Offshore AFRICA

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OTC 2018: A Pavilion for Ghana

The Maersk Deliverer is currently drilling offshore Ghana for Tullow

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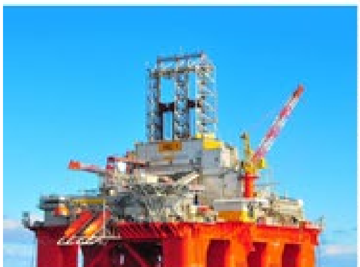


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PAGE / ARTICLE TITLE

Offshore AFRICA
VOL. ISSUE - 2017

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Offshore Africa Magazine is published by Jubert Communications Limited

LOCATION
7, Dadekotopong Street, East Legon, Accra

DESIGN & PRINT: BUCK PRESS LTD: 0302 408061

A Step in the Right Direction

The decision by the Ghana government to set up a 15-member panel to take steps to properly demarcate Ghana's maritime border with Ivory Coast to the West (in line with the 2017 ruling of ITLOS) and Togo to the east is a commendable gesture.

Indeed the ITLOS judgment has effectively put the matter to rest and provides a very good basis for resolving whatever differences that may still exist.

Leaders of the two countries have set a very good example for others to follow by showing to the world that even the most contentious international issues could be put to rest in a most pragmatic manner.

As more and more African states discover oil and gas, particularly across transnational maritime boundaries, tensions and skirmishes are inevitable. From East Africa to the West coast, a pattern is emerging.

ITLOS and other international bodies still provide acceptable means to resolve some of Africa's growing petroleum-inspired disputes, but a lot more needs to be done after the ruling is made.

GILBERT DA COSTA
Editor-in-Chief, Offshore Africa magazine

Gilbert Da Costa is a journalist who worked for many years as the Nigeria correspondent for Cable News Network (CNN), British Broadcasting Corporation (BBC), Voice of America (VOA), TIME magazine and Associated Press.

Born in Accra, Da Costa provided some of the most exciting, factual and unbiased reporting of top stories during his time in Nigeria- the long period of military dictatorships and the return to civil democracy in 1999.

A lawyer, Da Costa has had many outstanding experiences in his 30 -year career, including a minute-by-minute live reporting for CNN on the sudden death of both military ruler General Sani Abacha and politician Moshood Abiola in 1998. He was credited with CNN's electrifying coverage of Nigeria between 1993 and 2001.

Working in Nigeria offered him the opportunity to cover the oil and gas industry in great detail. He also covered the Boko Haram phenomenon extensively and was the first foreign reporter to visit Maiduguri and Limankara, in the troubled northeast, on assignment for TIME magazine in 2005.

Da Costa has interviewed several leading international personalities, including four serving Nigerian presidents.

Ghana Appoints Panel to Demarcate Maritime Borders

Reports reaching Offshore Africa say President Akufo Addo has appointed a 15-man Ghanaian team to implement the 2017 ruling of the International Tribunal for the Law of the Sea (ITLOS) on the maritime border dispute between Ghana and Ivory Coast.

The body, which is expected to be formally inaugurated shortly, is headed by Senior Minister Yaw Osafo- Marfo and includes senior representatives from various governmental and non-governmental institutions.

The Ghanaian cabinet, at the end of 2017, directed the Minister of Energy/ Petroleum and the Attorney-General to draw up modalities for demarcating Ghana's maritime boundary with Ivory Coast as outlined in the ITLOS ruling.

The committee, which is planning to host its first meeting, is expected to liaise with Ivory Coast to form a joint committee to carry out the task of effectively implementing the ITLOS judgment.

Ghana and Ivory Coast have resolved to amicably apply themselves to the court's ruling in a manner that will not jeopardize traditionally good bilateral relations.

The Special Chamber of ITLOS unanimously declared that Ghana had not violated Ivory Coast's sovereign rights with its oil exploration and production activities. Ivory Coast had accused Ghana in April 2013 of encroaching on a part of its maritime territory rich in hydrocarbons.

» Ghana's President Addo and his Ivorian counterpart

The Ghana group is also expected to commence talks with Togo, Ghana's neighbor to the east, for a joint maritime border demarcation. The process of delineating Ghana's eastern maritime border became necessary after an incident at the end of 2016 when the Togolese navy intercepted and drove out a vessel contracted to carry out seismic studies on an oil block on the Ghana side of the border.

A properly demarcated maritime border is critical to stem possible tensions in an area potentially rich in hydrocarbons.

Oil exploration in Africa's Gulf of Guinea has accelerated since Ghana discovered the giant Jubilee offshore oil and gas field in 2007.

The Race for Ghana's 4th FPSO

Lobbying has intensified for the contract to provide Ghana's fourth floating, production, storage, offloading (FPSO) vessel for the Tano Cape Three Points project (DWT/CTP). Aker Energy, the new operator of the field, is expected to name the bid winner of the U.S. $1 billion unit before the end of this year. The project could be worth up to $4 billion.

Yinson, the Malaysia-based FPSO service provider, is said to be leading the pack in the race to win a second FPSO deal in Ghana. The company owns the John Agyekum Kufour FPSO currently assigned to Eni at its OCTP block offshore Ghana.

Yinson reportedly got $117 million proceeds from selling a 27 per cent stake in the John Kuffour FPSO to a Japanese consortium. U.S. based MODEC provided Ghana's first two FPSOs.

Yinson is hoping to clinch the new FPSO deal to brighten its financial outlook. "The contract is potentially as large as the John Agyekum Kufour FPSO contract, as field production is expected to last till 2036, similar to JAK's Offshore Cape Three Points (OCTP) block," said UOB Hian, a research firm.

Yinson is also tendering for six FPSO projects in Africa and Asia in 2018.

ExxonMobil In Search of a Local Partner

U.S. oil firm ExxonMobil is expected to name an indigenous Ghanaian oil and gas company as partner for its newly acquired Deep Water Cape Three Point (DWCTP) within nine months, official sources tell Offshore Africa.

Under current Ghanaian exploration and production law, five percent equity interest in any oil and gas acreage acquired within Ghana must be reserved for a 100 percent Ghanaian owned oil firm. ExxonMobil owns 80 percent equity stake in DWCTP, with state-owned Ghana National Petroleum Corporation (GNPC) acquiring a 15 percent stake.

However, senior industry officials told Offshore Africa that the President is allowed to vary this requirement to give a Ghanaian company a five percent interest, reducing it to two or three percent.

Deepwater financial commitments can be very expensive, resulting in yet more calls for a few relatively well-resourced indigenous companies to form a consortium for the ExxonMobil, GNPC partnership.

Russian oil company Lukoil and American-owned Vanco had previously operated the DWCTP block, prompting doubts about the prospectively of the block. Lukoil, for example, abandoned the field after spending $500 million on a couple of exploration wells, finding some gas reserves but not sufficient deposits to justify further commitments.

Sources tell Offshore Africa that thick sediments identified on the block and the inability of previous operators to find oil in commercial quantity may have had something to do with the constraints of technology at the time.

"Technology for deepwater exploration was not very advanced at the time and because of conditions of relinquishment the previous operator had to give up the block," a highly placed source explained. "I believe there is a great chance of finding oil on the block. I don't know how much oil will be found, but I want to believe there is a good chance of ExxonMobil finding oil."

