbons from its holdings in Ethiopia's Ogaden Basin on a test basis. The amount of gas reserves discovered by Poly-GCL is estimated to be 6 to 8 Tcf.

Officials, from both the federal and local governments attended the inaugural ceremony which was held on June 28. The federal delegation was led by Meles Alemu, Minister of Mines, Petroleum & Natural Gas.

Fitsum Arega, chief of staff in Prime Minister Abiy Ahmed's office, said on Twitter that Abiy had met with officials from Poly-GCL Petroleum Investment Limited to "officially kick-start crude oil production test in Ogaden Region."

The state-affiliated Fana media quoted Abiy as saying 450 bpd would be produced on a trial basis.

Mozambique Suspends Sasol Tender

The Mozambican government announced the suspension of a call for tenders by the South African petrochemical giant, Sasol, because it favors foreign companies. The information was given by the local TV channel STV.

The tender, which was launched on June 8, is for the leasing of logistical services and transportation of 3,000 bpd of oil from Sasol's operations in in the Inhambane province.

"By giving priority to foreign companies, Sasol violates Mozambican legislation. The law provides that, for this type of business opportunity, the regulatory body, the National Petroleum Institute (INP), should be consulted and the procurement procedures transparent to give Mozambican companies the opportunity to be competitive," said Max Tonela, the Mozambican Minister of Energy.

"The offer includes alternative transportation of light oil by truck. These are opportunities that should first be offered to Mozambican companies. This is the principle that the government defends," he added.

A letter from the Ministry was reportedly sent to Sasol, ordering it to act in accordance.

Milaha Explorer Deployed to West Africa

Milaha has deployed its liftboat, *Milaha Explorer*, off the coast of West Africa as part of a long-term charter with a major international oil company. *Milaha Explorer* is the largest of its kind to be owned by a Qatari company, and has a large deck area, a variable load capacity, and the ability to accommodate 300 persons on board.

Source: Milaha

Commenting on the deployment of the vessel, Milaha's President and CEO Mr. Abdulrahman Essa Al-Mannai said: "Over the past few months, we have been significantly ramping up our operations, and I am pleased to announce further growth in our geographic footprint and operational portfolio with this long-term deployment, which marks our entry into Africa. Milaha Explorer is a new and modern vessel, and we wish its captain and crew safe and successful operations."

ENI and XOM Submit Development Plan for Mozambique

The partners on Mozambique's Offshore Rovuma Area 4 concession have submitted their development plan for the first phase of the Rovuma LNG project to the government. The first phase will produce, liquefy, and market natural gas in the form of LNG from the Mamba fields.

The plan details the proposed design and construction of two LNG trains which will each produce 7.6 million tons of LNG per year.

US supermajor ExxonMobil will lead construction and operation of LNG trains and related facilities on behalf of the JV. ENI, operator of Area 4, will lead construction and operation of upstream facilities.

According to an ExxonMobil statement, as the development progresses, every effort will be made to actively build the local workforce and supplier capabilities in Mozambique.

A final investment decision by the Area 4 JV parties is scheduled in 2019, with LNG production expected to commence in 2024. Marketing

activities are progressing, with negotiations on sales and purchase agreements underway, targeting completion in parallel with the development plan approval process.

Rovuma LNG is operated by Mozambique Rovuma Venture S.p.A., an incorporated JV owned by ExxonMobil, ENI and CNPC, which holds a 70% interest in the Area 4 concession alongside its partners Galp, KOGAS and Empresa Nacional de Hidrocarbonetos E.P. (ENH), each of which hold a 10% interest.

Gharb Center Seismic Launches

SDX Energy launched a 3D seismic program in the Gharb Center in Morocco. The survey will cover an area of around 240 sq km.

The work is expected to take 45 to 60 days, and the data collected will be processed and interpreted in Q4.

AlMansoori Delivers Facilities for Kenya's First Oil Wells

AlMansoori Specialized Engineering has successfully contributed to the Early Oil Pilot Scheme (EOPS) launch leading to Kenya's first oil production and export program by providing facilities for the landmark project. The EOPS is a momentous project because it establishes Kenya as the first East African nation to export oil.

Source: ALMansoori

The $15-million contract with Tullow Oil, part of Kenya's EOPS, included the provision of degassing facilities for three well pads and an early production facility (EPF) for oil and water separation, stabilization, storage and export. The wells and the facilities were designed and manufactured by AlMansoori in Abu Dhabi.

In line with its commitment to supporting the local workforce, AlMansoori has recruited personnel from the local community and has established a program to train and develop these local young people to work in the facilities. Furthermore, AlMansoori is utilizing local fabricators and suppliers to outsource the required materials and consumables for these operations.

Under the scheme, oil from the wells will be transported by road to refineries in Mombasa in advance of an 821-km pipeline being constructed to allow full production by 2021/2022.

Savannah Hits a Third Time in Niger

Savannah Petroleum has made another discovery in Niger, this time with the drilling of the Kunama-1 exploration well. The well is the third consecutive discovery that Savannah has made in its exploration campaign on the R3 portion of the R3/R4 PSC Area in the Agadem Rift Basin.

Preliminary results based on the interpretation of the available data set (which includes wireline logs, fluid sampling and pressure data) indicate that the well has encountered a total estimated 9 meters of net oil bearing reservoir sandstones in the E1 and E5 reservoir units within the primary Eocene Sokor Alternances objective. Wireline logs indicate the reservoir properties to be good quality and the available data indicates light oil equivalent to the Amdigh-1 well, the second discovery well and is consistent with offset wells along trend and the depth/API trend observed across the basin. Oil samples from the E1 and E5 reservoir units have been taken and returned to surface using wireline testing equipment.

The well was drilled by the GW 215 Rig to a total measured depth of 2,460 meters, and encountered the main objective targets at, or near, their prognosed depths. The well took a total of 14 days to reach target depth, and all operations are expected to be completed within 23 days of spud. This compares with a pre-drill expectation of 22 days to reach target depth and 30 - 35 days to complete all drilling operations.

The well is currently being suspended for future re-entry. A production test is expected to be performed on the well as part of a batch campaign using a dedicated test rig. This extended well testing program is currently being planned for later in the year. Following testing, a downhole completion assembly to Amdigh-1 is expected to be installed so as to enable the well to function as a production well in the future.

Following the successful results of the three exploration wells drilled to date on the R3 East area, Savannah has elected to exercise the first of the six individual options under its contract with Great Wall Drilling Company Niger. The GW 215 rig will now mobilize to the Eridal-1 well site, located on the R3 portion of the R3/R4 PSC Area 6km from Amdigh-1, where it will prepare to spud the Eridal-1 exploration well. Following the exercise of this option, Savannah will continue to have options for a further five wells, each of which can be exercised individually at Savannah's discretion.

The Eridal-1 well site preparation is in the final stages of completion and is on schedule to accept the rig following demobilization from the Kunama-1 well site. The move is anticipated to take between 10 to 15 days.

FPSO BW Adolo Sets Sail for Gabon

The FPSO that will be used offshore Gabon on BW Offshore and Panoro Energy's Tortue field has left Singapore. The vessel, the *FPSO BW Adolo*, is now enroute to Gabon. The Tortue field is part of the Dussafu Block, where BW Offshore is the operator.

Source: BW Offshore

The FPSO *BW Adolo* is expected to arrive in Gabonese waters in August 2018. The Tortue development project remains on course to deliver first oil at Dussafu later in H2 2018.

ADX Plans Dougga Sud Well for 2019

ADX Energy saw its estimate of the resources of the Dougga gas condensate discovery in Tunisia increase. According to the company an independent evaluation of the discovery and potential extension of the Dougga, the Dougga South West prospect, was completed by ERC Equipoise (ERCE).

ADX is the 100% equity holder and operator of the Kerkouane license where the Dougga discovery is located

For Dougga, the evaluation report includes a review and evaluation of geological and geophysical data, reservoir engineering modelling data and recovery factors, Contingent Resources quantification, development concept maturity, facilities engineering review, project schedule, project flow assurance and the suitability of the planned appraisal well. For the adjacent Dougga SW undrilled prospect, the evaluation includes the review and evaluation of geological and geophysical data, Prospective Resources quantification and risking. The evaluation report by ERCE does not include other exploration potential within the Kerkouane license.

The company plans to drill and test the Dougga Sud appraisal well during Q1 2019 using the *Noble Globe Trotter II* drilling rig. ADX is also in discussions with a number of parties regarding funding the well.

The ERCE report will be used by ADX in support of ongoing financing discussions for the Dougga Sud appraisal well and as a potential compliance listing of ADX on the Alternative Investment Market (AIM) of the London Stock Exchange (LSE).

Tlou's Rig Arrives at CBM Site

Tlou Energy's recently purchased core drilling rig has arrived onsite at the Lesedi CBM project in Botswana. The rig has low hours and will be ideal for obtaining coal and gas data in regions of sparse geological information, noting that the company holds 100% of licenses covering over 8,000 sq km.

Tlou already has its own desorption testing facilities onsite which allows the company to test core-hole samples without the requirement to mobilize third party personnel. Owning the core rig and gas testing equipment is expected to greatly reduce the cost of the company's core-hole drilling and allows the company more flexibility and control of proposed coring operations.

The company is planning to drill production wells, commencing Q3 2018. Each gas production or 'dual lateral' pod consists of three wells in total (two lateral wells which intersect a vertical well). In advance of this planned work, long lead items have been ordered and drilling rig selection is progressing with drilling of the first of the pods scheduled to begin later this quarter. Note that the rig required for these pods is a larger unit than the core drilling rig mentioned earlier and therefore is being externally sourced.

Tlou completed a seismic survey in late 2017 and a core-hole drilling program in early 2018. Following this work the company obtained a substantial upgrade of gas reserves. In addition, a significant amount of vital sub-surface information was acquired by the company which continues to be assessed by Tlou's independent consultants. This process is nearing completion and a final report detailing optimum locations for the new gas production wells will be completed in the near term.

Rig Mobilized for Congo Drilling

Anglo African Oil & Gas saw the mobilization of a rig for the drilling of its multi-horizon well in the Republic of Congo. The SMP-102 rig will drill the TLP-103 well. The rig is currently based in Gabon, where it has now been cleared by customs.

Loading of the rig is completed and the journey was expected to take just a few days. Once it has arrived at Pointe-Noire, Anglo African expects it to take around three to four weeks to transport the rig to the drill site and carry out the pre-drill setup at Tilapia.

Aminex Farms Out Ruvuma

Aminex's wholly-owned subsidiary, Ndovu Resources Limited, has signed a binding farm-out agreement with Zubair Corporation LLC. Zubair plans to assign its interest in the farm-out to ARA Petroleum Tanzania Ltd. (a company under formation) (APT), which will be an affiliate of Eclipse Investments LLC (Eclipse), the company's largest shareholder.

Subject to the detailed terms set out in the farm-out agreement, it is intended that the farm-out will accelerate the development of the Ntorya project, carry Aminex through to a minimum gross production rate of 40 MMcf/d and be self-funded through a full field development project.

In exchange for a 50% working interest in the Ruvuma PSA, APT will become operator and will conduct the following minimum work program. The partners will drill, complete, and test Chikumbi-1 (formally Ntorya-3) as soon as reasonably practical. In addition, under the deal 3D seismic will be acquired, processed and interpreted over a minimum of 200 sq km within the Ntorya area, which is understood to be the first time 3D seismic has been acquired onshore Tanzania. APT will also lead the way in establishing an EPS to achieve accelerated first gas to a minimum gross rate of 40 Mmcf/d.

TransCanada Tags Bonatti Unit for Coastal Gaslink Project

TransCanada Corp. has conditionally awarded Pacific Atlantic Pipeline Construction Ltd., the Canadian unit of Bonatti, a contract for the construction of a portion of the Coastal Gaslink Project. The award is pending a positive investment decision by the partners of LNG Canada for the construction of a LNG facility in Kitimat.

The entire 670-km long 48" pipeline, which is intended to feed the LNG facilities in Kitimat, will cross renowned mountain ranges in British Columbia. This is a climate-challenging region, with rich flora and fauna, which is subject to stringent regulations.

The scope of work of Bonatti encompasses construction and testing of two out of eight sections of the pipeline, for an estimated value of CAD$500 million

Bonatti will be directly responsible for hiring a projected 700 workers over the project construction period, with special emphasis placed on hiring locally first, giving priority to qualified local and indigenous businesses in Northern B.C.

Saudi Ships Gasoline to US

Saudi Arabia has shipped its first refined fuel cargo to the US. The 400,000 bpd Jubail Satorp refinery, a JV between Saudi Aramco and Total, said on its Twitter account that it sent the shipment of reformulated blend stock gasoline – commonly called RBOB – to the US, but did not say where the final destination was.

Motor gasoline inventories fell in the US during the week of July 6, according to U.S. Energy Department data. Stockpiles were up from the same time last year, when inventories totaled 235.7 million barrels.

RBOB prices have been trading at seasonal three-year highs as crude has rallied in the midst of the busy US summer driving season.

VOG Partners with Naturalgaz on CNG

Victoria Oil & Gas' (VOG) wholly-owned subsidiary in Cameroon, Gaz du Cameroun (GDC), entered into an exclusive agreement to partner with Naturalgaz Sanayi ve Ticart in the CNG sector.

The purpose of this long-term partnership is to design, build and operate CNG infrastructure and solutions for customers who need mobile energy, initially in GDC's home market of Cameroon with the intention of rolling this out into other African countries. The partnership will also market CNG products, including bulk CNG and gas-to-power to industry and businesses which require reliable off-grid and/or off-pipeline energy solutions, as well as auto CNG for alternative mobility solutions.

The first phase agreed to by the partners is a 2 Mmscf/d CNG plant and customer distribution project currently in design stage.

Besides the distribution of bulk CNG to industrial and commercial users, Naturelgaz also focuses on the development of the Auto CNG market in co-operation with CNG vehicle producers.

Kevin Foo, Chairman of Victoria Oil and Gas said, "The agreement to partner with Naturelgaz, starting in Cameroon, brings together GDC's upstream gas capabilities and experience of the Douala energy market with Naturelgaz' proven track record of delivering CNG solutions. We are excited to be adding CNG to our product mix."

LR Wins Work on Coral South FLNG

Lloyd's Register (LR) was awarded a contract for work on Mozambique's Coral South FLNG project operated by ENI. LR's scope of work includes undertaking covers design, procurement, certification, construction, integration and commissioning, as well as providing classification services under a risk-based inspection regime when the FLNG enters service in 2022.

The Coral South FLNG unit will be the world's first ultra-deepwater FLNG, operating at a depth of 2,000 meters. It is expected to produce around 3.4 million tons of LNG per year.

LR has been involved in the project since 2014, and in 2015 awarded a first Approval in Principle for the design. LR's primary role in the project is to ensure that the FLNG operates safely, is not going to impact the environment, that people working onboard the unit are safe and that it is designed, procured and fabricated in accordance with the most recognized industry standards.

Leveraging its capability in managing complex projects with its proven ability to put together teams with exactly the right mix of skills, knowledge and experience to get the job done, LR has a global team dedicated to the project.

Nigeria Aims to Reinvigorate its LNG Industry

Nigeria is losing out on increasing its LNG sales as frontier countries across the continent move faster in developing recent gas discoveries. Funding and infrastructure challenges have been delaying Nigeria's expansion of its NLNG facility.

The country has been dragging its feet in building Train 7 at its NLNG facility for more than eight years. It has also pretty much nixed a couple other LNG projects that have been on the drawing board for over a decade, namely the Olokola LNG and Brass LNG projects.

While Nigeria is procrastinating, new projects across the continent are moving at a steady clip towards development, with one even coming online. Mauritania and Senegal have disposed of both political and infrastructural constraints to develop their cross maritime border discoveries. According to recent reports, Kosmos and BP are moving towards taking the FID by the end of this year.