The U.S. oil firm is expected to carry out seismic work on the block by the end of this year. ExxonMobil signed a Petroleum Agreement with Ghana in January for the DWCTP block (measuring about 366,000 acres or 1,482 sq. km, located 92 km (67 kilometres) off the coast, in water depths ranging between 1,550m to 2,850metres (5,000 and 9,350 feet).

The DCTP agreement was the second engagement by ExxonMobil after the previous Ghanaian government blocked its 2009 bid to take over Kosmos' stake in the flagship Jubilee field. The DCWTP agreement is subject to parliamentary ratification.

OFFSHORE PARTNERS COULD BE A GAME CHANGER

Honourable Moses Asaga has had extensive public service and private sector experience. As a former deputy minister (finance), minister (employment) and a longtime legislator and chairman of the parliamentary select committee on mines and energy, Asaga is one of Ghana's best known oil and gas figures.

In Accra, he spoke to Offshore Africa's Chief Editor Gilbert Da Costa about Offshore Partners, his new company.

Offshore Partners is a very young and newly established company and the owners of Offshore Partners, about three partners, myself with Bayfield Oil & Gas Services and a logistics company. Offshore Partners is coming into the oil and gas services market with the intention to provide services. We have three categories of services that we want to promote.

Our first and most important is supply of pipes, pipelines, fittings and in the fittings we are talking of valves, flanges etc. Now what does pipeline supply play in the industry? If you start with drilling, you need drill pipes for drilling so Offshore Partners can be a sub-contractor to the drilling company for the supply of the pipes and the fittings and also in casing, they still need pipes for the casing during the drilling of the well.

Now in the bigger space, most of the subsea pipeline connections also need seamless pipes. Again that's is an opportunity for Offshore Partners and then even if it comes to the transportation of gas and other fluids for example, offshore we have all these gas pipelines, sometimes they need replacement, sometimes they need maintenances and all is about pipes.

When you are also building subsea infrastructure, a lot of it, about 40% of their requirement is also pipes, and seamless pipelines and fittings so that it is one area that would be a niche area.

Do you have technical partners for this line of activity?

In trying to do this, we are building expertise by partnering with technical partners and so far, we have technical partners from the United Arab Emirates who have steel mills and JV Partners in South Korea so that shouldn't be a problem when we are able to win contracts in Ghana and the whole of Gulf of Guinea because all is about offshore.

Then the second area is more of drilling services and in drilling services we are developing expertise in mud logging, hoking case and well line logging and drilling fluids, chemical supplies and of course, a whole shore based and logistics management. We are trying set up a shore base in Takoradi in partnership with Bayfield oil & gas company.

So between now, the short term to the medium term, these will be the areas that we will be operating. But I have a vision that when it comes to EPC we haven't really developed any expertise in EPC and EPC involves a lot of engineering, involves a lot of procurement and also a lot of construction. Most of the EPC contractors that are presently in West Africa and especially Ghana they come and form JV partners. But we want to develop local engineers who would be able to learn basic engineering and they need to get involved in the whole value chain of EPC to supplement the effort of the multinational companies.

So we plan to set up an engineering office. We are going to hire graduates from University of Science and Technology who have expertise in mechanical and petroleum engineering. Then we'll take them for training abroad for certification so that they will learn the value chain of EPC. This may take us about five years to be there but we believe that in five years' time there will be deep-water activities in Ghana where this requirement would be needed seriously so we are also looking at the long-term vision and the market.

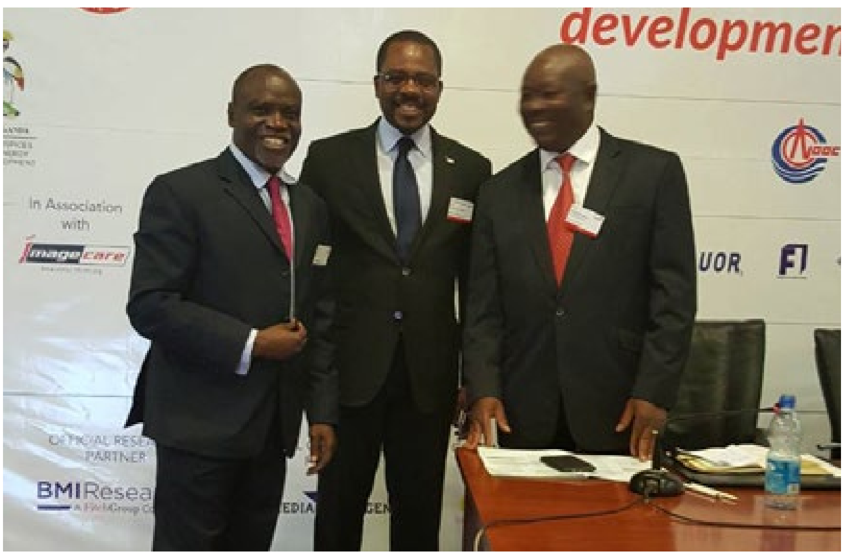
We've started a new year, 2018. The upstream industry had encountered some challenges in the past few years. With your knowledge and your background in the industry, what is your outlook for 2018?

I think 2018 is going to be an interesting year. 2018 is going to bring into fore a lot of exploration activities and also drilling activities and development of fields. I'm saying this because of the previous scare where Ghana and Cote d'Ivoire had a problem about boundaries which was taken to the International law of the sea court and because of that it created a bit of a scare for most of the operators and would be E & P companies.

Now that the judgment has been favourable to Ghana, it means that the whole continental shelf activities would resume. So the judgment that was given is going to really give impetus and excitement in the industry.

In 2018 we will be seeing a lot of oil and gas companies remobilizing to come to start to do either exploration, appraisal, drilling and development in their fields. So 2018 is seen as the remobilization and mobilization and then by 2019 there'll be a full-fledged activity in the oil and gas industry and there's going to be a lot of opportunities for local companies.

I think that the GNPC should now get deeply involved in some of the deep water projects because as a Ghanaian we want to see one day for the GNPC to become the Petrobras of Ghana.



» Hon. Moses Asaga (Fmr CEO National Petroleum Authority -NPA, and MP, Ghana), Hon. Gabriel Mbaga Obiang (Minister for Energy, Mines and Industry-Equatorial Guinea), Dr Fred Kalisa (Senior Advisor, Oil and Gas for President of Uganda). taken at International Oil and Gas Conference in Kampala

Egina FPSO Hailed for Local Content Feat

The giant Egina FPSO vessel is currently undergoing integration of six locally fabricated topside modules at the Ladol Free Zone in Lagos, Nigeria, marking the first time such a feat has been achieved on the African continent, according to field operator Total Upstream Nigeria.

"The Egina project is therefore a testimony to the fact that large deepwater projects can be developed with a very high level of in-country activities, thus fulfilling the aspirations and objectives of the Federal Government of Nigeria in terms of employment generation, capacity building and industrial capability development," a statement by Total Nigeria said.

The FPSO is 330 metres long, 34 m high,61m across, weighing 60,000 tons (the biggest ship in West Africa), and is designed to hold 2.3 million barrels of oil. The vessel will be moored at the ultra-deep Egina field about 130 km south of the main oil city of Port Harcourt, in the second half of this year.

The Egina field was discovered by Total Nigeria in 2003. Total operates the field in partnership with NNPC, CNOOC, SAPETRO and PETROBRAS. It will add 200,000 barrels per day to Nigeria's oil production (approximately 10 percent of the country's total production).

Egina is the largest investment project currently ongoing in Nigeria's oil and gas sector, and its expected to be completed in Q4-2018, within an initial budget of $16 billion. It is the first major deepwaer development project launched after the enactment of the Nigerian Oil & Gas Industry Content Development (NOGICD) Act of 2010, Egina has the highest level of local content of any such project in Nigeria.


» Dr. Ibe Kachikwu aboard FPSO Egina

Key Nigerian Content features of the Egina project include:

- Employment: 24 million man-hours worked in Nigeria (77% of total project workload), equivalent to a workforce of 3,000 persons on average over a period of 5 years;
- Fabrication: 60,000 tons of equipment to be fabricated in Nigeria;
- Training: over 560,000 man-hours of human capacity development training across Egina contracts;
- Infrastructure: construction of several large-scale new fabrication facilities in Nigeria and upgrade of several existing fabrication yards.

The Egina project includes pioneering Nigerian Content achievements:

- The Floating, Production, Storage and Offloading unit (FPSO) of Egina, a 330-meter long vessel designed to process oil and gas from the Egina field, will be berthed at the quayside in Nigeria for integration of locally fabricated modules – a first for Nigeria;
- Egina has the highest number of FPSO topside modules (six) to be fully fabricated and integrated in Nigeria;
- The assembly of the Integrated Control and Safety System of the FPSO was fully performed in Nigeria;
- Egina includes the fabrication of the largest subsea equipment (manifolds, risers) ever completed in Nigeria, far above what was achieved in previous projects.

All six manifold modules for the Egina project were manufactured at the Aveon yard in Port Harcourt. Egina, in water depths of up to 1,700 m (5,577 ft), is one of Total's deepest offshore projects. The facilities have a design life of 25 years.

A Made-in-Nigeria FPSO by 2028?

» Egina FPSO

Having achieved 40 percent local content with the $3.3 billion Egina FPSO, Nigerian officials are targeting more Nigerian content in future big-ticket oil and gas projects in-country.

Six topside modules were locally fabricated for Egina FPSO, 60,000 tons of fabrication, involvement of 250 Nigerian engineers and the use of locally made paint on the FPSO were some of the Nigerian content additions.

The Nigerian Minister of State for Petroleum Resources, Dr. Ibe Kachikwu, says building upon what has been achieved with Egina FPSO, the country now expects to build an FPSO unit locally.

"My target is that over the next 10 years, Nigeria will develop an FPSO here, locally. And that is not too much to ask. My target is that over the next 10 years, Nigeria will be self-sufficient in its own power provision," he told delegates at an international oil and gas conference in the capital city of Abuja.

Nigeria expects nearly $40 billion in new investments over the next five years in major offshore projects. The Egina project is attracting at least $16 billion, Zabazaba is tipped to bring in $10 billion, with Bonga southwest gulping $10 billion. Dr. Kachikwu spoke about a new funding mechanism that is bringing back direct foreign investments into the Nigerian oil and gas sector.

Nigerian content activities recorded six million training man hours and is now able to retain $5 billion in the local economy from the annual $20 billion industry expenditure. At least 36 percent of marine vessels operating in the Nigerian oil and gas industry are owned by indigenous players. Nigerian handles 60,000 metric tons of fabrication in-country.

Locally Manufactured **Modules for Egina FPSO**

The LADOL Free Zone in Lagos is currently hosting the largest vessel in West Africa- a 330 m long Floating, Production, Storage and Offloading (FPSO) unit- for final integration of six locally manufactured topside modules.

LADOL's Managing Director, Dr. Amy Jadesimi, spoke in Lagos about the industry-first Egina FPSO project and the local content benefits for the Nigerian economy.

The creation of the shipyard, as I said, is strategic not because it allows us to integrate and put massive modules together. You can even train people and you can put anything together in the yard.

It also allowed us to demonstrate the quality of work we can achieve in Nigeria. So the welding quality in the yard is already the highest in the world. Obviously, we can handle all the other industries, all the other components.

And when it comes to details and specifics of welding and fabricating small pieces together to fit into a complex facility like an FPSO that takes huge volumes of crude……

The employment of Nigerians is key. The standard that you have to achieve in order to fabricate is the highest in the world, which is why this facility has demonstrated that we can industrialize Nigeria. If we can meet the standard required by the most challenging industry in the world, we can handle all the other industries.

I was surprised to see hundreds, perhaps thousands, of Nigerians employed to do things in your shipyard that one could imagine being done in South Korea, Hamburg or such places.

Now that we have built this facility at LADOL Free Zone, we are focusing on upscale. We are putting up an upscale academy to train young Nigerians. Those are the cost savings we are talking about in the oil and gas industry and our ability to manufacture for other industries, like agricultural processing, and so on depends on us having a skilled workforce. So the upscale academy is about training Nigerians in a range of technical areas. These Nigerians will be kept partly employed by the work they are doing in LADOL moreso in part by the work they triggered or generated due to what they are doing in LADOL.

For example, the shipyard has 10 times multiplier effect. Meaning for every one job created at the LADOL Free Zone, 10 jobs are created outside.

In other yards across Nigeria, yards like Aveon, which has done fantastic work, but have been limited, because they haven't been able to manufacture large modules because it is not economic to manufacture large modules.

So now, yards like Aveon can increase their capacity and employ more people and you can see how they can create an exponential multiplier effect.

Local content is okay but you need money. How do you source for money for a project on this scale? Where will the money be coming from?

LADOL has been around since 2001. It is too hard to raise money in Nigeria. Banks have more incentive to keep their money to themselves or to spend on short-term treasury bills or things like that. They don't have enough incentive yet to invest in long-term development projects like LADOL. Even with the success we've had now, funding is still a challenge.

It is fortunate that we had support from the Bank of Industry. They came in at a very critical moment. Also the Nigerian Local Content Development and Monitoring Board.

Funding was critical to enable us to build some of the infrastructure, some of the support services we needed to bring in the FPSO. And Total also supported through Egina project.

Egina FPSO comes at a cost. How much ?

Historically, we've spent $300 billion on projects of these kind. And historically, the local content for that $300 billion may have been between 10 and 15 percent, and that 10 or 15 percent may have been made up of procurement. People were not manufacturing. Obviously that procurement was not about procuring Nigerian-made goods because we don't have a large manufacturing base. That is the challenge we've had historically.

One of the key things Total has done is to change the game. So going forward, we can now realistically hope to achieve the level of local content they have say in Brazil- which ia about 70 percent.

So the enabling environment is very important. We also need the ease of doing business to attract investment to build these facilities. So the government has done very well- pushing back and outlawing the monopoly that was strangulating maritime in the oil and gas sector for a long time.

The President outlawed that monopoly last April and was very critical to enable vessels to come in. In order for the private sector to come in, they need to know if they can operate here- costs will be low enough and the market can give them a return.

We need to take the first step as Nigerians. The first private investors have to be Nigerians. We need to create strategic facilities, infrastructure to enable us prove to the world that this is an investment destination of the century.