And then there is Cameroon's FLNG project brought to fruition by state-run SNH, Perenco, and Golar LNG. The project is the first operational FLNG facility in Africa and the second in the world. The project's inaugural cargo was exported in May.

On the other side of the continent you have both Mozambique and Tanzania planning LNG facilities, with Mozambique having onshore as well as offshore projects in the early development stage.

While there is a demand for LNG coming out of the Asian markets, Nigeria is losing out on these buyers as it drags its feet in moving forward with NLNG Train 7. But things may see a turnaround in the near future as steps have been taken to move forward on that train. Nigeria LNG recently signed an agreement with three oil majors for the engineering and design contracts for NLNG's Train 7.

Among the contractors participating are Saipem, TechnipFMC and Chiyoda Corp. The FID could be taken late this year.

Nigeria's latest plan would boost production to 30 million tons by 2024 from 22 million tons now. Total, a Nigeria LNG shareholder, said the plant expansion is "very important" as the market is "booming again."

"Our vision is to be a global player that helps to build a better Nigeria," Tony Attah, Nigeria LNG's chief executive officer said in London. "We are looking forward to the growth. When I am talking about growth I am talking about Train 7. We have the support we need, we have the support from the shareholders, from the government, from the board of directors."

LR will be heavily involved throughout the entire supply chain. The project is currently in a detailed engineering design phase, with the bulk of design work happening in Korea, France and Japan. LR is required to deliver a number of design appraisal documents as part of this phase.

All the equipment, systems and machinery that make up the topside plant on the FLNG will be certified by LR. To do this LR will be holding more than 500 contracts with equipment vendors directly and will be delivering services in all vendor locations. This will result in all the equipment arriving in Korea certified by LR to agreed codes and standards.

Upon completion of construction, the FLNG unit will be towed from Korea to Mozambique and LR will be in attendance to witness the hook up of the mooring system and to survey the commissioning of the topside plant on station. LR site surveyors will confirm that the unit is installed and commissioned in accordance with its rules and the industry codes and standards that it is designed to.

Modular Refinery in the Works for Eastern Niger Delta

A contract to move the construction of a modular refinery was awarded by Waltersmith Petrolman Oil, a subsidiary of Waltersmith Refining & Petrochemicals. The contract went to JV company, Velem, made up of Lambert Electronics out of Lagos and VFuels LLC out of Houston.

The contract is to build a 5,000 bpd modular refinery and Velem will provide the engineering, procurement, construction, and modular refinery fabrication for the processing site that, once completed, will refine Nigerian crude from Ibigwe onshore field in eastern Niger Delta. The project is scheduled to be completed within 18 months.

The contract follows the Nigerian Department of Petroleum Resources' (DPR) granting of requisite licenses for the project to Waltersmith, which previously finalized equity and debt financing through local and multinational financiers

Egypt to End LNG Imports

Egypt plans to stop importing LNG this year, as production at newly inaugurated gas fields increases. Egypt said previously that it would halt imports by the start of 2019.

Petroleum Minister Tarek El Molla was quoted by *Reuters* as saying the country will save $250 million per month by no longer importing LNG.

ExxonMobil 'Super Sizing' Mozambique LNG Project

ExxonMobil is expanding the LNG train size for its Mozambique LNG project in an effort to cut production costs, according to reports. The company is expanding the Rovuma LNG project by half before taking the project specifics to lenders for funding.

The US super major is now aiming to build the world's biggest liquefaction trains, outside Qatar, in Mozambique's remote north, putting ENI's more modest plans on the shelf in pursuit of cost savings to boost returns on investment.

"The larger train design will lower the unit cost of the Rovuma LNG project and ensure a competitive new supply for the global LNG market," ExxonMobil spokeswoman Julie King was cited as saying in a Reuters report.

Under new development plans submitted to the government, ExxonMobil's first two liquefaction trains should each produce 7.6 mpta, with a start date in 2024. ENI initially planned 5 mtpa trains.

Active marketing efforts for the LNG are currently underway as well, according to ExxonMobil.

Senior management representatives of the co-venture parties (ExxonMobil, ENI, CNODC, ENH, Kogas and Galp) met during World Gas Conference in Washington, D.C. to affirm marketing progress.

"We have made significant progress on marketing and are now in active negotiations on binding sales and purchase agreements for Rovuma LNG with some affiliated buyer entities of the Area 4 co-venturers," Peter Clarke, president of ExxonMobil Gas and Power Marketing Company, said at the World Gas Conference. "These commitments will help us progress toward a final investment decision, which we expect to reach in 2019."

The initial phase of the Rovuma LNG project will develop the Mamba reservoirs in Area 4 and help deliver reliable, affordable energy to customers and create long-term economic value for the people of Mozambique and the project's co-venturers.

Tanker Explodes, Many Dead and Injured

At least nine people were killed when a fuel tanker exploded on a highway in Lagos, Nigeria, on June 28. The oil tanker exploded setting more than 50 cars on fire during rush hour in the city.

"Petrol started leaking. A bus ran into it. The fire hadn't started, then a car ran into the bus, which caused the fuel to ignite," a witness, Oludare Adodo, told CNN. "Suddenly, I heard a loud 'blam!'"

"Some folks were abandoning their cars and running, and those closest to the tanker were simply merged into a wall of red," he added.

Such explosions are not uncommon in Nigeria, with the *Premium Times* in Nigeria recording 115 tanker accidents in 2016.

Honeywell UOP Chosen for Egyptian Petchem Plant

Sidi Kerir Petrochemicals Co. (SIDPEC) has chosen Honeywell UOP's C_3 Oleflex™ technology to produce 500,000 metric tons per year of on-purpose propylene at SIDPEC's refinery in Amerya, near Alexandria, Egypt.

Source: SIDPEC

Honeywell also will provide the process design package, proprietary and non-proprietary equipment, on-site operator training, technical services for startup and continuing operation, and catalysts and adsorbents for the project. Including this project, Honeywell UOP's Oleflex technology has been selected for 52 out of 64 propane and isobutane dehydrogenation projects globally since 2011. When completed, the SIDPEC unit will be the first Oleflex unit operating in Egypt.

"This plant will allow SIDPEC to expand its portfolio and take advantage of domestically produced propane to make products such as polypropylene," said John Gugel, president of Honeywell UOP. "The Oleflex technology converts propane into high-quality propylene, which is rising in demand, particularly in growing economies."

Raven to Market ENOC Jet Fuel in Nigeria

Raven Energy Limited (Raven), the Nigerian subsidiary of Raven Resources Group, signed an exclusive Technical Services & Marketing Agreement (TSMA) with Emirates National Oil

Company Limited (ENOC). The deal has Raven marketing ENOC's jet fuel in Nigeria.

The new alliance between ENOC and Raven stands to serve the highly competitive market across the oil and gas value chain in Nigeria.

At the signing in Dubai, UAE, Chairman and CEO for Raven, Adeniyi Makanjuola, said, "This is a major development for Raven and provides a strategic partnership with a global industry leader that will not only strengthen the infrastructure locally available but will also provide additional cost savings and enhanced productivity by reducing turnaround times."

Group CEO, ENOC, Saif Humaid Al Falasi, said: "Expanding our operations in Nigeria underlines our strategic international growth plans as we continuously look for opportunities to grow our business with our partners. Today, we supply in excess of 2.8 million gallons of jet fuel per day to a diversified portfolio of clients in the UAE and internationally.

"We've successfully forged many collaborations and our partnership with Raven Aviation is one that we take pride in. We hope to continue exploring future opportunities to elevate the aviation fuel infrastructure, while expanding capabilities in the African market."

Dangote Refinery Could Export Surplus

Aliko Dangote, head of the Dangote Group, plans to start selling gasoline, diesel and aviation fuel by early 2020 from the mega oil refining complex his company is constructing near the Nigerian city of Lagos.

The $10 billion, 650,000 bpd refinery should be near full capacity by mid-2020, Edwin Devakumar, group executive director at Dangote Industries Ltd. said in a Bloomberg interview.

"People still have difficulty believing we can do it on time and within those costs," Devakumar said in the interview. "But we believe we can. It's something of the size that's rarely been done before. It's huge."

The facility is expected to produce around 50 million liters per day of gasoline and 15 million liters of diesel. Nigeria's domestic demand for gasoline is currently around 35 million, Dangote plans to export the surplus production.

The company has been in talks with a number of companies regarding them supplying crude and buying refined products, according to Devakumar.

ExxonMobil Starts Production at Singapore Complex

ExxonMobil started production of hydrogenated hydrocarbon resin and halobutyl rubber at its integrated manufacturing complex in Singapore; the company's largest integrated refining and petrochemical complex in the world.

ExxonMobil's new Escorez™ hydrogenated hydrocarbon resins plant will be the world's

Source: ExxonMobil

largest with a capacity of 90,000 tons per year and will meet long-term demand growth for hot-melt adhesives used in packaging or baby diapers. The new 140,000-tons-per-year butyl plant will produce premium halobutyl rubber used by manufacturers for tires that better maintain inflation to improve fuel economy.

The startup of these two new plants follows ExxonMobil's earlier acquisition of one of the world's largest aromatics production facilities in Singapore last year.

The new plants expand on ExxonMobil's flexible steam cracking capability in Singapore, which provides a range of feed stocks for upgraded specialty products to meet growing long-term demand in Asia Pacific. The Singapore complex also includes a new cogeneration unit at the refinery, bringing the total cogeneration capacity of the site to over 440 megawatts, which will help reduce emissions and support more efficient use of energy.

By Mark Pabst, Senior Correspondent

Is MOZAMBIQUE the Next Nigeria?

Mozambique is poised to become the next big thing in liquefied natural gas. If it fails to settle its security situation in the Cabo Delgado province, it could also become the next big thing in African insurgencies.

In a recent article about investment opportunities in upstream energy the financial website *Seeking Alpha* described Mozambique as "the next juggernaut on the global liquefied natural gas stage." While the description may border on fawning, it is certainly not an exaggeration to say Mozambique has attracted big money and global players to its gas fields.

Last year ExxonMobil spent $2.8 billion for a 35.7% stake in a field in Mozambique's offshore Rovuma Basin. With its purchase the American supermajor joined Italy's Eni and China National Petroleum Corporation (CNPC), among others, in one of East Africa's most promising gas developments.

Eni has been poking around offshore Mozambique since the mid 2000s, and their hard work has certainly paid off. Eni was the firm that sold ExxonMobil the stake in Rovuma, meaning the Italians are already cashing in on their finds. But all the partners seem poised to profit handsomely in the long run. The Rovuma Basin holds an estimated 85 trillion cubic feet of natural gas, and the Mozambican government said it expects further exploration to double reserves by 2030.

While the government's predictions might be dismissed by some as overly optimistic, the smart money seems to agree that Mozambique will soon emerge as a significant LNG exporter. Not only are additional fields being developed, but there appears to be no shortage of customers for Mozambican gas. Local markets are likely to show strong demand, but they will pale in comparison to the amount of gas shipped overseas as LNG. A report by the International Energy Agency predicts that global gas demand will grow 1.6% annually through 2022, and a strong economy in Asia could mean an even bigger growth in demand for Mozambican gas.

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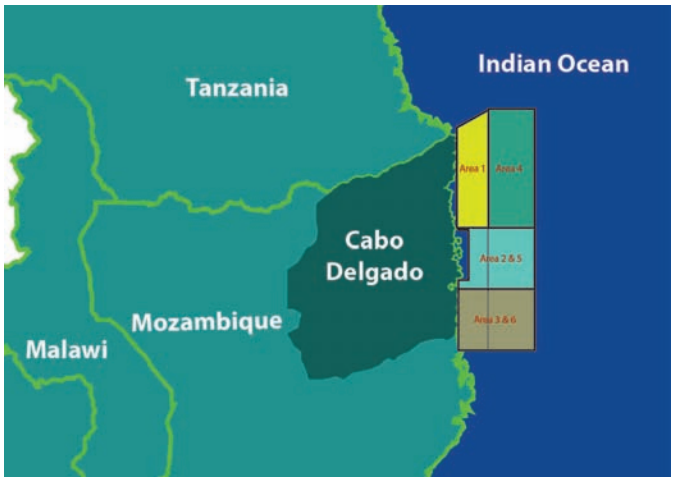


Of course, there is some concern that Mozambique may not be ready to handle the wealth created by gas revenue. Back in 2016 International Monetary Fund chief Christine Lagarde described Mozambique as "a country that is facing... a real hardship and a necessity to very promptly redesign its business model and realign its interests with a completely new reality."

Lagarde was referring to the so-called "resource curse," a term used to describe why countries with an abundance of natural resources like fossil fuels have less economic growth, less democracy, and worse development outcomes than countries with fewer natural resources. Corruption, poor management of natural resources, and economic inefficiencies have plagued many resource rich countries, particularly in Africa, and Lagarde is not the only person to worry that Mozambique could fall victim to the

curse. During the same interview, she expressed concern about a few other resource rich African countries, including Nigeria.

But in recent months, Mozambique has developed more in common with Nigeria than just abundant resources and a need for economic reform. Since October Boko Haram-style violence has plagued the country's northern Cabo Delgado province, an area that borders both Tanzania and some of Mozambique's most promising offshore acreage.

While there are still many questions about the Mozambican Islamist militant group behind the violence, called *Ahlu Sunnah Wa-Jama*, its members appear to have links with Islamist militants across East Africa. In early July four farm workers were decapitated by the group, and the government said it believed the attackers had come from camps in Tanzania. Some of the Cabo Delgado locals have taken to calling the militants *Al Shabaab*, a reference to the Somali militant group of the same name.

However, despite international links, it appears *Ahlu Sunnah Wa-Jama* has deep roots in ethnic and religious tensions that are specific to Cabo Delgado. A little over half of the province's population is Muslim, with the remainder mostly Roman Catholic. Some of the main ethnic groups are divided along religious lines. The Makonde are mainly Christian and the group ranks among the most prosperous and influential in the region. It counts several army generals and Mozambique's President Filipe Nyusi among its members.

"… a poll by the United States-based Pew Research Center found that approximately two thirds of Mozambique's Muslims would prefer sharia law, something unlikely to be popular in a religiously diverse province like Cabo Delgado."

The poorer Kimwani are mainly Muslim, and many have expressed resentment as Makonde have begun moving into areas along the coast that were traditionally dominated by the Kimwani. Moreover, a poll by the United States-based Pew Research Center found that approximately two thirds of Mozambique's Muslims would prefer sharia law, something unlikely to be popular in a religiously diverse province like Cabo Delgado.

Ahlu Sunnah Wa-Jama kicked off its campaign of violence with attacks on police stations and government buildings, but quickly moved on to attacking villages and churches. While the militants have yet to strike any foreigners working in the gas sector, one of the villages attacked was less than five kilometers away from a construction camp for employees of the Texas-based Anadarko.

The government responded with what President Nyusi himself described as a "ruthless" campaign that has included hundreds of arrests and, according to the human rights group Human Rights Watch, extra-judicial killings. Government forces now occupy many villages in the province, and while this has reduced the number of direct attacks on settlements, it has also resulted in the militants adopting new tactics. For example, the July beheadings occurred when farmers left the relative safety of their protected village to tend to their crops.

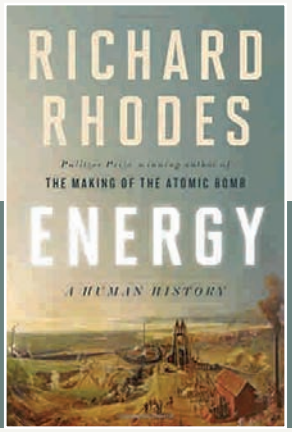
"Our forces are more in the villages to ensure the safety of homes, schools, (and) hospitals," one local police commander told *AFP* after the incident. "We advise people not to circulate outside the radius protected by the security forces, but because people have their crops they insist on going out."