» LADOL's MD Dr. Amy Jadesimi and NPA's MD Hadiza Bala Usman

President Koroma Opens $12 Million Solar Project

Sierra Leonean President Ernest Bai Koroma has inaugurated a solar park in Freetown executed by UAE based Advanced Science and Innovation Company (ASIC) LLC as the Project Manager and Lead of the Solar Park Freetown Project and the EPC, SMRT Projects and Energy Solutions.

The project total cost was reduced from the initial USD18 million allocation to only USD12.6 million for all project components, including certain critical infrastructure additions.

The landmark 6MW Solar Park Freetown Project, which won the first prestigious International Renewable Energy Agency and Abu Dhabi Fund for Development (IRENA/ADFD) financing facility, was initiated and coordinated from its inception by late Ambassador Siray Alpha Timbo and Dr. Bahige Annan the Consul General of Sierra Leone in Dubai, UAE and later further developed together with the Project Manager, Filip Matwin, CEO of ASIC.

The Project, will for the first time in the history of the country, provide large amounts of clean Renewable and sustainable Electricity to both urban and western rural districts around the capital, Freetown.

Solar Park Freetown Project is specially designed to include a number of institutional and critical human resource arrangements for sustainable management and international best practices of the IRENA/ADFD project facility. The Project has been specially structured by the Project Manager in coordination with the PIU, to provide a most efficient implementation of sustainable Renewable Energy and knowledge transfer, for Sierra Leone's particular geographic and socio-economic situation, and to be in line with His Excellency's the President of Sierra Leone and IRENA / ADFD's goal of sustainable electrification in Sierra Leone.

The total cost of the project, which has been successfully reduced over the year by the Project Consortium (PM & EPC), include in addition to the 6MW Power Plant, assets such as an additional extension and upgrade of road and grid-power infrastructure, incl. a necessary extension of the 161KV grid power line, a distribution substation, and a MV/HV substation as part of the total project, which will significantly benefit the Government and the people of Sierra Leone.

GE to Help Increase Output and Reliability of Shell Petroleum Development Company's Afam VI plant in Nigeria

GE's Power Services business (NYSE: GE)has announced the signing of a Multi- year Service Agreement (MYA) with Shell Petroleum Development Company (SPDC) for its 650MW Afam VI combined cycle power plant located in the South-eastern part of the country.

The plant which provides enough electricity equal to power over 3 million Nigerian homes at peak performance, will expect to improve its availability, reliability and output for up to 200,000 Nigerian homes, while decreasing its operational costs. SPDC and its partners in the joint venture it operates, built the plant in a significant contribution to help meet Nigeria's electricity needs.

The agreement will cover planned maintenance for the three existing GE GT13E2 gas turbines as well as one GE steam turbine. In addition, the order includes GE's MXL2 upgrades to help increase the plant capacity by up to 30MW while increasing its efficiency.
In addition to increasing power output by up to 30MW, upgrades on the turbines are expected to deliver a combined-cycle efficiency increase, resulting in significant fuel savings and reduced CO_2 emissions. GE's solutions will also extend inspection intervals for the gas turbines reducing maintenance and repair expenses—which, in turn, will reduce overall plant costs and result in improving profitability.

GE's GT13E2 gas turbine offers industry-leading efficiency with up to 55% efficiency levels in combined cycle operation, superior fuel versatility that enables a wide range of fuel compositions without hardware changes while substantially extending standard inspection intervals. Its unique operating profile capability offers the potential for financial savings by allowing customers to react quickly to fluctuating power demands, while keeping costs in line.
GE has been operating in Nigeria for over 40 years, with more than 900 employees, 90% of whom are Nigerians. The company has businesses spanning across key sectors including oil and gas, power, healthcare and rail transportation.

EnergyFundz Forms Joint Venture with OceanTech Engineering-for Ghana Energy and Infrastructure Projects

EnergyFundz is proud to partner with OCEANTECH ENGINEERING- to develop energy and infrastructure projects in Ghana. Ghana is on course to become the fourth-largest oil producer in sub-Saharan Africa.

By 2020, oil output is expected to be over 240,000 barrels per day and gas at 250 million cubic feet per day. This rapid development will require significant infrastructure development in the energy, power and waste management sectors.
In order to provide these services in Ghana, EnergyFundz™ has joined domestically with Sultan Global Group (SGG), a business advisory firm specializing in government affairs and engagement, public affairs, strategy and development. Together, the EnergyFundz-Oceantech Engineering partnership will expand sales, contracts, exports and opportunities for US/Texas energy products and services in Ghana.

Companies interested in expanding or exporting their products or services to Ghana are requested to contact EnergyFundz™ at info@energyfundz.com or +1 713 715 8986.


» Delegates at WAIPEC in Lagos

PETAN Leads Drive for **Nigerian Content**

Mr. Bank Anthony Okoroafor is Chair of the Petroleum Technology Association of Nigeria (PETAN), the umbrella body for indigenous Nigerian oil and gas companies. PETAN is driving the push for more Nigerian content.

In this interview with Offshore Africa, he reiterated the overriding importance of local content and local participation in the continent's largest oil producing nation. He spoke in Lagos at the 2nd West African International Petroleum Exhibition and Conference (WAIPEC).

Tell us about PETAN

PETAN is a group of people who believe in the development of their country. People who believe that you can add value to their country by genuinely setting up companies, genuinely developing people, genuinely buying equipment to do those services that most international company think that the locals cannot do.

It was tough when we started. But once you are genuine and you are consistent and you are focused. With time things will work out well. Now PETAN employs more than one million people-PETAN companies. So many of us started, borrowed money, bought equipment, initially companies didn't want to give us jobs. We kept on fighting, kept on pushing and eventually we started working. We started getting opportunities.

Like now if you look at drilling rigs, PETAN companies have drilling rigs, vessels, deep water offshore vessels. We have logging equipment, wielding equipment. So basically most of the services across the value chain are now provided by Nigerians. Those were the things people said was impossible before.

At a time when global focus is on renewable and other cleaner sources of energy, how is PETAN responding to the challenge?

It is not a problem. We are in energy business. We are investing in solar. Many of us are investing in electric energy.

The campaign to diversify the economy has gathered momentum and of course agriculture is the most viable option. How can PETAN help realize the aspiration?

What makes a country great is being able to feed yourself as a country. No African country should be importing food. First of all it doesn't have to be PETAN lone. It has to be the number one priority of the whole country.

The country needs your expertise to harness the vast resources in the sector. We are talking about adding value to raw materials.

Well most of the technology is upstream in the oil and gas sector. Well it is just to go mechanized farming. Mechanized farming is what every country needs. The skill required for mechanized farming is very low. So it can easily be deployed. It can easily be transferred. It is just to have a deliberate policy to be self-sufficient in food production.

Is there a mentoring programme in PETAN for the next generation to come on board?

Yes there is a lot of mentoring. We have internship programme. Every year we train so many people. Shell sends us several people. NCDC sends us several people. Most of the OICs send us several people for mentoring and training. So it is an ongoing process.

Some reservations have been raised about the predisposition of Nigerians to talk too much and act less. What is the assurance that the laudable recommendations will see the light of day?

Let me tell you, Nigerian content is working. Twenty years ago Nigerians didn't own drilling rigs. Twenty years ago Nigerians didn't own deep water offshore vessels. Twenty years ago Nigerians were not involved in oil field logging, oil field pumping, laying of pipelines, engineering services. We have one hundred percent Nigerian companies offering those services. It would not have been possible without the NOGIC Act.