The current situation sounds like the recipe for a long-term, low level insurgency. The government controls villages, but the militants are taking advantage of the province's heavily forested landscape and proximity to an international border to make hit and run attacks on soft targets. In addition, while the militants' tactics are rightly criticized as terrorism, they appear to have some sympathy, if not outright support, from a portion of the local population. The government's heavy-handed response could even increase sympathy for the militants among certain groups.

Finally, the country's newfound gas wealth has the potential to either improve the situation or make it much worse. The additional government revenue will help fund the security forces and the infrastructure they need to better police the area. However, how money from the gas boom is distributed in the province will also likely have a huge effect on the conflict. If one ethnic or religious group is perceived as prospering at the expense of another, the foreign companies producing the gas could be seen as part of the problem and become targets. And Cabo Delgado could be in for years of violence.

Reviewed by Mark Pabst, Senior Correspondent

The Past, Present, and Future of Energy



Energy: A Human History
By Richard Rhodes
Simon & Schuster
2018

"The stone age did not end because the world ran out of stones, and the oil age will not end because we ran out of oil."

The above quote has been ascribed to everyone from legendary Saudi oil minister Ahmed Zaki Yamani, the erstwhile head of Royal Dutch Shell's hydrogen energy division Don Huberts, and former CEO of Kuwait Petroleum Corp. Nader Sultan. Although the words were supposed to have originated with one of these consummate energy insiders, that hasn't kept the critics at bay.

In fact, energy consultant and blogger D. Ray Long called it "the dumbest analogy ever used by smart energy people" and wrote that "if you're using the stone age analogy, I'd suggest that you don't properly understand energy." Long's point is twofold. First, stone was a source material for tools, not energy, so the analogy is comparing apples and oranges. Second, supply scarcity and ensuing price increases may not have had anything to do with the end of the stone age, but they are certainly potential factors in the end of the oil age.

Why one energy age ends and why another begins is also the topic explored by Pulitzer Prize-winning writer Richard Rhodes in his new book *Energy: A Human History*, and thankfully Rhodes doesn't deal in misleading or overly simplistic analogies. The book's length (over 400 pages) means the author has plenty of space, so he can dispense with pithy, but misleading, quotations.

The book is an exhaustive look at how the world's predominant sources of energy have changed over the last four centuries of human history, but while it may eschew clever soundbites, it does owe quite a bit to a wonky, 40-year old graph fittingly entitled "a simple and predictive model for the energy markets." Originally presented by Cesare Marchetti for the International Institute for Supplied Systems Analysis, the graph shows just how long it takes the world to adopt a new energy source.

In general, it's almost 50 years before a new energy source captures 10% of the market, and a full century to reach a 50% market share. Popular new energy sources don't become widely adopted overnight. Even if they are cheaper or more efficient than what they replace, they need to have something extra. They must capture people's imagination.

And imagination is also what distinguished Rhodes' book from Marchetti's graph. While both essentially make many of the same points about how one source of energy eventually replaces another, Rhodes' narrative makes for a series of fascinating stories rather than a set of dry facts. This is mostly because the author chooses to give the history of energy a human face, telling the stories of the businessmen, eccentrics, scientists, and rogues that were central to creating our modern energy infrastructure.

He sketches out the biographies of a relatively obscure figure like Richard Trevithick Jr., nicknamed the Cornish Giant, who served as both a carnival strongman and pioneer in steam energy. Trevithick, a showman to the core, invented early horseless carriages and railroad engines, making and losing a series of fortunes. Like many men who were ahead of their time, he died penniless, but near the end of his lifetime the coal powered steam trains that he helped launch were beginning to transform the global economy.

Rhodes also writes about better-known figures, but includes enough previously obscure facts to keep things interesting. For example, he adds several curious details to the American polymath Benjamin Franklin's famous obsession with electricity. While Franklin's experiments involving kites, keys, and thunderstorms are well known, Rhodes writes about less noteworthy incidents, like the time Franklin disastrously tried to use electricity to kill and cook a turkey at a picnic.

> **"Rhodes is clear that the collective result of the great changes in energy sources over the last 400 years of human history is climate change …"**

The biographical anecdotes are amusing, but they serve a larger agenda. Trevithick was one of many bit players who helped create a new

world in the 19th century that ran on steam produced by burning coal. Franklin's work with electricity paved the way for later inventors to tame the energy source and pave the way for widespread electrification of the world in the 20th century.

Yet Rhodes is clear that the collective result of the great changes in energy sources over the last 400 years of human history is climate change, which he writes in the foreword "looms over civilization with much the same gloom of doomsday menace as did fear of nuclear annihilation in the long years of the Cold War." He even states that one of the reasons he undertook to write *Energy* is "to cast light on the choices we're confronting today because of the challenge of global climate change."

> In general, it's almost 50 years before a new energy source captures 10% of the market, and a full century to reach a 50% market share. Popular new energy sources don't become widely adopted overnight.

His choice of the nuclear holocaust metaphor is not surprising to anyone familiar with Rhodes' previous work. He won his Pulitzer for his book *The Making of the Atomic Bomb*, an equally exhaustive exploration of the history behind the creation of the modern world's greatest weapon. Somewhat ironically, near the end of *Energy* he betrays a fondness for nuclear power as the best solution to the climate change conundrum, claiming that its popular reputation as volatile and dangerous in unwarranted.

He also seems to be slightly regretful about oil becoming the 20th century's primary fuel source. He points out that widespread taxes on alcohol, a popular source of energy for illumination in the 19th century, made it expensive compared to kerosene, and he notes that early automobiles ran on many different forms of energy before a combination of luck and public policy led petroleum to dominate the transportation sector.

Throughout his book the environmental consequences of our energy choices are never far from Rhodes' mind, and several times he points out how environmental degradation was often looked on as the price of progress. However, he is clear that in a time of global climate change the human species can no longer trade insults to our environment for a more comfortable existence. Based on his extensive investigation of the history of energy, Rhodes doesn't just believe that the oil age will not end because we run out of oil. For environmental reasons, he believes it must end well before we run out of oil.

An African First

XiNa Solar One

All images are courtesy of Abengoa Solar

As featured in Issue 3 2018 of Alternative Energy Africa magazine.

Among much fanfare, the 100-MW XiNa Solar One concentrating solar power (CSP) plant in South Africa's Northern Cape province, online since last year, was officially inaugurated on May 18. Among the attendees was Minister of Energy, Jeff Radebe and members of the Pofadder community.

The plant, owned by a consortium made up of Abengoa Solar, IDC, PIC, and XiNa Community Trust, is located in the Northern Cape province close to Pofadder, and is spread out over a 300-hectare site. The project broke ground in December 2014 and began producing power in August of 2017.

The XiNa Solar One plant uses cylindrical parabolic trough technology and has a total installed capacity of 100 MW with a 5.5-hour thermal energy storage system using molten salts. It is also the first tower plant in operation in South Africa, and Abengoa's third solar thermal plant built in the country following the 100-MW KaXu Solar One and the 50-MW Khi Solar One facilities. These plants are already in commercial operation since 2015 and 2016 respectively. The latter was the first operational solar thermal plant that uses the technology of tower and heliostats in South Africa and on the African continent.

Alternative Energy Africa was fortunate in being able to speak with Dominic Goncalves, VP Business Development, Abengoa South Africa, on his thoughts and feelings about this major accomplishment for the company, the people of the local community, and South Africa's solar industry.

AEA: Congratulations on the official launch, it's quite an achievement! Can you tell me more about the XiNa One and its technology?

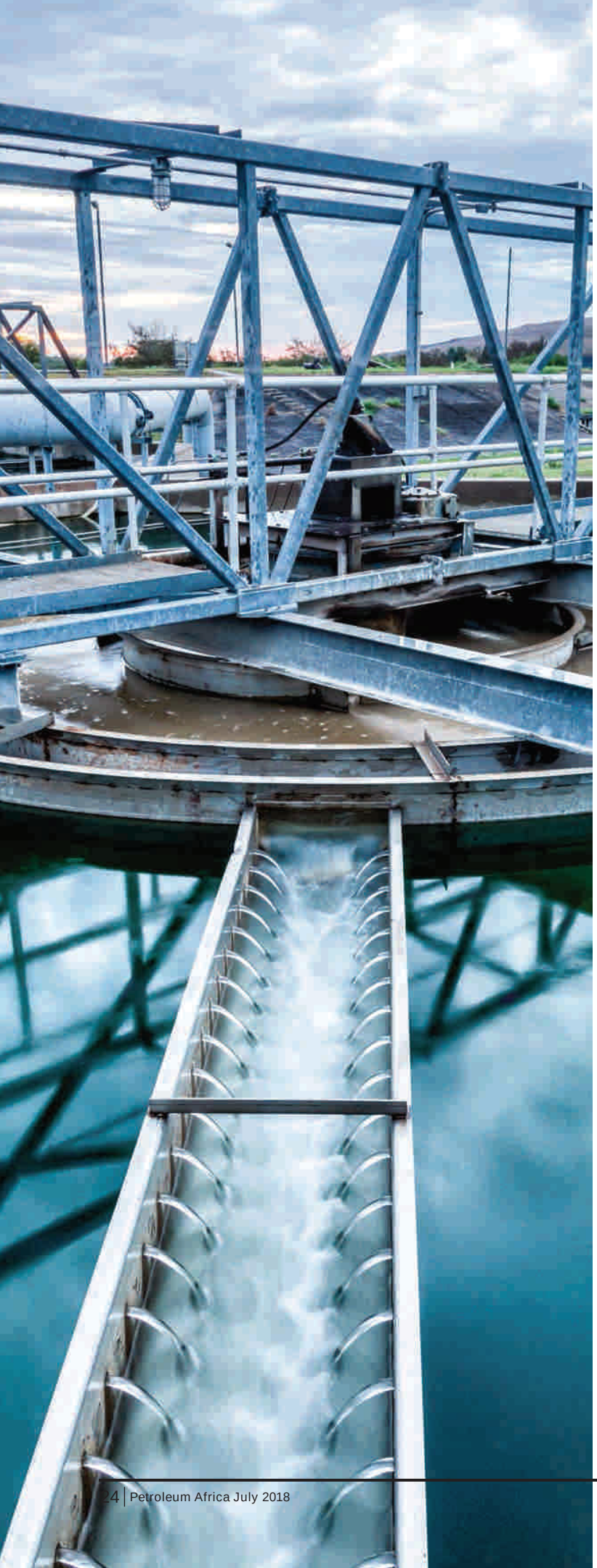
DG: XiNa Solar One is a solar thermal parabolic through plant with a capacity of 100 MW, which includes a molten salt energy storage system that can store the necessary energy for a further 5.5-hour supply and guarantee the dispatchability of the plant.

The technology involves mirrors which reflect the sunlight onto a tube receiver containing heat transfer fluid (HTF), which is heated to temperatures of up to 393ºC. The hot HTF is sent to a heat exchanger that heats water to produce steam. The steam generated is then used in conventional steam turbines for generating electricity.

The plant therefore, is both renewable and dispatachable, non-reliant on fuel risks, since the feedstock is the sun, and the plant provides electricity at night until 22h00, to add value in covering the evening peak when the power is needed the most.

AEA: What is the feeling among the Abengoa team bringing on its third major solar facility in South Africa, XiNa Solar One, now that it is powering South African homes?

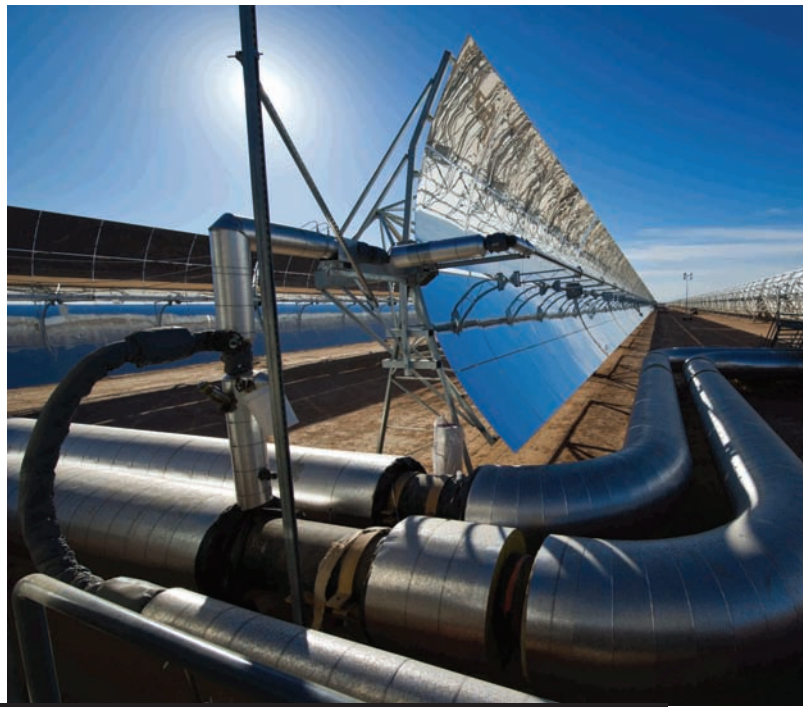
DG: The practical completion of XiNa Solar One was in fact achieved in August 2017, so the plant has been working at full capacity for the last nine months. This achievement represents – for the team working on site, as well as for the whole company – a firm step forward and it demonstrates the talent and commitment of

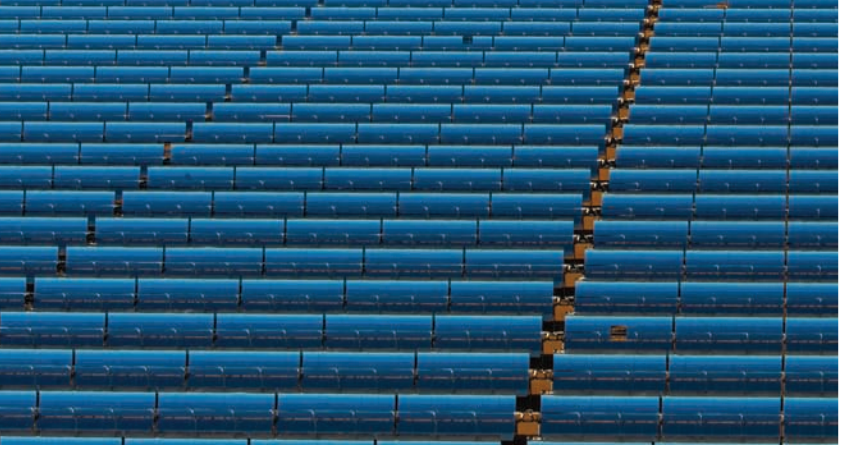


our people in addition to validating the trust that the market has placed on us. In addition, we feel very proud to be contributing to the sustainable development of a country that is still heavily dependent on fossil fuels.

AEA: Besides bringing clean, affordable energy to the region, how has the project benefitted the local communities?

DG: Thanks to this project Abengoa has helped to regenerate the economic, social, industrial and environmental fabric of this area in South Africa. During the construction phase, job creation peaked at over 1,300 positions, to which another 80 have been added during the operation phase, over the next 20 years. Now that the project is operational, the plant produces clean energy to serve more than 95,000 South African households and prevents the emission of 348,000 tons of CO_2 each year. Furthermore, XiNa Solar One is the country's first solar thermal plant designed to operate based on the so-called 'energy sale windows' that are detailed in an electricity calendar, in accordance with the agreement signed with Eskom, South Africa's power utility and final client of the plant, to which the production at the plant is aligned.





AEA: Any future facilities planned in South Africa, or in the African continent?