Collaboration with foreign partners can be abused by some indigenous companies to sabotage national interest. There should be a re-think I suppose?

The NOGIC Act does not say you cannot cooperate with people. Areas we have key competences we should work. Areas we don't have the technical know-how we can have partners. But you must have a plan on how the technology will be transferred. And that is where NCDMB has done a great job.

There is the technology plan. In that technology transfer plan, you must have a time frame of how and when that technology will be transferred. And within the time frame that technology must be transferred. So those issues will not arise. The intentions of the policy are clear.

It is obvious Nigeria is moving forward to actualizing the target to increase in-country value retention?

Yes we were 5%, 10 years ago. Today we are 28%. And the idea is to have 70% in 2027. We are making progress.

Oil-rich Africa Needs $100 Billion Investments Annually For Energy Security

By Kate Da Costa

Despite having over 129.1 billion proven reserves of crude oil, representing 7.6 percent of the world's proven reserves and gas reserves of 466.7 trillion scf accounting for 7.5 percent of the world's proven gas reserves, Africans continue to grope in the dark, in search of reliable power to drive the continent's economy and industrialization process.

Austin Avuru

Even though Sub Sahara Africa is the second largest exporter of crude in the world, energy utilization is still grossly inadequate and majority of its people lack access to electricity. It is estimated that over 600 million people in Africa live without electricity.

The figure accounts for two-third of the population. Another one-third about 50 percent of the population has no access to electricity, while the Sahel and South Africa fall within the category where less than 25 percent of the populations do not have access to electricity.

This provides opportunity for massive investments. A total of $100 billion investment is needed annually to meet domestic energy security in Sub Sahara Africa, according to a top Nigerian oil and gas executive.

Africa must therefore move away from being a net exporter of crude to being a major consumer of energy to propel industrialization. Emphasis should shift from producing fossil fuels to cleaner energy sources as dictated by global trends, the oil chief cautioned.

Speaking on the topic:" The Future of the global oil and gas industry in the next decade and the impact on African region," the Chief Executive Officer of Seplat Petroleum Development Company, Mr. Austin Avuru said Africa needs to domestically embrace the utilization of fossil fuels to power industrialization.

Frowning on the trend whereby African countries exploit crude products to export to Europe, only to import refined products, Avuru stressed the need for the domestication and retention of oil and gas resources to catalyze development.

"A lot of African countries import their petroleum not necessarily from nearby African countries but from Europe. These are the kind of stories we hear. When there is a discovery it is about building pipelines so that the resource can get to the export point so that it goes to Europe for refinery and the product comes back as petrol. It is the same story everywhere.

"We don't hear big stories about a big discovery leading to the building of some big refineries. We are saying that consumption is going to increase over the next 20 years. It will be much more than what we are projecting. So Africa is emerging significantly and we must effectively embrace domestic utilization of oil and gas to power industrialization."

Underscoring the global shift from fossil fuels to renewable energy, the Seplat chief, who projected that demand for gas and solar would continue to grow said while crude oil will still remain relevant urged African countries to leverage investments into the sector by creating enabling investment conditions.

UGANDA SAYS NOW READY FOR OIL PRODUCTION

East Africa debutant in the oil and gas business, Uganda has confirmed that it will achieve first oil in 2020. The country discovered oil in commercial quantity in 2006.

So far there is a proven 500 million barrels of crude to be exploited in the country. Uganda expects to produce 90,000 barrels of crude daily for export. It also hopes to refine 30,000 barrels of crude daily for local consumption after achieving first oil.

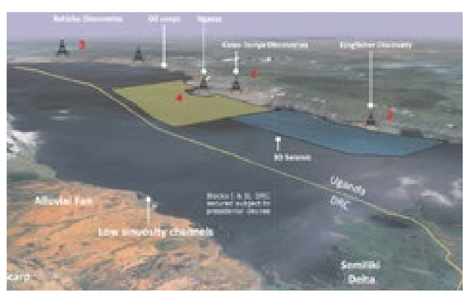
Speaking about Uganda's fledgling oil industry, the Acting Commissioner Petroleum Directorate, Ministry of Energy and Mineral Development, Uganda, Mr. Frank Mugisha explained why it had taken the country so long to develop its oil industry.

"After the discovery we realized that we don't have a formidable legal and institutional framework. So what was done was to put in place a formidable legislative framework," he declared.

Mugisha assured that legal and institutional frameworks to drive investments into the industry have been put in place, which includes robust legal framework, excellent geophysical policy, favourable investment climate, good infrastructure, tax incentives, liberalized and fiscal measures.

Already negotiations are ongoing with foreign developers to build pipelines to deliver 90,000 bpd of crude for export, while a refinery to process 30,000 bpd for local consumption was in conception, he added.

Enumerating the vast investment opportunities that the oil industry has, the Uganda administrator said there was need for the development of an industrial park, airport, road infrastructure and allied companies to fully harness the resource.



NCDMB Targets **$1 Billion Nigerian Content Fund**

» GNPC officials present a cheque to the University of Energy in Ghana

The Nigerian Content Development and Monitoring Board (NCDMB) says it expects to grow its $200 million "seed money" to at least $1 billion to provide more loans and support for contractors in the Nigerian oil and gas industry. Government-owned Bank of Industry is the partner bank in the drive to support indigenous contractors.

"The challenge we've given to the Bank of Industry (BoI) is that we are giving you this seed money of $200 million. Our expectation is that you will attract counterpart funds in order to raise this fund to a $1 billion mark so it can go round genuine Nigerian contractors," declared Engineer Simbi Kasiye Wabote, Executive Secretary, NCDMD,

Loans granted under the special NCDMB-sponsored package attracts a more reasonable eight percent interest rate, compared with current market rate of at least 30 percent. Mr. Wabote identified funding shortage as a huge challenge for indigenous oil and gas operators. "If you look at all the intervention funds in this country, there is an intervention fund for agriculture, for small and medium enterprises but none for the oil and gas sector. People believe there is money in the oil and gas sector, so why do we need to finance them? But Nigerian businesses are struggling to take advantage of the local content Act because of financing issues. This is meant to bridge that gap."

He noted that Nigeria is making steady progress in the implementation of the local content Act, currently said to stand at 28 percent. "Local content is not a sprint, it is a marathon," he added.

With current lending rates around 30 per cent, Mr. Kayode Pitan, Managing Director at Bank of Industry reckons the $200 million credit line for Nigerian contractors will make a difference. "When our people manufacture, it is very difficult because your cost is very high-30 per cent and you have to add to that the cost of power and staffing etc. So the single digit lending is major for our people."

Africanus Mensah-Ghana's Oil Entrepreneur

By Kate Osayi

Evidently, the most desirable outcome for Ghana's burgeoning oil and gas industry is to raise enterprising local players who can make a big difference in the scheme of things. Already, indigenous entrepreneurs have emerged for strategic roles in what is obviously one of the world's most challenging and standards-driven sectors.

Mr. Africanus Mensah is the Chief Executive at Amaja Oilfields Limited, a leading indigenous Ghanaian company, providing first class services in the industry. Amaja, an acronym of Africanus, Milagros. Anna, Jacob and Anthony, presently operates an oilfield machine shop and pipe yard.

Mensah's involvement in Ghana's oil and gas industry did not happen by chance. With over three decades' of work mainly in oilfields, the University of Texas graduate in Petroleum Engineering (Drilling and Reservoir) is eminently equipped for a star role in the country's fast growing upstream petroleum industry.

In 1986, he joined an Indonesian company as a trainee Engineer before moving to the UK to work as an offshore Roustabout Engineer and then to El Tigre, Venezuela as a Swamp/ Land Engineer.

The Essikadu born, US-trained, engineer demonstrated immense versatility serving in diverse industry roles, and in various places around the world. He served notably as a Land Based Engineer, Red Deer, Calgary, Canada; Offshore Engineer, Galiota, Trinidad Tobago; Field Service Manager, Port Harcourt, Nigeria; District Manager, Rio, Brazil; Country Manager, Bogota Colombia; and Vice-President, West Africa, Paris/Angola,

Similar high profile moves to Houston Texas, as Vice President QHSE, North and South America and then to Lagos, Nigeria as Vice-President, West Africa for SchlumbergerSema marked the highest point in his illustrious career.

In 2006, he established Amaja Oilfield Limited, which he hopes to build into the "next Schlumberger." With staff strength of over 150, the company may have some serious catching up to do in terms of the size of its workforce. But the quality of its services demonstrates it is certainly on track to becoming the next big thing for the Ghanaian oil industry.

Amaja provides services which include: Rethreading of Casing; Heavy Weight Drill Pipe; Drill Collars; Stabilizers; Sub; Hangers; and Accessories threads.

The company also engages in the: Repair of all API and Premium Connection Licensed threads in both Carbon and CRA material; Quality inspection of accessories and their threads; and Training and Customer demonstrations.

The oil and gas juggernaut believes most of the indigenous companies are too small in size to survive and thus wants to see more mergers and acquisitions. As he puts it, "the bigger the better."

Mr. Mensah believes in diversification of portfolios and wants to see oil and gas help to create prosperity in Ghana.

"We are building a top class shopping mall; cinema; restaurant; shopping etc...$ USD 65M project; 20,000 m2 floor space." He expects to create over 2,000 additional jobs as well as help farmers grow food.

UGANDA MAY DEPEND ON FOREIGNERS TO FILL OIL JOBS

» Ugandan President Yoweri Museveni

Uganda will start investing in oil and gas infrastructure ahead of the planned production in 2020 but there are indication that majority of the work will be undertaken by expatriates.

This is based on the fact that the Uganda Petroleum Institute, one of the institutions mandated to impart skills to the local population interested in working in the sector, has so far trained and graduated just 133 Ugandans with diplomas and certificates.

Makerere University, which introduced undergraduate courses in oil and gas in 2009, seems to have done little to address the human resource gap.

Speaking during a forum dubbed 'skilling and local content forum' organized by Uganda Chamber of Mines and Petroleum (UCMP) in collaboration with the Ministry of Education and Sports, President Yoweri Museveni, said the number is 'too' small.

He blamed the current situation to the low level of student enrolment in science disciplines.

"Many Ugandans are trained in humanities but there is a sizeable group who do science and technical courses," he told the audience.

Energy Minister, Irene Muloni, however attributed the limited number of trained Ugandans in matters oil and gas to the high costs involved in the international certification, lack of internationally accredited training centres and a mismatch of the domestic curriculum to the international industry demands.

Oil and gas activities are expected to create at least 167,000 jobs at their peak during field development as well as pipeline and refinery construction, according to Muloni.

Of those, 14,000 will be direct jobs, 42,700 indirect and 105,000 induced jobs. In terms of competences, 15% [of the 167,000] are estimated to be professionals (engineers and managers), 60% technicians and craftsmen and 25% unskilled laborers.

Local Content Bad for Business- AMCHAM

The local content drive of the Ghanaian government has been described as "negatively affecting the government's drive to improve the ease of doing business, attract foreign direct investment and promote overall economic growth."

In a joint statement signed by officials of the American Chamber of Commerce (AMCHAM) and European Business Organisation (EBO) in Accra, the groups dismissed the local content initiative as "protectionism" limiting or eliminating foreign participation in certain sectors of the economy."

They also criticized the concept of indigenous ownership of business in the context of local content, claiming "in today's world and a global economy local ownership is not the key element of any business."

The stance of the American Chamber of Commerce comes against the backdrop of the 'America First' campaign of U.S President Donald Trump to promote American business and economic interests at home and around the world.

CONSHIP TRAINS VENDORS IN NEW BUSINESS CONCEPTS

» Trainees at CONSHIP workshop in Accra

Leading Ghanaian logistics company Consolidated (CONSHIP) is working with its vendors and suppliers to improve their approach to doing business, particularly in governance and compliance issues.

At a recent training workshop in Accra, CONSHIP took participants through strategic topics such as basic business management regulations, and an overview of governance and compliance. Others were business ethics, anti-bribing and business sustainability.

"The goal was improve their business processes and ethics to meet international standards that CONSHIP is working with," the company said.

CONSHIP was hopeful the training will help the vendors to improve on the conduct of their business and the services they render to CONSHIP.

Dr. M.C. Vasnani, CEO of CONSHIP, urged participants to share their new knowledge with colleagues. Certificates were presented to mark what could be the first in a series of workshops to be hosted by CONSHIP.

Towards GREENER NATURAL Gas

By Robin Wylie

Evolving technologies could allow natural gas to play an even greater role in the transition to a low-carbon future...

The increasing use of natural gas for electricity generation is one of the most significant energy trends of the past 30 years. In 1987, natural gas accounted for 8 percent of global electricity production. Now that figure is 22 percent, and rising steadily. (By 2040, around 30 percent of total worldwide energy generation is expected to come from natural gas).

As our consumption of natural gas continues to rise, however, so too will the need for greener sources of power, as humanity comes to grips with the realities of climate change. Natural gas has been widely praised for its relatively low emissions compared to other hydrocarbons such as coal. But technology is continuously pushing the boundaries of how green natural gas can be.

A new generation

One way to make natural gas greener is to increase the thermal efficiency of the power plants that use it – more efficient plants need to burn less fuel to produce a given amount of energy, thereby reducing carbon emissions; a one percent rise in efficiency reduces greenhouse gas emissions by between 1 and 3 percent.

Today, the most efficient way to generate electricity on a wide scale using natural gas is using "combined-cycle" power plants. These operate using a double step generation process, first using combusted natural gas to power one turbine, before using the exhaust gases to heat water, producing steam, which is then used to drive a second turbine.

Combined-cycle natural gas plants are significantly more efficient than traditional "simple cycle" power plants, which have no capacity for waste heat recovery. Simple-cycle plants typically achieve efficiencies of 32 to 38 percent, while combined-cycle plants can now reach efficiencies of over 60 percent. In 2016, General Electric inaugurated a combined-cycle natural gas plant with a record-breaking 62.2 percent efficiency.

Currently, simple-cycle power plants are the most widely used in natural gas power generation, but the use of combined cycle technology is on the rise. Combined-cycle plants accounted for roughly three-quarters of global additions in 2015, and now provide more than 80 percent of natural gas-fired generation in the United States.

Using CO_2 to cut CO_2

Recycling the waste heat from power generation is one way to cut down on carbon emissions from natural gas. But another way to achieve this could be to use the carbon emissions themselves.