DG: Africa as a whole, including South Africa, is a key market for Abengoa where we find great business opportunities because of growing populations and the need to increase power generation. And particularly the excellent solar radiation in the Northern Cape of South Africa, which provides a great opportunity to deploy more solar energy – both solar thermal and photovoltaic – in this region.

The Renewable Energy Independent Power Producers Procurement (REIPPP) Program, of which XiNa Solar One is one of the major projects by both capacity and investment, was designed in response to the load-shedding and rolling black-outs of 2007/2008. XiNa, and projects like it under the program, have helped to solve South Africa's energy crisis, and we believe that many new projects, using renewable energy, as well as gas-to-power, will need to be developed and constructed in the future.

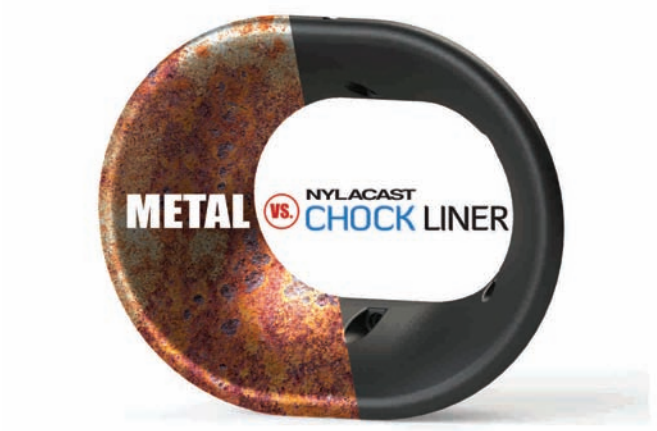
Just as South Africa experienced an energy crisis, which led to the development of projects like XiNa, the country is currently experiencing a massive water crisis, with 17 of the 19 river systems fully utilized. There are not many sources of water that can be effectively utilized to serve the country's growing population considering its aging and limited water infrastructure. We believe that South Africa will follow the route of many water-scarce regions, such as the Middle East, North Africa, Southern California, and Australia, among others, and will deploy large-scale desalination projects *en masse*, hopefully under similar programs such as the REIPPP, which will benefit local communities and provide positive economic impact. Abengoa's desalination plants globally are providing water for seven million people. We currently have plants under construction for 600MLD, which is more than the water consumption of the whole city of Cape Town. For these reasons, South Africa, and the African market, will remain a key strategic market for Abengoa.

An Evolution in Mooring Technology with Safety in Mind

Nylacast introduced the Chock Liner with its patented low friction technology supporting safe and reliable moorings of vessels of all types and purpose.

The transition from steel wire rope to fiber rope is widespread across industry. Fiber rope has a good strength to weight ratio and ease of handling, resulting in much lower risk of injury.

Although advantageous, a major weakness of fiber rope is poor resistance to external abuse and abrasion through everyday operations and poor surface contact. Abrasion continues to be one of the most common root causes of rope failure and reduction in its residual strength.



Nylacast Chock Liner

It is impossible for synthetic rope to perform to its maximum capabilities when used with poorly maintained deck equipment, often rusted or with a rough surface finish. Rope manufacturers recommend surfaces are correctly prepared, maintained and routinely inspected before and after rope installation. A 300-microinch finish (7.62 microns) is recommended for all deck hardware which comes into contact with the rope, in addition to the avoidance of chocks heavily scored from previous wire rope use.

The Chock Liner mooring technology from Nylacast provides vessels with the ability to be moored with greater safety, performance and efficiency, offering multiple benefits. The Chock Liner is versatile and capable of being fitted to brand new vessels and retro fitted to existing chocks and panama fairleads with no hot works or dry docking required.

Increased safety is a feature of the Chock Liner which reduces rope wear and abrasion, reducing the risk of breaking or failure. There is also no need for crew members to be near mooring lines under tension, as minimal (if any) chafe protection is required following installation of the Chock Liner.

The Chock Liner's smooth surface and finish and its material characteristics provides better equalization of mooring loads, especially when in high swell. The self-lubricating, low friction Chock Liner material requires little or no maintenance and no painting, coating or external protection. Corrosion resistant materials technology is featured on the Chock Liner, providing protection against the arduous environments faced in the global maritime industry.

Custom manufactured from initial chemistry to end product, the Chock Liner is available for use on all chock and vessel sizes. Developed to optimize and enhance vessel moorings, much of the advantages derive from the unique materials technology developed through over 20 years of field experience in design, testing and material selection with fiber ropes.

The featured materials technology in Nylacast Chock Liners allows for the accommodation of HMPE fiber rope with lower risk of abrasion and wear when in contact with the chock or panama fairlead. The Chock Liner is also suitable for polyester/polypropylene, polyester and nylon ropes, as required for FLNG, FSRU and STS where a specific synthetic pennant may pass through the fairlead. In all cases due care and attention is required in relation to the loads involved, chock designs and rope sizes.

This evolution in mooring technology is featured on various vessel types including passenger ships and ferries, container vessels, service vessels, LNG tankers and product carriers, FPSO and special purpose vessels, navy, yachts and fishing vessels.

Nylacast Chock Liner in continuous use after 7 years

The Chock Liner has been tried and tested in industry for many years. Master of Teekay's LNG carrier *Tangguh Sago* commented, "The Nylacast Chock Liner is an excellent product for preventing mooring rope wear and damage. I believe the Chock Liners should be installed on all vessels equipped with HMPE ropes. We have installed 30 Chock Liners to the vessel which are still in excellent condition after seven years of continuous service and should last the lifetime of the vessel."

The low weight, low friction materials technology used within the Chock Liner is also featured in a wide range of marine equipment and products from sheaves and pulleys to spooling shells and rollers.

CORTEC Debuts New CRB26 Pressure Relief Valve

CORTEC, a manufacturer of high quality API chokes, valves and manifolds, has introduced its new CRV26 Pressure Relief Valve (PRV).

The CRV26 PRV is a product of the CORTEC Fluid Control division of CORTEC, which provides a complete line of high-end valves designed and manufactured according to specific project specifications. CRV26 PRV is engineered to protect drilling systems against the dangers of over pressurization and is the first of its kind to be rated to 10,000 PSI systems.

Stephen Corte, vice president, CORTEC, said, "Automated PRVs provide the highest level of accuracy and reliability and are automatic or manually resettable for thousands of cycles. Our CRV26 PRV offers a competitively priced alternative to other remotely-operated PRV models, along with a degree of service life, precision and repeatability that conventional burst disks and manual spring reset valves cannot provide."

Source: Cortec

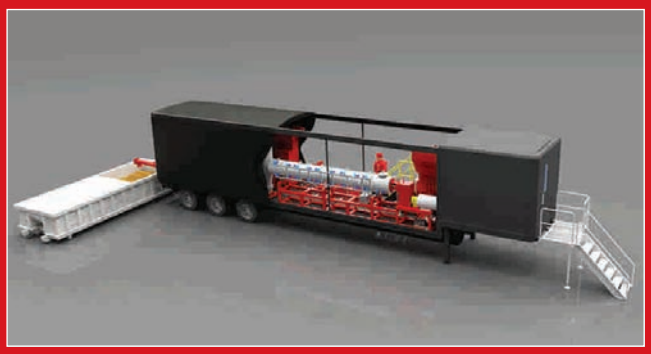
The CRV26 PRV is suitable for frac system relief, mud pump relief and managed pressure drilling (MPD) and is compatible with API 6A and NACE MR0175 requirements.

Halliburton Introduces Advanced Solids Control and Separation System

Halliburton announced its BaraOmni™ hybrid separation system, a next-level separation technology that effectively removes ultra-fine low gravity solids (LGS), resulting in better performing, longer lasting fluid systems to help operators significantly reduce costs.

As drilling fluids are used, ultra-fine LGS accumulate and can negatively impact operational performance. Operators currently use dilution to address this issue, which results in excessive fluid volumes and costs. The hybrid separation system features advanced capabilities to remove ultra-fine LGS, which was not previously possible. This eliminates the need for dilution and improves the operator's ability to recover drilling fluids so they can drill more wells with less fluid volume.

Additionally, BaraOmni advanced separation technology allows drilling fluids, contaminated solids and other hydrocarbon waste streams to be treated with a single system. It replaces traditional complex solids control and waste management equipment set-ups. As a result, the operator can minimize waste transportation, off-site treatment and storage to reduce environmental exposure and total cost of ownership.



Source: Halliburton

"We developed the hybrid separation system to improve the solids control and separation market with a compact and mobile system that can separate ultra-fine LGS and treat multiple waste streams at the rig site," said Bradley Brown, vice president of Halliburton Baroid. "This is part of our larger focus on engineering fluid and separation solutions together to help our customers mitigate potential operational issues and reduce overall costs."

In west Texas, the system was successfully operational within 24 hours of mobilization and was used to treat ultra-fine solids laden, non-aqueous drilling fluid. In this application, the technology reduced solids from a 24 percent concentration LGS to a final concentration of 3 percent LGS. The result was a field-ready, premix fluid that was readily blended into a high-performance drilling fluid. This hybrid separation process is an industry step-change in ultra-fine solids removal and cuttings treatment.

New Flange Alignment Pin Speeds Bolting Process

Safe bolting processes are a critical concern in all industries operating with controlled bolting applications across the globe. There is a common misconception that safety comes with a high price tag and extended working procedures, however, when compared to the many other expensive indirect costs, including the potential number of injuries and lost man hours, the desire to implement preventative measures becomes an easy decision.

Safety specialists Hands Free Bolting's latest addition to its safety accessory range is the Flange Alignment Pin; a fast, safe and simple method to lining up bolt holes. Simply insert the pin into the bolt hole with the largest gap, turn 180° to align the bolt holes, insert bolts then turn 180° to remove pin. Like every product in the safety accessory range from Hands Free Bolting, each pin also features an inbuilt safety tether attachment to further support safe working procedures by preventing dropped objects.

Completely eliminating the need for a hammer, the Flange Alignment Pin is designed with a tapered end allowing access to offset bolt holes, ultimately speeding up the bolting process.

Georgie Arnold, Hands Free Bolting's Sales Manager comments "Our aim is to bring a complete tool kit of safe bolting accessories that meet the most demanding safety requirements and make implementing safe working procedures as easy as possible. In line with this, we have introduced our brand new website which has been designed to allow our Distributors and Resellers to easily navigate and purchase the solutions they require for customers, with the option to add on Safety Kits.

Source: Hands Free Bolting

"The addition of the Flange Alignment Pins is a part of the continuous product launch schedule we are rolling out for Hands Free Bolting's safety accessories. Customers can benefit from purchasing a range of sizes, while also enjoying cost-effective tools as many product lines are available in Boxed Sets, including the newly released Flange Alignment Pins."

Paradigm and Expro Announce Alliance for 'Slick-E-Line®'

Paradigm Intervention Technologies (Paradigm) and international oilfield services company, Expro, have signed an alliance agreement to deliver digital slickline services.The partnership specifically focuses on Paradigm's patented 'Slick-E-Line®' technology, which combines the versatility and efficiency of traditional slickline with the real time data streaming capability of electric line. Alongside Expro's global market leading expertise in well intervention services, this allows the alliance to deliver a broader range of mechanical slickline and cased hole logging applications.

Signed in January 2018, this agreement responds to the increasing demand for new technology that improves operational efficiency across a wide range of well intervention activities, while minimizing any costly non-productive time.

John Creighton, Paradigm's General Manager, commented: "We are seeing a new wave of customer projects that require digitally enabled slickline. Working alongside a leading global well intervention provider, we are now positioned to deliver a combined service that allows our customers to meet and exceed their operational objectives."

Dave Bowman, Expro's Well Intervention Vice President, added: "This is a strategically important partnership that complements our existing slickline and cased hole services, bridging the gap and providing our customers with real-time decision making for their well intervention challenges."

Paradigm's patented Slick-E-Line® was successfully commercialized in late 2016 and is now operating in multiple key oil and gas markets around the world.

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Home Grown Funding

Some African nations are trying to incorporate sovereign wealth funds from profits derived through the sale of their natural resources to benefit their countries' citizens, but so far their success has yielded mixed results.

Sovereign wealth funds (SWFs) are intended to address a host of needs specific to the nation; for example, bridging infrastructure funding gaps, social programs, boosting quality of education and health care, are just a few of many ways the funds can be utilized.

At present, Angola, Gabon, Ghana, Morocco and Nigeria are among those hydrocarbon nations with SWFs, with Kenya and Zambia looking to establish similar savings structures for the benefit of their people and future generations. Botswana, housing coal bed methane resources, already has the largest fund in Africa with proceeds from its diamond trade buoying the $5.3-billion Pula Fund.

African Nations with Sizeable Sovereign Wealth Funds	
Algeria	Angola
Botswana	Equatorial Guinea
Gabon	Ghana
Libya	Mauritania
Morocco	Nigeria
Rwanda	Senegal

Report Cards

High Marks

In the first edition of the Africa Sovereign Wealth Fund Index published this year by international advisory firm Konfidants, Nigeria ranked Number 1 with a 62.49 percent polling, narrowly beating out Rwanda at 62.24 percent. Ghana came in third at 62 percent, just behind Rwanda. The index measures size and other variables of the existing 12 major SWFs on the African continent and values their combined total at about $89 billion. The index evaluates the transparency and accountability of the African sovereign wealth funds and also looks at soundness of governance structure and the level of public financial disclosure. Most, but not all, of these SWFs are chiefly funded through petroleum revenues, or in combination with other resources.

Nigeria and Ghana, scoring well on the new index, have been praised for their efforts in investing their oil wealth for the benefit of their citizens. Although Nigeria, Africa's most populous country, when broken down would see less money per citizen by far from its fund value than say Ghana or Angola, it has thus far performed better than expected by many industry pundits in investing in the country's future. Nigeria established the Nigeria Sovereign Investment Authority (NSIA) in 2012 which has three funds under its purview: the Infrastructure Fund (40 percent), Stabilization Fund (20 percent) and Future Generations Fund (40 percent). The latter directly aims to protect oil revenues for the benefit of future generations.

Ghana set in force the Petroleum Revenue Management Act of 2011 with an aim to safeguard its natural resource wealth. Under the 2011 Act is the Ghana Stabilization Fund (GSF), the Ghana Heritage Fund (GHF), and the Ghana Infrastructure Investment Fund (GIIF). Each of these funds serves a different purpose. GSF is intended to act as a hedge to stabilize the economy in the event oil revenue plummets. The GHF is to be put aside for future generations while the GIIF is geared toward the development of national infrastructure.

As previously mentioned, Botswana's SWF is the Pula Fund. Established in 1994 with the aim of preserving part of the income from diamond exports for future generations, it has held its own as compared to some oil-reliant SWFs. According to the Bank of Botswana, "the Pula Fund has increased substantially in value (when measured in both domestic and foreign currency) in real terms since it was established." The bank does state that it did suffer a few setbacks over the years, most notable during the economic crisis of 2008, but overall the Pula Fund has been stable and performed well.

Several other oil funds, as the chart denotes, are established within African nations and have been relatively stable – Gabon, Morocco, Rwanda and Senegal – with little to report. As they say, no news can often be good news.

Needs Improvement

Mauritania has one of the longer established SWFs, dating back to 2006. The National Fund for Hydrocarbon Reserves is funded by

revenues that the government receives from companies extracting oil, as well as from royalties and taxes that foreign operators remit from their production. This fund has had its transparency questioned and has been used to cover budget shortfalls. Perhaps with new hydrocarbon production in its future, authorities can get this fund back on track.

In 2006 it was announced that Libya would establish its own fund: the Libyan Investment Authority (LIA). The timing was excellent as sanctions by US and Europe were gradually whittling away. The fund grew quickly to an estimated $65 billion according to a report by *The New Arab*, but between nepotism, a lack of transparency, and utter chaos in the country, the LIA's status is dubious. Lawsuits between Libya, banks, attorneys and advisors are in full swing in UK courts and the Libya Central Bank is hush-hush on laying out the investments for public scrutiny.