In the past few years there has been increasing interest in the possibility of using the waste carbon dioxide from power plants to produce additional power, by subjecting the gas to high pressures and temperatures, and using it to drive a separate turbine.

When CO_2 is simultaneously heated to above 88°F and pressurized to above 73 times atmospheric pressure, it enters what is called a "supercritical" state, where its density increases significantly while still moving like a gas. And this combination of properties makes it an ideal substance for driving a turbine.

By converting waste CO_2 into a supercritical state, various kinds of thermal power plant — including natural gas plants — can potentially increase their generation capacity without burning any extra fuel, thereby raising their efficiency, and cutting their net carbon emissions. The potential of supercritical CO_2 turbines to modern power generation is so significant that the technology was recently the subject of an article in the prestigious journal Science, with the title: "Turbines can use CO_2 to cut CO_2."

There are various engineering challenges associated with using supercritical CO_2 to drive turbines. For one, the turbine blades need to be able to withstand higher mechanical stresses, and their design also need to be optimized to work efficiently with the consistency of supercritical CO_2, which is somewhere between a liquid and a gas.

Liquid CO_2 is heated in a pressure cell until it reaches the critical point were it changes into a supercritical fluid

But that isn't stopping developers from taking advantage of the opportunity offered by this new technology. Dresser-Rand, a turbine supplier to the oil and gas industry, has already commercialized a functioning supercritical CO_2 turbine, which has a maximum output of 8 MW. And a partnership between NET Power, CB&I, Toshiba, and Exelon is currently developing a 50 MW demonstration plant which incorporates a supercritical CO_2 turbine, in Texas. It is expected to be completed later this year.

» Caledonia combined-cycle plant (tva.gov)

And aside from these private companies, the United States Department of Energy announced this year that it is building a prototype power plant that uses supercritical CO_2 turbines. The project, which has a budget of $80 million, is expected to go online in 2023.

Spotting the leaks

Improving turbine technology is one way towards greener natural gas. But there is another significant opportunity to curb carbon emissions, at an earlier stage in the supply chain.
There is wide concern about the environmental impact of fugitive gas emissions — accidental leaks of methane and other greenhouse gases that can occur during the production of hydrocarbons. Fugitive gas emissions can result from the production of oil and coal, but the greatest potential is from natural gas wells.
The scientific consensus is that fugitive emissions are unlikely to offset the environmental benefits of natural gas compared to other fossil fuels. But nevertheless, reducing such emissions is a key area where the carbon footprint of natural gas could be significantly reduced. And that's where new technologies can help. Fugitive emissions are notoriously difficult to identify, given that natural gas is invisible to the human eye. But electronic eyes are a different story.

One of the most promising techniques for identifying fugitive gas emissions is drone-mounted methane sensors, which allow gas producers to spot gas leaks from the air. Previously, the best option for detecting fugitive emissions was to use handheld infrared cameras; switching to automated, airborne monitoring using drones could therefore allow much more complete measurements to be made with less manpower.
Methane-detecting drones have already been developed by numerous organizations. One of the first was developed by NASA. The drone was initially intended for use on Mars (where methane could be a fingerprint of life), but the technology has since been used to hunt for fugitive emissions in natural gas fields in Canada.
And last year, General Electric presented "Raven", a methane-detecting helicopter drone developed by its R&D department. On a test run, the drone successfully found gas leaking from a two oil wells in Arkansas.
These machines, and the various other methane-sniffing drones, which are operating or in development, could enable the natural gas industry to detect, quantify — and most importantly, plug — their elusive fugitive emissions.
Whether in power plants or during gas production, new technological advances are making greener natural gas a possibility. With sufficient commitment to implementing them in practice, there is every reason to think that natural gas can maintain — and even improve upon — its position as a leading low-carbon fuel source for the future.

OIL - WHERE NEXT?

As Kenya prepares to export oil, having discovered it in the Turkana region relatively recently, some years after Uganda, the future global price for the commodity assumes added significance for the country. Still a net importer, its economy has benefitted from the slump in oil prices over the past few years, but clearly now the situation is about to change if the future development of these reserves is to be commercially viable. For the moment, the crude oil will be transported using tankers with heating facilities incorporated because it is very waxy in nature, pending the possible construction of a pipeline to Mombasa port, an extremely expensive, hopefully short-term, way of operating.

Uganda first made significant oil discoveries in 2005 but has yet to commence production, for a variety of reasons, including a major tax dispute and arguments over the construction of a domestic refining facility. Perhaps the most optimistic projection is that production will commence in 2020 (the government continues to believe 2018 is feasible) but discussions about the construction of and funding for a pipeline to the coast are ongoing (through Tanzania is the current favoured option, to the port of Tanga) and the commercial viability of this depends to a large extent on global oil prices. In Angola, most of the oil export revenues currently go towards funding (Chinese) debt, mainly for the construction of oil and gas infrastructure and Uganda could easily find itself in a similar situation in future.

Whilst these considerations are primarily of national significance, the global supply and demand situation which influences oil prices has a number of factors to consider. Having dipped below US$30 a barrel a few years ago, the OPEC countries, along with Russia and other oil exporters, in November agreed to cut their total production quite significantly, with Saudi Arabia playing a leading role, in a coordinated effort to raise global prices. Few thought this agreement to erode the oversupply of crude would hold, as many of the countries that were party to it have a history of secretly cheating on their new production and export quotas. However, to much surprise, it did, and oil prices have traded higher in the US$45 - $55 range for the following six months, the period of the agreement. This deal was the first such action taken by the oil producers' cartel for over eight years, in an effort to combat shale oil production, largely in the US, through fracking.

Perhaps even more surprising than this initial six-month deal was the recent announcement following an OPEC meeting in May that this would be extended "into next year", for nine months to March, in a bid to tackle high global inventories and the continued oversupply of oil. However, it was a classic case of "buy on the rumour, sell on the news" as prices were buoyed leading up to the decision and then retreated rapidly from five-week highs. The eventual announcement was in line with expectations but many traders had been hoping for more – either a longer extension period or deeper cuts to output.

The Nigerian Oil Minister said that "if we keep to the agreement (not a given) we hope to see a rebalancing of global supply and demand by the first quarter of 2018 and a floor price of US$50 established. However, an increase to US$60 seems optimistic". As usual, there has been a large dose of cynicism about how long the agreement will hold and most observers believe the agreed production cuts will almost certainly have to be further extended well into 2018 and possibly beyond. However, the proof of the pudding will be determined by the market, thereby setting the global price.

SHALE OIL

On the supply side, the ability of this new cartel to overpower a resurgent US shale industry is a significant factor as American production responds quickly to higher prices and volumes can be ramped up or down because of the advanced fracking technology. In March this year, prices dropped because US shale production had rebounded, offsetting the new cartel's supply curbs, and the number of rigs drilling for oil in the US rose for a 14th consecutive week. Production costs reductions through improved technology have meant that many shale producers can be competitive at US$50 per barrel and concerns are mounting that an increase in US shale production will undermine the push by OPEC and other producers to reduce stockpiles and bring to a close the worst oil price crash in a generation.

Revenue Management Issues Crucial to Ghana's Oil and Gas Sector

Revenues from petroleum resource are finite and volatile in nature hence, petroleum revenues should be expended to achieve optimal outcomes. Governments decide on the quantum of revenues to invest for future generations and the quantum to be spent on its present citizens.