Oil and gas rich Equatorial Guinea, since 2002, has featured the Fund for Future Generations as its sovereign wealth fund. Very little information can be found in the public domain and the US Department of State alleges "there is little transparency in its management structure or the value of the fund. The U.S. Treasury and Federal Reserve ranks the fund as the least transparent fund in the world."

Algeria boasts the Revenue Regulation Fund, which until 2014, had been faring well. In a country which relies on hydrocarbons for 60% of its revenues and accounting for 95% of its exports, the drop in oil prices in 2014 has been disastrous. A report by the International Policy Digest suggests Algeria's sovereign wealth fund is likely to run out of money completely within two years. Recent oil price gains however may postpone or save the fund if there is some stability or further gains.

The Angola Case

Angola's sovereign wealth fund, Fundo Soberano de Angola (FSDEA), is arguably the continent's most scrutinized scheme. The Konfidants' Index gave it a score of 56.57%. FSFEA was established in 2012 after a 2011 assertion by the International Monetary Fund that more than $32 billion in Angolan revenue went unaccounted for between 2007 and 2010.

Jean-Claude Bastos

FSDEA was intended to emulate the Norwegian model however it got off to a rocky start when former President José Eduardo dos Santos' son, José Filomeno dos Santos (Zenú) was chosen as one of the three-member panel charged with overseeing the fund. Shortly thereafter, Zenu engaged Angolan-Swiss businessman and friend Jean-Claude Bastos' firm Quantum Global to manage the fund.

The arrangement was always under scrutiny for the Bastos/dos Santos connection, and the many Bastos' self-serving investments into ventures in which he held interests that followed. Fast forward six years later and you find the entire situation being dismantled. It all came to a head in November 2017 when the leak of documents now famously known as the "Paradise Papers" revealed that Bastos had earned $41 million from the FDSEA over a 20-month period.

Source: Governo

President João Lourenço

Angola's new leader, President João Lourenço, promptly sacked the dos Santos son in January and fired Quantum Global as the FSDEA manager. A BBC report stated the media outlet had determined as part of the Paradise Papers investigation that the fund paid management fees of more than $90 million to Bastos' Mauritius-based QG Investments Africa Management. This occurred over a 20-month period between May 2014 and the end of 2015.

Now, the Lourenco administration has lobbied for the freezing of Quantum Global assets. In April, a British Court granted an FSDEA application for a worldwide freezing order on several Quantum Global Group companies, according to reports.

Whether or not Angola recovers any of the funds that have allegedly been misappropriated, President Lourenco seems intent on getting the FSDEA back on track to serving its original purpose: to benefit the people of Angola.

Future of African SWF

The Sovereign Wealth Fund is in Africa to stay, with many additional countries looking to establish their own. With new oil producers set to emerge over the coming decade, such as Uganda, and countries like Kenya, Mozambique and Tanzania expecting significant increases in production, establishing a SWF would be a prudent measure. If SWFs are managed appropriately, they can bring a multitude of benefits to the citizens and the local economy.The key is in accountability, some nations have been schooled well, while others will most likely have to wait for a change of guard like Angola has recently seen.

By Jennifer Nickle, Deputy Editor

Source: Kenyan Government

Uhuru Kenyatta

KENYA

President: Uhuru Kenyatta (since April 2013)
Independence: December 1963 (from UK)
Population: 47,615,739 (July 2017 est.)
GDP (purchasing power parity): $163.5 billion (2017 est.)
GDP - real growth rate: 5.1% (2017 est.)
GDP - per capita (PPP): $3,500 (2017 est.)
Energy Minister: Charles Keter
Oil - production: N/A
Oil - consumption: N/A
Oil - proved reserves: 750 million barrels (2017)
Natural gas - production: N/A
Natural gas –consumption: N/A
Natural gas - proved reserves: 2.01 billion cubic meters

Source: CIA FactBook

As East Africa's most developed country, Kenya is uniquely positioned in the region, situated on the equator on Africa's east coast. Kenya has been described as "the cradle of humanity," being the home to some of the earliest evidence of humanity. Today the country has a vibrant culture, full of ethnic diversity.

Arabs began settling coastal areas, over the centuries developing trading stations which facilitated contact with the Arab world, Persia and India. The Portuguese tried to establish a foothold on Kenyan coast in the 16th century but were driven off by Swahili states and Omani Arabs by the late 17th century. In the late-1890s Kenya fell under the British East African Protectorate and British settlers began moving inland, building a railway from the coast to Lake Victoria.

In 1920 the East African Protectorate became crown colony of Kenya, administered by a British governor. A little more than 20 years later the calls for independence from the British began, with the Kenyan African Union (KAU) forming to campaign for African independence with Jomo Kenyatta as the KAU leader. After two decades of a violent campaign against whites in Kenya, the British initiated plans to prepare Kenya for majority African rule.

In 1963 Kenya gained independence and Kenyatta was named prime minister, one year later the Republic of Kenya was formed with Kenyatta being named president. Kenyatta died while in office in 1978 and was succeeded by Vice-President Daniel Arap Moi. Kenya's next president faced coup attempts and a host of opposition that he had suppressed through political arrests; but he still managed to stay in office until 2002 when Mwai Kibaki won the 2002 elections in a landslide victory.

Kibaki ruled Kenya until 2013 when Uhuru Kenyatta, the son of Kenya's first president, won the presidential elections with just over 50% of the vote. A challenge to the results by his main rival, Prime Minister Raila Odinga, was rejected by the Supreme Court. The next elections in 2017 had Kenyatta being declared the winner, however the election was declared null and void and was re-run in October; Kenyatta once again came out on top.

The country has the most developed economy in East Africa with a growing entrepreneurial middle class and has enjoyed steady growth. However, according to economists its economic and development trajectory is hindered by weak governance, ineffective rule of law, and corruption. The government has successfully attracted foreign direct investment into infrastructure development and is promoting regional trade liberalization.

Kenya's economy accelerated for the second consecutive quarter, expanding at the swiftest pace since Q4 2016. Stronger growth, within-target inflation and an improving external position have held up the shilling and enabled further easing in monetary conditions, laying the

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foundations for robust economic activity. The economy closed 2017 with a GDP of just over 5%.

Agriculture remains the backbone of the Kenyan economy, contributing one-third of GDP and employing nearly 75% of the population. In spite of political turmoil throughout H2 2017, tourism was up 20%, showcasing the strength of this sector. Some high visibility terrorist attacks during 2013-2015 (e.g., at Nairobi's Westgate Mall and Garissa University) affected the tourism industry severely, but the sector rebounded strongly over 2016-2017 and appears poised to continue growing.

The Industry

This is an exciting time for Kenya's oil and gas sector. While exploration has been going on for decades, it was not until the past several years that exploration paid off. The country's Lokichar Basin in the north has been the site of some major successes, which have put Kenya on the road, literally, as an African producer. In early June 2018, the transfer of stored crude oil to Mombasa by road commenced. The early oil pilot scheme (EOPS) uses oil produced from injection and production testing at the Ngamia and Amosing fields operated by Tullow.

Source: Tullow Oil

Drilling operations in the Lokichar Basin

Tullow and its JV partners, Africa Oil Corp. and Maersk (now owned by Total), are developing the Ngamia and Amosing fields as the "Foundation Stage" for the South Lokichar development. This stage envisages a 60,000 to 80,000 bpd Central Processing Facility (CPF) and an export pipeline to Lamu. The installed infrastructure from this initial phase can then be utilized for the optimization of the remaining South Lokichar oil fields, allowing the incremental development of these fields to be completed at a lower unit cost post-First Oil.

The Foundation Stage is currently planned to involve an initial 210 wells through 18 well pads at Ngamia and 70 wells through seven well pads at Amosing. This stage will target volumes of around 210 million barrels of oil of the total estimated 2C resources of 560 million barrels of oil, and a plateau rate of 60,000 to 80,000 bpd. The incremental development of the remaining 2C resources and the significant upside potential is expected to increase plateau production to 100,000 bpd or greater, according to Tullow.

A Joint Development Agreement (JDA), setting out a structure for the government of Kenya and the Kenya JV partners to progress the development of the export pipeline, was signed in October 2017. Front

Source: Africa Oil Corp.

East Africa and Kenya discovery map

End Engineering and Design (FEED) and Environmental and Social Impact Assessment (ESIA) work for the upstream Foundation Stage are now under way, following the award of the upstream FEED and Integrated Project Management contracts to WorleyParsons in May. The FEED and the ESIA work for the pipeline are also progressing to plan, with the midstream FEED contract awarded to Wood Group. Commercial discussions continue with potential pipeline contractors.

In the meantime, the partners launched the EOPS in June which initially saw approximately 600 bpd produced through well testing and this is expected to steadily increase to 2,000 bpd once the EOPS is fully operational and production testing commences from the Amosing field. The EOPS was brought to fruition with the help of AlMansoori Specialized Engineering who was contracted by Tullow to provide facilities for the landmark project. The $15-million contract included the provision of degassing facilities for three well pads and an early production facility (EPF) for oil and water separation, stabilization, storage and export.

Extended injection and production testing continues, with water injection testing ongoing at Ngamia-11 and continued oil production from the Ngamia-8 well. The Ngamia-3 well also successfully started production in June. Results from the wells to date are in line with expectations and data will be used to inform the development plan for the Foundation Stage of the South Lokichar Development.

In addition to the South Lokichar projects, Kenya is seeing drilling on Pate Island by Zarara Oil and Gas. Zarara's subsidiary, Midway Resources International, received approval in October 2017 from Kenya's National Environment Agency (Nema) to drill two natural gas wells off Lamu; the Pate-2 and Pate-3 wells. The first of the two wells, the Pate-2, spud in April. The Pate-2 natural gas well is being drilled under the company's PSCs for Blocks L4 and L13, which are located near Port Lamu. The company contracted two rigs, the first to drill and

run 20-in. casing for the two wells to 300 meters. The second rig will drill each well to a targeted depth of 4,500 meters. The drilling campaign follows a four-year evaluation program using 2D seismic over the original Pate-1 discovery area drilled by Shell and BP in 1970. The Pate-2 is targeting the basal Kipini sandstones that flowed gas in Pate-1 as well as Paleocene-Cretaceous sands.

Erin holds stakes in four exploration blocks in Lamu Basin offshore Kenya. The company, in April, suspended its exploration activities due to financial constraints. The company has seen a drastic drop in cash flow since the beginning of the fall in oil prices. This situation, says Jean-Michel Malek, the acting CEO of the company, "causes a capital shortage that raises significant doubts about the ability of the company to continue exploration."

Simba Essel holds a 100% interest in the PSC for onshore Block 2A. The block overlies the southern tip of the Mandera Basin while the southwest corner of the block extends into the Anza Basin. The company has conducted both a passive seismic survey and a 2D survey on the acreage. Based on the data acquired to date, Sproule International issued a report identifying 29 prospects and leads. Simba said that it will move forward with a 3D seismic program on the acreage, covering 160 sq km where the best prospects were identified. The seismic will help to further delineate and identify the best drilling targets. In November Simba's partner, Essel Group Middle East (EGME) said that in addition to identifying the first drill targets, the company is proceeding with plans to bring a drilling rig into Kenya and mobilize the rig on Block 2-A in Wajir. EGME also intends to commence with site preparation in 2018 in preparation for the drill program which is expected to occur before end-2018.

Source: Simba Energy

Simba's passive sonar survey on Block 2A

Kenya will see its fuel storage capacity increase by more than a fifth with a $52 million investment from the Kenya Pipeline Co. (KPC). The company will spend the funds on building four new tanks to increase its storage space. KPC is adding capacity to meet growing demand for fuels in East Africa. The additional tanks will accommodate increased volume from a new pipeline being built from the port of Mombasa to Nairobi that is expected to be completed this year.

Nigeria and Rwanda Offered Nuclear Assistance

Canadian firm StarCore Nuclear has proposed to set up in Nigeria, 23 small modules of nuclear reactors distributed in power stations in order to increase the West African country's energy capacity.

"This proposal includes the installation of 23 mini-nuclear networks in the most remote areas of the country to reduce the electrification bill for these areas. Responding to the safety standards of the International Atomic Energy Agency (IAEA), the small reactors installed by StarCore do not overheat and the automation of their operation causes them to go out on their own as soon as a problem arises," said the company in a correspondence to the media outlet *Sweet Crude*. The company will own the infrastructure put in place and will sell its production to the country as part of an agreement to buy electricity. It hopes to obtain a sovereign guarantee to facilitate the mobilization of funds for construction.

Meanwhile, Russian state-run nuclear company, the Russian State Atomic Energy Corporation (ROSATOM), signed a MoU with the Ministry of Infrastructure of the Republic of Rwanda on cooperation in the field of peaceful uses of atomic energy. Preparation of the framework Intergovernmental Agreement between Russia and Rwanda is expected to be the next step.

Source: StarCore Nuclear

Nuclear cooperation MoU signed

The MoU establishes legal basis for the implementation of bilateral cooperation in a wide range of areas, including the development of nuclear infrastructure in Rwanda and the development of programs aimed at raising awareness of nuclear technologies and their applications, as well as the use of radioisotopes and radiation technologies in manufacturing, agriculture and healthcare. The parties will create joint working groups to identify specific projects within cooperation.

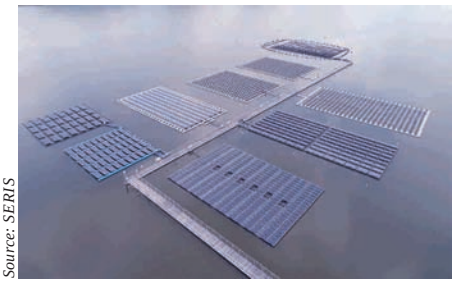
Kenya Power Bills Drop with Hydro Increase

An increase of hydroelectricity power generation to Kenya's energy mix will allow for the country's citizens to see a drop in their power bills. According to the country's Energy Regulatory Commission (ERC), consumers will benefit from an 8% drop in their next month's bill.

This is in addition to the decline in power costs consumers have seen over the past three months. This will be achieved by reducing the use of fuel in the production of electricity due to an increase in the contribution of hydroelectricity. Lower transaction costs, such as loans from energy producers, also resulted in a saving of about 0.31 shillings which was passed on to the cost of energy billed to end consumers.

Korhogo Solaire to Construct PV Plant in Cote d'Ivoire

Korhogo Solaire's first PV plant to be built in Cote d'Ivoire will be located in the locality of Binguébougou. The plant will have a power generation capacity of 25 MW.



Source: SERIS

The world's first floating PV facility in Singapore

Its implementation will be provided by Korhogo Solaire, a subsidiary of the Moroccan company Nova Power for an estimated cost of about $40 million. The energy company will design, finance, build and operate the infrastructure.

Amendments have also been made to the public service concession contract concluded between the Ivorian State and the Ivorian Electricity Company to ensure the transmission and distribution of the energy produced by this plant.

DRC's Zongo II Hydro Plant Inaugurated

Joseph Kabila, president of the DRC, inaugurated the country's Zongo II hydropower plant in the central Kongo province on the Congo River. It is the third and largest station on the river after the Nsanga and Zongo I dams.

The plant's three turbines have a combined capacity of 150 MW. The project was developed with a cost of $360 million by Chinese firm SinoHydro.

The plant's production will be routed to Kinshasa through high-voltage lines currently under construction. The construction of the transport infrastructure will be financed by the Exim Bank of China, which also contributed to the financing of the plant.

The country currently has an installed capacity of 600 MW for an electrification rate of about 20%.

Olkaria V Geothermal Plant 40% Complete

Kenya's Olkaria V geothermal power plant was 40% complete as of mid June, according to KenGen director Rebecca Miano. The 168-MW capacity project is scheduled to be completed by July 2019 at an estimated cost of $400 million.

Source: JICA

Olkaria V

"The project is underway within the predefined budget. Knowing that geothermal energy is less expensive than thermal, we expect a further drop in the cost of electricity for end consumers," said Miano.

Kenya is the first country in Africa to have installed geothermal capacity and the ninth in the world.

Total Commissions First Solar Service Station in Ghana

Total's subsidiary in Ghana has commissioned its first solar service station in the port of Tema, with a capacity of 35 kilowatts. In total, 225 square meters of solar panels were installed to meet the energy needs of the distribution center.

This service station is part of the company's modernization plan in Ghana, one of the major components of which is to solarize at least 50% of its distribution network within five years. Total is one of the major players in environmental protection in Ghana, said Eric Fanchini, Managing Director of Total Ghana.

"The world's energy future, including that of Ghana, is shaped by the dual challenge of climate change and increasing demand for electricity. Thus, renewable energies, especially solar, are crucial in this new environment [...] As a Ghanaian oil marketing company, we are proud to

complement the efforts of the Government of Ghana to prioritize the use of solar energy," he said, according to reports by Ghana Web.

As part of the same plan, Total Ghana decided to provide various solar solutions from lamps, kiosks and logistical support for Ghanaian start-ups. Solar kiosks were deployed at three gas stations to provide customers with access to phone charging stations and Wi-Fi.

Seychelles Floating PV Tender Launched

A tender to develop, finance, own, and operate a 4-MW floating grid-connected solar PV plant in the Seychelles was launched at the Africa Energy Forum that took place in Mauritius.

The tender was launched by Seychelles Minister of Environment, Energy and Climate Change, Wallace Cosgrove, with the support and technical guidance from the African Legal Support Facility (ALSF).

The floating grid connected solar PV plant will be located in le Rocher Lagoon, Mahé.

The Seychelles Solar PV Project will be the first in Africa, and one of the first salt-water floating solar PV plants in the world. More importantly, this clean and innovative project has a great potential to be replicated elsewhere; and become a promising and scalable energy solution to land scarcity in island states as they turn towards more renewable energy.

Enel and IDC See Funding for Zambia's Ngonye Solar Plant

Enel Group and Zambia's Industrial Development Corporation (IDC) signed a $34-million financing agreement for the construction of the Ngonye solar power plant.

This funding includes $10 million of senior debt secured from the International Finance Corporation (IFC), $12 million from the Canada-IFC Climate Change Program and $11.75 million from the European Bank. Enel, which is in charge of the development of the plant, will also inject $40 million into the project.

The plant is to be located in the South Lusaka Economic Zone and will be owned 80% by Enel and 20% by IDC. It is already the subject of a 25-year PPA signed with Zambia's national electricity company, ZESCO.

ACWA Completes Morocco's Khalladi Wind Farm Project

Energy firm ACWA Power inaugurated the Khalladi wind farm in Morocco. The Khalladi is the first wind farm it has built in Morocco.

With a capacity of 120 MW, the project cost $180 million. It will produce 380 GWh per year, the equivalent of the consumption of a city of 400,000 inhabitants.

Source: ACWA Power

Khalladi Wind Farm

Acwa is involved in several projects in the country, including the construction of NoorO I (160 MW), NoorO II (200 MW), NoorO III (150 MW) thermal power plants and photovoltaic plants NoorO VI (72 MW), Noor Boujdour (85 MW) and Noor Laayoune (20 MW).

The implementation of these infrastructures is part of the national energy policy that plans to increase the share of renewable energies in the energy mix to 52% by 2030.

Partners Sign PSC for Weizhou Field

CNOOC signed a PSC with Roc Oil and Smart Oil Investment for the Weizhou 10-3W oilfield and Block 22/04. The Weizhou 10-3W oilfield and Block 22/04 are located in the Beibu Gulf Basin of the South China Sea.

The Weizhou 10-3W oilfield covers a total area of 18 sq kms with a water depth of 40 meters and Block 22/04 covers a total area of 80 sq kms with a water depth of 40-80 meters.

According to the terms of the PSC, Roc Oil and Smart Oil shall act as the joint operators of the contract area. Roc Oil and Smart Oil shall conduct the development operation of the Weizhou 10-3W oilfield in proportion to their participating interests (Roc Oil 35% and Smart Oil 25%) and CNOOC participates with the remaining 40%.

During the exploration phase of Block 22/04, Smart Oil and Roc Oil shall bear all exploration expenditures incurred in proportion to their participating interests (Smart Oil 65% and Roc Oil 35%). Once entering the development phase, CNOOC has the right to participate in up to 51% of the participating interest in any commercial discoveries of Block 22/04.

After signing the above-mentioned PSC, except for those relating to CNOOC's administrative functions, CNOOC will assign all of its rights and obligations under the PSC to CNOOC China Limited, a subsidiary of CNOOC Limited.

CUPET to Launch Bid Round in December

La Union Cuba-Petróleo (CUPET) plans to launch a formal bid round at the 2nd Cuba Energy, Oil and Gas Conference taking place in December. The Cuban state-run oil firm is calling on all international IOCs, operators, service providers and companies throughout the value chain to convene in Havana over four days of strategic and technical networking and business development.

Delegates to the 2nd Cuba Energy event will receive an exclusive insight into the very latest information and analysis provided by CUPET and industry experts; including a workshop focused on BGP's extensive survey and recent results from the Cuban sector of the Gulf of Mexico.

CUPET has continued with hydrocarbon exploration efforts, both on and offshore. Among these actions excels the biggest ever offshore 2D Multi-Client survey acquired by BGP Offshore in the Cuban Economic Exclusive Zone. Newly released 26,880 km of 2D PSTM and PSDM data are available to license from BGP, including 21,000 km in the Cuban sector of the Gulf of Mexico. Preliminary results reveal deep and high-quality information under the sea bed.

In order to show and promote this new data, CUPET and BGP announced the opening of a data-room within the frame of the international event. Coincidentally, as part of the event, CUPET will announce an international bidding round for available offshore blocks in the Cuban Economic Exclusive Zone.

SBM Wins FEED for Second Liza FPSO

SBM Offshore was awarded a contract by ExxonMobil subsidiary, Esso Exploration and Production Guyana Limited (EEPGL), to perform FEED for a second FPSO for the Liza development located in the Stabroek block in Guyana. EEPGL is the operator of the Stabroek block with partners Hess Guyana Exploration Limited. and CNOOC Nexen Petroleum Guyana Limited.

Following the FEED and subject to requisite government approvals, project sanction and an authorization to proceed with the next phase, SBM Offshore will construct, install and then lease and operate the FPSO for a period of up to two years, after which the FPSO ownership and operation will transfer to EEPGL.

The second Liza FPSO design is based on SBM Offshore's industry leading Fast4Ward™ program as it incorporates the company's new build, multi-purpose hull combined with several standardized topsides modules. The FPSO will be designed to produce 220,000 bpd of oil, will have associated gas treatment capacity of 400 Mmcf/d and water injection capacity of 250,000 bpd. The FPSO will be spread moored in a water depth of about 1,600 meters and will be able to store around two million barrels of crude oil.

With respect to FPSO *Liza Destiny* (*Liza 1*), it is progressing according to plan and currently under conversion in Singapore. Discussions with the client are underway regarding a potential accelerated transfer of ownership using the purchase option in the 10-year lease contract. The outcomes of these discussions are expected to lead to a transfer of the FPSO ownership and operation after a period of up to two years.

SBM is exploring options to maximize local content and Guyanese workforce development in preparation for the operating phase of both Liza FPSOs.

Shah Deniz 2 Starts Up

BP and its partners in the Shah Deniz consortium saw the start-up of the landmark Shah Deniz 2 gas development in Azerbaijan, including its first commercial gas delivery to Turkey.

The BP-operated $28 billion project is the first subsea development in the Caspian Sea and the largest subsea infrastructure operated by BP worldwide. It is also the starting point for the Southern Gas Corridor series of pipelines that will for the first time deliver natural gas from the Caspian Sea direct to European markets.

Offshore, the Shah Deniz 2 project includes 26 subsea wells, 500 km of subsea pipelines and flowlines and two new bridge-linked platforms. Gas is transported onshore through an 85-km pipeline to the Sangachal terminal near Baku, which underwent a major expansion to accommodate the new increased gas output. The project also includes the new South Caucasus pipeline expansion – 428 km of new pipeline in Azerbaijan and 59 km in Georgia, including two new compressor stations – carrying Shah Deniz gas to Turkey.

Source: BP

Shah Deniz 2 is BP's largest new upstream project in 2018, and, following Atoll in Egypt, is the second of six project start-ups expected for the year.

At plateau, Shah Deniz 2 is expected to produce 16 Bcm/y incrementally to current Shah Deniz production. Together with output from the first phase of development, total production from the Shah Deniz field will be up to 26 Bcm annually of gas and up to 120,000 barrels of condensate per day.

The development is a major milestone in the creation of the new Southern Gas Corridor which, once completed, will transport Caspian gas directly into the heart of European markets for the first time. From the South Caucasus pipeline, gas is transported across Turkey through the new Trans-Anatolian Pipeline (TANAP), and, when complete, the Trans-Adriatic Pipeline (TAP) will then supply gas as far as Greece, Albania and Italy. Commercial deliveries to Europe are expected to commence in 2020.

Successful Completion of Edvard Grieg Development Drilling Program

Lundin Petroleum's wholly owned subsidiary Lundin Norway AS (Lundin Norway) has successfully completed the plan for development and operation (PDO) development drilling program at its operated Edvard Grieg field on the Utsira High in the Norwegian North Sea. A significant reserves upgrade and extension of the production plateau have been made since the PDO with additional resource potential identified.

The Edvard Grieg field in PL338 started production in late 2015. The drilling program, consisting of 14 development wells, has successfully been completed under budget by the *Rowan Viking* jack-up drilling rig, which is now being demobilized.

Overall reservoir results from the development drilling have exceeded the pre-drill expectations. Combined with a strong reservoir performance, that has seen no material water production to date, these positive results have led to a 47% increase of the best estimate gross ultimate recovery for the Edvard Grieg field since the PDO. In addition, further contingent resources are identified associated with infill drilling opportunities.

The reserves upgrade has led to the field production plateau being extended from the PDO by two years to end 2019. An infill development drilling program is being planned for 2020 which has the potential to further extend the production plateau. A 4D seismic survey is being acquired over the field in 2018 to refine the infill well targets.

Current gross production from Edvard Grieg is approximately 95 Mboepd, which reflects the facilities capacity allocation with the Ivar Aasen field. The capacity of the Edvard Grieg production wells is currently more than double the available facilities capacity, which provides flexibility to optimally manage the reservoir. The facilities continue to perform ahead of guidance with a production efficiency of 97% year to date. Total gross production from Edvard Grieg from first oil to end Q1 2018 amounted to 74 Mmboe.

Element Opens O&G Lab in Singapore

Element Materials Technology (Element) opened a new laboratory in Singapore, servicing customers in the oil and gas sector. Element Singapore is an ISO 17025 accredited materials testing laboratory which offers specialized metallurgical and fracture toughness testing. It will provide services to all the major oil & gas EPC contractors and fabricators around the Asia Pacific region.

The laboratory will employ 21 people and significant investments have been made in state-of-the-art equipment to ensure the provision of the most efficient service for customers. In addition to metallurgical and fracture toughness testing, the laboratory now has multiple baths for ASTM G48 corrosion testing and has the capacity to conduct coating testing, such as cathodic disbondment testing at room temperature and elevated temperature, as well as indentation and impact testing. The sour service corrosion testing facilities have also been upgraded thanks to investment in a high-end scrubber system.

Petro Matad Spuds Snow Leopard

Petro Matad spud the Snow Leopard-1 well (Petro Matad 100%) in the Taats Basin of Block V in Mongolia on July 9. The Snow Leopard-1 well, which is targeting 90 million barrels of oil, is the first of the company's 2018 four-well drilling campaign.

The well has a planned total depth of around 3,350 meters and is expected to take up to 70 days to complete. In the event of a discovery, the company will bring in a separate rig for testing.

Galp Ready to Drill Portugal's First Deepwater Well

Portuguese oil company Galp Energia is set to start drilling the country's first deep water exploration well offshore Portugal. According to the company's exploration and production director, Thore Kristiansen, the company only has modest hopes of success.

The project, being developed by a consortium of Galp and Italy's ENI is off the Alentejo region's Vicentine coast, known for its beaches and large natural park.

In May the country's environmental agency, APA, confirmed that the environmental studies and risk assessments carried out on the project are exhaustive and did not identify significant negative environmental impacts.

ENI and Galp have thoroughly complied with every requirement established by the applicable legislation, as well as with the requests raised by the various public institutions involved in the process.

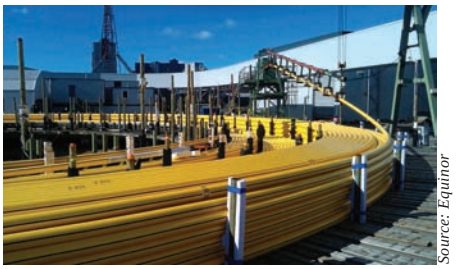
Seabird Receives LoA for Asia Pacific Job

Seabird Exploration received a letter of award to provide a source vessel for an upcoming seismic project in the Asia Pacific region.

The project is anticipated to commence during Q3 and will have a duration of approximately three months. SeaBird will be using the *Voyager Explorer* for the project.

Equinox Tags Nexans for Next Phase of the Troll Project

Equinor (formerly Statoil) is starting the Troll Phase 3 development to recover the large amount of gas resources in the western part of the field. Nexans will play a vital role in the Troll Phase 3 project by supplying Equinor with the complex umbilicals required to power and control the subsea systems.



Source: Equinor

Troll Phase 3

Phase 3 of the Troll project covers the development of the Troll West structure, which lies in water depths of approximately 330 meters and is located 25 km north-west of the Troll A platform. The subsea production systems will comprise two subsea templates or manifolds, as well as nine trees. Each manifold is expected to have four well slots.

A total of eight production wells will be drilled and tied-back to the Troll A platform in order to recover the gas reserves. First gas is expected from the project in Q2 2021.

For the Troll Phase 3 development Nexans Norway will design, manufacture and supply static umbilicals that include high voltage power elements, high-pressure hydraulic lines, low-pressure hydraulic lines, a MEG (methanol and glycol) service line for chemical injection, a spare line and fiber-optic communications – all within a single cross-section. A 20-km umbilical will link the Troll A platform to Template W1, while a 7-km umbilical will then link Template W1 to Template W2. The contract also includes the supply of connections, terminations and other umbilical accessories.

Nexans is scheduled to deliver the Troll Phase 3 umbilicals duringQ1 2020.

Al Yasat Wins EPC for Bu Haseer

Al Yasat Company for Petroleum Operations (Al Yasat), a subsidiary of the Abu Dhabi National Oil Company (ADNOC), has awarded the EPC

contract for the full development of the offshore Bu Haseer field, to Abu Dhabi's National Petroleum Construction Company (NPCC).

The agreement covers engineering, procurement, construction, and commissioning activities for offshore facilities, which will see production capacity from the Bu Haseer field increase from today's 8,000 bpd to 16,000 bpd in 2020.

A key feature of the award is that over half the value of the NPCC contract will feed back into the local economy under ADNOC's In-Country Value program. The program seeks to stimulate private sector partnerships and opportunities resulting from its 2030 growth strategy, catalyze socio-economic development, improve knowledge transfer and create additional employment for UAE nationals.

The Al Yasat JV, made up of ADNOC and CNPC, includes two concession blocks, one offshore and one mixed onshore / offshore. The offshore block, in addition to Bu Haseer, includes a number of oil and gas fields currently under appraisal and development including Belbazem, Umm Al Dholou, and Umm Al Salsal. Bu Haseer is the first of these fields to be developed. The anticipated oil in place from the entire offshore block is 1.5 billion standard barrels. The onshore /offshore concession area is located to the south-west of Abu Dhabi and Al Yasat is currently assessing this area's full commercial potential.

The announcement comes just one month after the first shipment, from Das Island, of 50,000 barrels of Bu Haseer crude to China, loaded by CNPC.

MODEC Awarded FEED in Australia

MODEC's subsidiary MODEC International Inc., was contracted by ConocoPhillips Australia, as operator of the Barossa JV, for the FEED of a FPSO vessel for the project. Under the contract, MODEC shall participate in the FEED on a competitive basis against a JV of two other contractors.

Barossa is an offshore gas and light condensate project that proposes to provide a new source of gas to the existing Darwin LNG facility. The offshore development concept includes subsea production system and gas export pipeline as well as the FPSO, located around 300 kms north of Darwin, Australia.

Echo Spuds Final Well in Argentinean Program

Echo Energy spud the fourth and final well in its back-to-back drilling program onshore Argentina, the CSo-2001d. The well is located on the company's Fraccion D asset and is operated by Compania General de Combustibles (CGC) in a JV with Echo.

The well, in the western area of the Fraccion D license, targets a Tobifera high identified on 2D data, and is planned to be drilled to a measured depth of approximately 1,514 meters by the Petreven H-2015 rig.

The CSo-2001d well is targeting 19.0 Bcf (gross best case) contingent resources, assigned to the prospect in the recent Competent Person's Report (CPR) produced by Gaffney Cline & Associates in addition to a further 18.7 Bcf (gross best case) of prospective resources identified in the same CPR.

BHS-Sonthofen Supplies Turnkey Filter Systems to Iran

BHS-Sonthofen has produced five filter systems for use in natural gas production in southwest Iran, together with its Iranian sales partner Faris International. Full turnkey systems that combine several process steps for processing amine, which is crucial to gas scrubbing, in one closed process were accepted at the end of April. The new plants allow for the environmentally friendly and efficient circulation of raw materials.

The new gas refinery – Bid Boland II – in Iran has a planned capacity of 120,000 barrels of liquid natural gas (LNG) per day. In the future, natural gas will be extracted from the earth and separated from contaminants in the first process step. BHS-Sonthofen supplied expertise in the clarifying filtration of process liquids as a specialist in filtration technology.

SNOC Launches Bid Round

The Sharjah Petroleum Council (SPC) issued an invitation to oil and gas firms to bid in its inaugural onshore acreage licensing round covering three concession areas. SPC has appointed Sharjah National Oil Corporation (SNOC) to conduct the licensing round.

The round opened on June 25, offering companies 30-year contracts with a 10-year extension.

Sharjah is offering three Concession Areas; A, B and C, located in the producing Thrust Zone play trend, including an un-appraised deeper gas discovery below the Sajaa gas-condensate field (Area A). SNOC is currently preparing to drill a well in Area B as operator and is also offering participation in this near-term exploration opportunity.

Hatem Al Mosa, SNOC's CEO, said, "We are delighted to have made significant progress with our ongoing exploration program and look forward to conducting a successful licensing round in order to accelerate it together with suitable partners."

Newly acquired extensive 3D seismic (shot in 2016 and fully processed in 2017 and early 2018), significantly improved the imaging of the fold-thrust belt and early indications are emerging of potentially large, undrilled leads & prospects and untested plays.

Significant capacity is available in existing SNOC field infrastructure, gas-condensate processing and export facilities and all suitable field discoveries can be tied into the existing plant in order to generate early cash flow at lower CAPEX, with SNOC to purchase the hydrocarbons.

The new license round has adopted a globally-competitive fiscal regime, which ensures that smaller fields are highly commercial and larger accumulations also generate very attractive returns. Commercial documents (a Concession Agreement and Joint Operating Agreement) have been prepared and are available for review in the SNOC Data Room, together with the relevant technical data, including the 3D seismic.

The window for bids will close on November 18 with the winning bidder(s) announced shortly thereafter and contracts effective from January 1, 2019.

Envoi has been engaged by SNOC, on behalf of the Sharjah Petroleum Council (SPC), to assist in the search for established E&P companies and investors to participate in their first ever license round.

Independent E&P Companies				
Company	Ticker Symbol	Currency	One-month Percent Change	Price as of July 27
Jacka Resources	JKA.AX	AUD	50.00%	0.003
Gulf Keystone	GKP.L	GBP	33.60%	268.00
VAALCO Energy	EGY	USD	32.03%	3.05
TransAtlantic Petroleum	TNP.TO	CAD	-26.10%	1.50
Groundstar Resources	GSA.V	CAD	-20.00%	0.02
Glencore	GLEN.L	GBP	-17.20%	326.00

Petrofac Sells Chergui to Perenco

Petrofac agreed to sell its entire 45% interest in Tunisia's Chergui license to Perenco. The sale is part of Petrofac's strategy to transition back to a capital light business model by divesting non-core assets and follows the recent disposal of the *JSD6000* offshore pipelaying vessel project.

All Chergui employees will transfer to Perenco as part of the transaction, which is expected to conclude before the end of the year. Petrofac is expected to book a small gain on the transaction.

CFO Alastair Cochran said: "This transaction demonstrates we are delivering on our clear strategy of focusing on our core and reducing capital intensity."

The Chergui gas field, located on and around Kerkennah Island, near Sfax, Tunisia, was discovered as part of the West Kerkennah exploration permit granted in the late 1970s. Petrofac acquired a 45% interest in the Chergui concession in 2006 from ETAP, the Tunisian state oil company, for a cash consideration of around $30 million.

Soco Seling Cabinda Subsidiary

Soco International entered into a SPA to sell its total shareholding in Soco Cabinda. The SPA is with Quill Trading Corp. and WMLC Resources and is for a total cash consideration of $5 million.

SOCO's 85% owned subsidiary, SOCO Cabinda, holds a 22%, non-operating working interest in the PSC for the Cabinda North Block onshore Angola's Cabinda enclave.

The completion of the SPA is conditional, *inter alia*, upon receipt of customary approvals. The long stop date for satisfaction or, where applicable, waiver of the SPA conditions is July 31.

Ed Story, President and CEO, commented, "The sale of SOCO's interests in the Cabinda North Block further demonstrates our commitment to portfolio rationalization, which forms a key part of the Group's strategy. This transaction completes our previously announced plans to divest from all our current African interests. We look forward to the future and continue to assess new opportunities to further grow and strengthen the business."

TransGlobe Begins Trading on AIM

TransGlobe Energy's shares have now been admitted to the AIM market of the London Stock Exchange. The company's shares have begun trading on AIM under the ticker symbol TGL.

Upon Admission, the company's common share capital consisted of 72,205,369 common shares. TransGlobe does not hold any common shares in treasury. This figure may be used by shareholders to determine if they are required to notify their interest in, or a change to their interest in, the company.

The common shares have been listed on the TSX under the symbol TGL since November 7, 1997 and on the NASDAQ under the symbol TGA since January 18, 2008.

Sound Energy in Share Placing

Sound Energy has issued a placing of new ordinary shares to raise $15 million before costs. The net proceeds of the placing of approximately $14.25 million will strengthen the company's cash position as it initiates its high-impact three-well exploration program in Morocco.

The company issued, conditional on admission, 30,829,308 new ordinary shares of 1p each at a placing price of 37p per placing share. The placing shares will, when issued, rank *paripassu* in all respects with the existing ordinary shares. Application will be made for the Placing Shares to be admitted to trading on AIM and admission was expected to take place on or around July 6.

Sonangol Settles with Cobalt

Sonangol, the state-run oil and gas firm of Angola, revealed that it settled its dispute with Cobalt International Energy. Sonangol said it made a $350 million payment to the US independent oil and gas firm to settle the dispute over the sale of two oil blocks.

Cobalt had filed arbitration requests in 2017, seeking in excess of $2 billion due to the impact of failed extension talks on its attempts to sell offshore blocks 20 and 21 in Angola.

Sonangol said at the end of 2017 that the pair had come to an agreement that had the Angolan firm paying $500 million to Cobalt. The $350 million payment it made on June 11 was the final installment, according to Sonangol cited in a Reuters report.

Oceanscan Invests in Sonardyne Acoustics

International equipment supplier Oceanscan has added underwater acoustic positioning technology from Sonardyne International Ltd. to its rental fleet.

The Mini-Ranger 2 Ultra-Short Baseline (USBL) vessel-based systems and Wideband Sub-Mini 6 (WSM 6) transponders have been acquired by Oceanscan following client demand for accurate and reliable underwater tracking technology to support their projects, especially in the growing offshore wind and shallow water hydrographic survey markets.

Adil Ali, Subsea Sales Manager at Oceanscan, said: "We are looking to increase our inventory of Sonardyne's high-performance and reliable technology to service the renewables and offshore construction industries. We're seeing strong demand in the market, especially for Sonardyne's Mini-Ranger 2 and WSM 6+. The market is increasingly busy and we wanted to have the latest and greatest technology available for rent globally."

Oceanscan's new Mini-Ranger 2 systems are likely to be employed tracking remote operated vehicles (ROVs), side scan sonars and magnetometers for use in offshore wind construction, including unexploded ordnance (UXO) survey and debris clearance.

"With a position update rate of up to three times per second and excellent high-elevation tracking, Mini Ranger 2 is well suited to these sorts of

Drilling & Service Companies				
Company	Ticker Symbol	Currency	One-month Percent Change	Price as of July 27
Helix Energy Solutions	HLX	USD	22.00%	9.94
TGS	TGS.OL	NOK	18.70%	328.80
Saipem	SPM.MI	EUR	14.60%	4.47
Nabors Drilling	NBR	USD	-20.70%	6.01
McDermott International	MDR	USD	-15.80%	17.79
Halliburton	HAL	USD	-14.50%	41.80

tasks," said Alan MacDonald, Sales Manager with Sonardyne in Aberdeen. "Mini Ranger 2 is also easy to ship internationally and simple to learn to use, so it is a great addition to a company's rental pool offering."

Wentworth Gets Paid in Tanzania

Wentworth informed its shareholders that payments received during June 2018 for gas sales generated from the Mnazi Bay Concession in Tanzania totalled $3.1 million net to Wentworth. Payments were received from both state-run oil firm TPDC and state-run utility Tanesco.

The payment was for one month's gas sales to TPDC and one month's gas sales to Tanesco.

Afreximbank Finances Dangote Refinery

Aliko Dangote, the head of the Dangote Group, secured funding for the construction of his company's planned mega refinery in Nigeria. Dangote signed a $650 million loan facility with the African Export-Import Bank (Afreximbank) for the oil refinery project in Nigeria.

The financing will allow the company to complete the $10 billion oil refinery and petrochemical complex. The refinery is to be located at the Olokola LNG Free Trade Zone in Lekki-Lagos. The plant will be Nigeria's first privately owned refinery.

Total Closes on Engie's LNG Assets

French oil and gas major Total announced the closing of the acquisition of Engie's portfolio of upstream liquefied natural gas (LNG) assets with an overall value of $1.5 billion. Additional payments of up to $550 million could be payable by Total in case of an improvement in the oil markets in the coming years, the company reports.

The portfolio of Engie assets in the purchase include participating interests in liquefaction plants, notably the interest in the Cameron LNG project in the US, long term LNG sales and purchase agreements, an LNG tanker fleet as well as access to regasification capacities in Europe.

Equa G Orders Contracts Canceled with CHC Helicopters

The Ministry of Mines and Hydrocarbons of Equatorial Guinea issued a mandate that all oil and gas operators in the country cease using CHC Helicopters. The Ministry has told the firms to cancel all contracts with the transportation firm due to noncompliance with the country's national content regulations.

Oil companies operating in Equatorial Guinea were given 60 days to unwind contracts and find new suppliers, with only those companies in compliance with the local content provisions established in 2014 allowed to bid for contracts.

A compliance review of the entire sector is ongoing led by the Director of National Content and outside legal advisors of the Ministry. The notice will be expanded to all service companies who are non-compliant as the review continues. Similar measures will be taken.

Ghana and Togo Could Battle Over Keta East Block

Ghana could be facing another legal battle over maritime boundaries when it comes to oil exploration. According to Ghana's Public Interest and Liability Committee (PIAC), Togo and Ghana could engage in a legal battle over oil exploration in the ultra-deep Keta East Block.

The Ghanaian government awarded an exploration block in the region to a joint venture of Blue Star Exploration, Ghana's state-owned oil company GNPC, and Heritage E & P. This operation is disputed by the Togolese authorities who believe that the maritime boundary covering the oil concession granted is a Togolese territory. PAIC revealed this in their 2017 report that was recently released.

According to the PIAC report, the exploratory companies would even be intimidated by the Togolese coast guards every time they attempt to execute their specifications. In addition, the document urges officials to find a solution. "PIAC has noted the negative claims of the Togolese authorities regarding its maritime border with Ghana, particularly on the Keta East ultra-deep block, and urges the government to take urgent measures to demarcate Ghana's maritime boundary with Togo and to resolve the dispute that is still at an early stage," the report states.

IOSH Accredits JC International as a Safety Training Provider

Nigerian firm JC International has added another certification to its roster. The company received accreditation from the Institution of Occupational Safety and Health (IOSH), UK as a safety training provider. The latest accreditation came just one week after the firm secured Hull Gauging certification from the American Bureau of Shipping (ABS).

In a statement signed by the Managing Director of the company, Austin Joseph, the IOSH accreditation has authorized JC International to provide Managing Safely V5.0, Working Safely V5.0 and Managing Safely Refresher V2.0 training service to individuals, corporate bodies and government agencies.

The license was awarded following the conclusion of due assessment on the ISO 9001:2015 certified company, which confirmed it as a world-class training institution with the capacity to provide safety training in accordance with global standards.

CNOOC Willing to Invest More in Nigeria

China National Offshore Oil Corp (CNOOC) is willing to invest $3 billion in its existing oil and gas operation in Nigeria, according to NNPC after a meeting with the Chinese in Abuja.

During a visit to Nigeria's state-owned NNPC, CNOOC Chief Executive Yuan Guangyu said the company had invested more than $14 billion in its Nigerian operations and expressed readiness to invest more, according to a Reuters report.

The CNOOC chief said that the West African country was the company's largest investment

Major E&P Companies

Company	Ticker Symbol	Currency	One-month Percent Change	Price as of July 27
ENI	ENI.MI	EUR	3.64%	16.20
Engie	ENGI.PA	EUR	3.58%	14.15
Total	FP.PA	EUR	3.03%	55.00
BP	BP.L	GBP	-3.78%	567.30
ExxonMobil	XOM	USD	-1.15%	81.92
Royal Dutch Shell	RDSA.L	GBP	-0.80%	2599.00

destination and also asked the NNPC to seek common grounds with CNOOC for enhanced productivity.

Algeria to Host September OPEC Meeting

Algeria is the destination of the September OPEC meeting according to the country's Energy Minister Mustapha Guitouni.

"This meeting will allow the OPEC countries to consult and work together to maintain the stability of the oil market," Guitouni said speaking at a news conference in Algiers.

He went on to comment on the volatility of oil prices currently, saying this was due to external factors affecting the market. He said they would stabilize automatically after achieving the balance between supply and demand.

ADES Acquires 31 Rigs from Weatherford in Middle East and Africa

ADES International Holding Ltd. signed a definitive agreement with Weatherford International plc for the acquisition of 31 onshore drilling rigs. The company who operates in the Middle East and Africa paid an estimated $287.5 million for the rigs.

ADES said that the acquisition was in line with its strategy to strengthen its onshore capabilities. The transaction will be financed through a combination of cash and secured debt instruments, and is expected to close in the second half of 2018, subject to customary closing conditions previously agreed upon.

As part of the Transaction, ADES will acquire Weatherford's onshore drilling operations, including their associated assets, contracts, management systems and approximately 2,300 employees and contract personnel spread across Algeria, Kuwait and Saudi Arabia, where Weatherford has built a substantial presence and track record that will enable ADES to expand its presence across attractive pre-selected markets within the Middle East and Africa, consistent with its strategy.

The acquired assets consist of 12 rigs in Kuwait, eleven rigs in Saudi Arabia, six rigs in Algeria and two rigs in Southern Iraq. Twenty of the acquired 31 rigs are currently operational and the remaining 11 will be used in tendering activities and for strategic inventory purposes that will enable ADES to continue to grow in these attractive markets within the Middle East and Africa.

Tullow Loses Arbitration to Kosmos

For the second time in July, Tullow Oil lost out to arbitration. The International Chamber of Commerce ruled in favor of Kosmos Energy in regards to its share of liability of costs related to the *West Leo* drillship. The ruling covers Kosmos' costs beyond October 1.

As a result, Kosmos is not liable for its share of costs, being $50.8 million, arising from the recent case in the English Commercial Court brought by Seadrill Ghana Operations against Tullow. The arbitration award also provides that Tullow is due to reimburse Kosmos for some of its legal and rig demobilization costs.

Tullow also recently lost the case brought against its Ghanaian subsidiary by Seadrill Ghana Operations in the British Commercial Court. The UK firm announced that the court ruled that Tullow was not entitled to terminate its contract for the *West Leo* rig with Seadrill.

Tullow had invoked the contract's *force majeure* provisions on December 4, 2016 but the court disallowed the provision. Tullow is now required to pay Seadrill a contractual termination fee and other standby fees that accrued in the 60 days prior to the termination of the contract. These fees amount to approximately $254 million.

US Revokes Citgo CEO's Visa

The president and CEO of Citgo Petroleum Corp., Asdrubal Chavez, had his US visa revoked. Citgo is the US subsidiary of Venezuela's state-run PDVSA. Chavez is the cousin of Venezuela's late president Hugo Chavez.

US State Department spokesman Noel Clay said the US has broad authority to revoke visas, but does not discuss individual cases because they are confidential under the law.

In a statement on the issue, a Citgo spokeswoman only said that the "day-to-day operations of CITGO remain uninterrupted and senior leadership remains unchanged."

Firms Ordered to Pay $680 Million

Firms controlled by two Oando Plc executives have been ordered by a court to pay $680 million in a dispute over corporate shareholdings. A Nigerian court ordered firms owned or part-owned by Wale Tinubu and his deputy to pay $680 million in a dispute over corporate shareholdings.

The legal battle revolves around ownership of a holding company that controls a majority stake in Oando, which is being investigated over claims of financial mismanagement and had its shares temporarily suspended in 2017.

According to court documents, the recipient of the payments is Ansbury Investment Inc., owned by the family of Nigerian-Italian businessman Gabriele Volpi.

A statement by Oando said it is not part of any arbitration and has not been ordered to pay anything.

The London Court of International Arbitration ruled that Ocean and Oil Development Partners (OODP) owes Ansbury $600 million. OODP is a JV between Ansbury and Whitmore Asset Management Ltd., owned by Oando CEO Tinubu and his deputy, Mofe Boyo. Whitmore itself owes a further $80 million.

Oando emphasized that the $600 million is owed by the JV between Ansbury and Whitmore, which means that in a sense the former "owes itself."

African Rig Count

Country	March 2018	April 2018	May 2018	June 2018
Algeria	55	55	50	50
Angola	3	2	4	4
Benin	0	0	0	0
Cameroon	0	1	1	1
Chad	1	1	1	1
Congo	2	3	2	3
Congo (DRC)	0	0	0	0
Cote D'Ivoire	0	0	0	1
Djibouti	0	1	1	1
Egypt	27	30	25	27
Equatorial Guinea	0	0	0	0
Ethiopia	0	0	1	2
Gabon	3	4	4	3
Ghana	0	1	1	1
Guinea	0	0	0	0
Kenya	8	8	9	9
Liberia	0	0	0	0
Libya	1	1	1	1
Mauritania	0	0	0	0
Morocco	1	1	1	1
Mozambique	1	1	1	0
Namibia	0	0	0	0
Niger	0	0	1	1
Nigeria	12	13	14	13
Senegal	0	0	0	0
Sierra Leone	0	0	0	0
South Africa	0	0	0	0
Sudan*	0	0	0	0
Tanzania	0	0	0	0
Togo	0	0	0	0
Tunisia	2	2	2	2
Uganda	0	0	0	0

Source: BHGE

*Data not available

Africa Production of Crude Oil

(including Lease Condensate, Thousand Barrels/Day)

	2018		
Country	April	May	June
Algeria	997	1035	1039
Angola	1515	1519	1431
Cameroon	79	80	80
Chad	90	89	90
Congo (Brazzaville)	329	319	331
Congo (Kinshasa)	20	20	20
Cote d'Ivoire (Ivory Coast)	28	28	28
Egypt	630	640	640
Equatorial Guinea	127	127	126
Gabon	183	187	190
Ghana	118	118	119
Libya	982	962	708
Mauritania	0	0	0
Morocco	0.5	0.5	0.5
Niger	20	20	20
Nigeria	1791	1632	1660
South Africa	3	3	3
Sudan and South Sudan	203	204	204
Tunisia	48	48	48
Total Africa	7163.5	7031.5	6737.5

Various sources including EIA, IEA and OPEC

Production of Natural Gas Plant Liquids

(Thousand Barrels/Day)

	2018		
Country	February	March	April
Algeria	320	320	320
Angola	51	51	51
Congo (Brazzaville)	15	15	15
Egypt	217	215	217
Equatorial Guinea	21	21	21
Libya	31	31	31
South Africa	5	5	5
Tunisia	3.5	4	3.5
Total Africa	663.5	662	663.5

Various sources including EIA, IEA and OPEC

World Rig Count

Country	June 2018			Variance From	May 2018			June 2017		
	Land	Offshore	Total	Last Month	Land	Offshore	Total	Land	Offshore	Total
Latin America	154	26	180	6	150	24	174	158	34	192
Europe	48	30	78	-2	52	28	80	59	32	91
Africa	76	18	94	0	77	17	94	72	14	86
Middle East	350	42	392	-9	353	48	401	355	42	397
Asia Pacific	136	79	215	-3	137	81	218	119	75	194
United States	1,037	19	1,056	10	1,026	20	1,046	909	22	931
Canada	134	3	137	54	80	3	83	148	2	150
Worldwide Total	1,935	217	2,152	56	1,875	221	2,096	1820	221	2,041

Source: BHGE

OPEC Oil Production
(Thousand Barrels/Day*)

Country	2018 April	May	June
Algeria	997	1035	1039
Angola	1515	1519	1431
Congo	329	319	331
Ecuador	520	520	519
Equatorial Guinea	127	127	126
Gabon	183	187	190
Iran, I.R.	3823	3822	3799
Iraq	4429	4461	4533
Kuwait	2705	2703	2731
Libya	982	962	708
Nigeria	1791	1632	1660
Qatar	590	602	603
Saudi Arabia	9959	10015	10420
UAE	2872	2862	2897
Venezuela	1436	1388	1340
TOTAL OPEC	31930	32154	32327
OPEC exluding Iraq	27501	27693	27794

Source: OPEC

** Based on secondary sources*

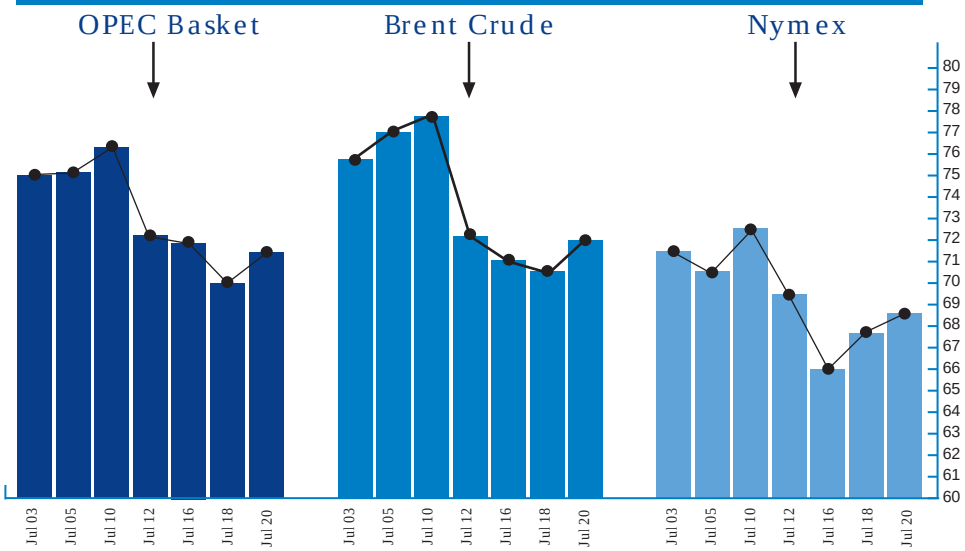
World Oil Production
(million barrels per day)

Country	2018 Q2 2018	May	June
Americas	21.89	22.01	21.79
Canada	4.84	5.01	4.67
Chile	0.01	0.01	0.01
Mexico	2.13	2.11	2.12
United States	14.92	14.87	14.99
Asia Oceania	0.38	0.38	0.38
Australia	0.31	0.31	0.31
Others	0.07	0.07	0.07
Europe	3.31	3.15	3.25
Norway	1.74	1.62	1.73
UK	1.06	1.03	1.02
Others	0.51	0.5	0.5
Total OECD	25.58	25.53	25.42
Total Non OECD	29.39	29.34	29.52

Source: IEA Oil Market Report

Oil Prices

July 03	$
OPEC Basket	74.96
Brent Crude	75.87
Nymex	71.59
July 05	
OPEC Basket	75.21
Brent Crude	77.09
Nymex	70.63
July 10	
OPEC Basket	76.34
Brent Crude	77.80
Nymex	72.56
July 12	
OPEC Basket	72.15
Brent Crude	72.11
Nymex	69.35
July 16	
OPEC Basket	71.90
Brent Crude	71.03
Nymex	67.07
July 18	
OPEC Basket	69.98
Brent Crude	70.52
Nymex	67.75
July 20	
OPEC Basket	71.57
Brent Crude	71.99
Nymex	68.26

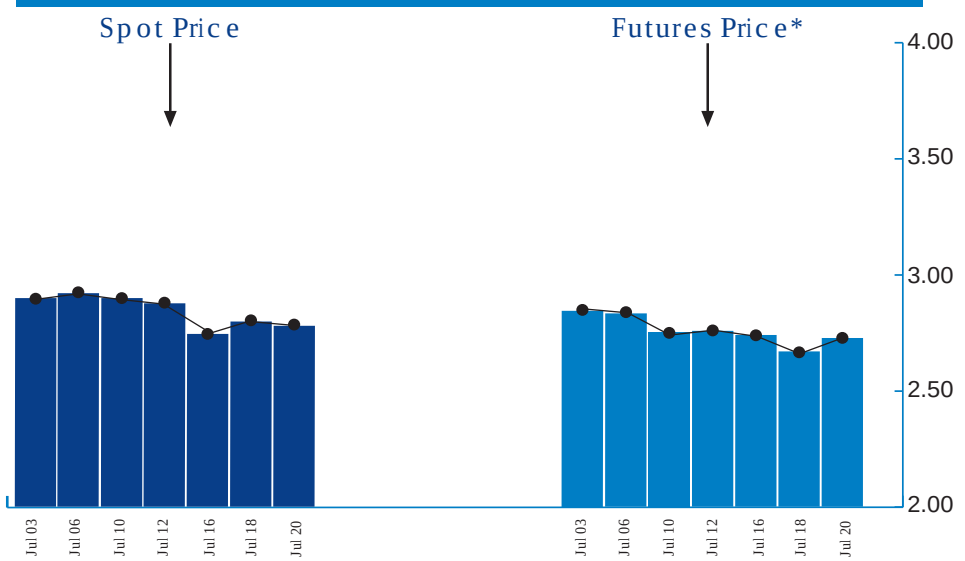


Data compiled by Petroleum Africa from various sources including OPEC, EIA and others

Gas Prices

July 03	$
Henry Hub	2.90
New York	2.84
July 06	
Henry Hub	2.91
New York	2.82
July 10	
Henry Hub	2.90
New York	2.75
July 12	
Henry Hub	2.89
New York	2.76
July 16	
Henry Hub	2.76
New York	2.73
July 18	
Henry Hub	2.80
New York	2.68
July 20	
Henry Hub	2.79
New York	2.72

Dollars per BTU



Conferences

July 2018			
11-12	4th Africa LPG Summit 2017	Johannesburg, South Africa	www.lpgsummit.com
17-19	Nigeria Oil & Gas 2018	Abuja, Nigeria	www.cwcnog.com
17-19	POWER-GEN & DistribuTECH Africa	Johannesburg, South Africa	www.powergenafrica.com
September 2018			
3-5	World Heavy Oil Congress & Exhibition 2018	Muscat, Oman	www.worldheavyoilcongress.com
5-7	Africa Oil & Power 2018	Cape Town, South Africa	www.africaoilandpower.com
20-20	World Upstream Summer Reception	London, UK	www.africa-petroleumclub.com
24-25	Tanzania Oil & Gas Congress	Dar Es Salaam, Tanzania	www.cwctog.com
26-28	Regional Energy Co-operation Summit	Accra, Ghana	www.regional-energy-cooperation-summit.com
October 2018			
1-3	Future Energy Africa Exhibition and Conference	Cape Town, South Africa	www.futureenergyafrica.com
4-5	Equatorial Guinea Gas Summit & Exhibition	Malabo, Equatorial Guinea	www.cwceg.com
9-11	Benghazi International Forum and Exhibition of Oil & Gas (BIEOG2018)	Benghazi, Libya	www.bieogexpo.ly
9-11	2nd ECOWAS Mining & Petroleum Forum & Exhibition	Abidjan, Cote d'Ivoire	www.ametrade.org
9-11	Asian Downstream Week (ADW 2018)	Bangkok, Thailand	www.europetro.com
17-18	Africa Marginal and Independent Oil/Gas Producers Conference	London, UK	www.afroginvestmentsconference.com
22-24	Navingo Offshore Energy Exhibition & Conference	Amsterdam, The Netherlands	www.navingo.com
30-31	AMI's Oil & Gas Non-Metallics 2018	London, UK	www.ami.international
31-Nov 2	5th Mozambique Gas Summit & Exhibition	Maputo, Mozambique	www.mozambique-gas-summit.com
November 2018			
5-9	Africa Oil Week 2018	Cape Town, South Africa	www.Africa-oilweek.com
12-15	Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC)	Abu Dhabi, UAE	www.adipec.com
14-15	Gas Options: North & West Africa Summit	Marrakech, Morocco	www.gasoptions-nwafrica.com
21-22	9th Annual Ghana Summit	Accra, Ghana	www.cwcghana.com
26-27	2nd Africa Oil & Gas Local Content Conference & Exhibition	Luanda, Angola	www.ametrade.org
December 2018			
3-6	The 8th Practical Nigerian Content Forum (PNC)	Yenagoa, Nigeria	www.cwcpnc.com
3-4	BBTC MENA 2018 – Bottom of the Barrel Technology Conference	Manama, Bahrain	www.europetro.com
5-6	ME-CAT 2018 – Middle East Catalyst Technology Conference	Manama, Bahrain	www.me-cat.biz

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