A number of civil wars in resource-rich African countries such as Republic of Congo (Brazzaville), Chad, the Democratic Republic of Congo (DRC) and the insurgency in Nigeria's oil-rich Niger delta region have provided some water tight evidence on the need to find answers to questions such as how much money has been accrued from oil production, what has been done with government revenues from the sector, whether investments made with the oil revenues have yielded any value for citizens and how to avoid the so called 'Oil Curse'

Governments, citizen's and civil society actors in recent times, have been keen on the use of the percentage of petroleum revenues which feeds into the national budget. For instance, the Government of Ghana in the 2017 budget statement selected agriculture, physical infrastructure and service delivery in education, health as well as physical infrastructure, road, rail and critical development as its key priority areas to benefits from petroleum revenues for the 2017-2019 financial year.

Based on the background above, Penplusbytes www.reportingoilandgas.org put in a robust data collection mechanism by monitoring 50 media organizations comprised of 31 print,9 online,5 radio and 5 TV stations in Ghana to monitor issues dominating upstream oil and gas issues in Ghana for the 4 quarter of 2017. Revenue management and local content emerged as topical issues in Ghana's media landscape with revenue management issues dominating coverage of Ghana's oil and gas sector.

From Penplusbytes media monitoring report, Ghana recorded incidents of untimely disbursements of oil funds to projects. In addition to this, some projects that were funded by revenues from the oil and gas sector were poorly executed. Some did not actually exist and those that existed were abandoned. Investigations carried out by Business Finder into the use of some GH¢83million from Ghana's petroleum revenues by the Scholarship Secretariat in 2016 revealed that the oil funds were misused. Questions such as how to ensure value for money for oil-funded projects dominated. On the local content front, citizens became particular on the quantum of locally produced materials, personnel, financing, goods and services rendered in the petroleum industry value chain accrued to Ghanaians.

Despite the existence of Ghana's Petroleum Revenue Management Act, 2011 (Act 815) that lays down the key parameters for collection, disbursement and management of Ghana's oil and gas revenues, revenue management issues dominated the sector over the period. Key policy recommendations proffered to duty bearers as a result of the research include:

- Ensuring value for money of oil funded projects by ensuring timely funds disbursements, corruption free contract award processes and quality supervision by oversight institutions.
- Enhance skills, capacity of individuals and SMEs to ensure significant local participation in the oil and gas sector.
- Increase nation's take of oil wealth through better future negotiations and where possible, renegotiate existing contracts that do not benefit the country.
- Promote backwards and forward linkages of oil and gas production with other sectors of the Ghanaian economy to enhance high developmental impact of this resource.

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Ghana to Launch **Local Content Fund**

Ghana's long-awaited Local Content Fund is expected to be launched this year to help indigenous oil and gas contractors fund contracts in the oil and gas sector. Funding has been identified as a big problem for operators. In Lagos, Petroleum Commission's Director Kodjo Kyei spoke to Offshore Africa's Kate Da Costa.

In your opinion what strategy can be deployed in building capacity in the oil and gas sector in West Africa?

Nigeria, Ghana, Uganda, Angola and other countries are producing oil. Some started years ahead of us. Nigeria is quite advanced in the production of crude oil. We can leverage on these factors and take advantage. In the area of capacity building, there are rigs that are available in Nigeria; there are mobile equipment that are available in Nigeria.

If Ghanaian contractors are awarded contracts, there is no need to invest huge capital in acquiring these rigs or buying this equipment from Europe. The drilling equipment are available in Nigeria we can share resources and reduce cost. If there is installed capacity that is available in Nigeria, Ghana can share and vice-versa.

There are training facilities we can share. We have this training facility built by one of the companies, Nigerians can train there. There is no need to spend thousands of dollars sending Nigerians abroad when there are training facilities available in Ghana.

Ghana enacted the Local Content Act in 2013, how is this legislation impacting the oil and gas sector?

We discovered oil in commercial quantity in 2007 and then production started in 2010. We encourage the participation of Ghanaians across the entire value chain. If there are any services Ghanaians are able to provide 100 percent they are awarded the contract. We have a list of 24, 25 companies which are Ghanaian companies, more are being added. To a large extent there is a gradual decrease in the importation of goods and services. Even in the area of labour, employment, a sizeable number of Ghanaians are employed in this sector.

How has the management of the oil company helped to strengthen the Ghanaian economy and the currency, the cedi?

Our production figure has increased. We are doing about 200,000 bpd. Eventually the income goes a long way. Government also receives taxes and other payments from oil producing companies. Government is also intensifying revenue mobilization from other sector to stabilize the cedi.

Local content law was introduced to protect local Ghanaian companies from their foreign counterparts with their huge capital. How has it helped to keep Ghanaian companies in business?

Our legislation provides that if a non-indigenous company expresses interest in investing in the oil sector. The law says it must form a joint venture with a Ghanaian company. Aside that it has to give the Ghanaian company 10 percent of the value of the contract.

There has been serious concern in several quarters about the cost of the ENI gas project. The contract amount is very exorbitant. I want to find out whether there are plans to review the contract?

Well the oil contract has been signed already. But I am sure the ministry is looking at it in conjunction with the Petroleum Commission. I am sure some discussions to that effect are ongoing. But I don't know whether it will be reviewed otherwise.

In your presentation you said Ghana has a Local Content Fund. The fund actually is one percent of contracts awarded in the upstream sector. How many companies so far have accessed this fund?

It is in the setting up stage. No company has accessed it yet. We are now putting in place the guidelines and instructions and we will launch.

Perhaps we should be looking towards the end of the year for the launch?

Maybe the second quarter of the year and the fund will be duly launched.

How much are we talking about as the start-up for the companies?

It depends on the inflows that will come from the projects. And the contract values that operators will come out with that will determine how much the fund that will be set aside.

Ghana has done quite well as to attract considerable investments into its relatively young industry. What were some of the investors' friendly qualities that made it possible?

One of it was the regulatory regime we put in place as soon as oil was discovered. We put in some regulatory regime, laws to be able to manage the resource very well. As soon as we started, the Petroleum Commission, the Local Content Act, Exploration and Production Act and other regulatory frameworks were duly put in place. I am sure once the investors know that the laws work, it gives them the confidence to invest in the industry.

ONS 2018 | EXHIBITION

27-30 AUGUST | CONFERENCE

STAVANGER-NORWAY | FESTIVAL

The biennial ONS 2018 is where energy professionals meet to exchange ideas opinions to advance scientific and technical knowledge for offshore resources and environmental matters.

Jubert Communications Limited (publishers of Offshore Africa oil and gas magazine), in partnership with the Norwegian Embassy in Accra, is organizing a trade mission from Ghana to the 2018 edition of ONS in Stavanger, Norway.

Jubert Communications and Norwegian Energy Partners (NORWEP), the umbrella body for oil, gas and energy companies in Norway, will host an International Market Day for Ghana.

This is a great opportunity for investments and partnerships. We have also scheduled a session with Aker Energy, the new operator at Deepwater Tano/Cape Three Points block, offshore Ghana, previously held by Hess. There will be other meetings with groups, businesses and investors for the delegation.

Let us focus on the new opportunities that will arise at ONS 2018. By joining the delegation you will be able to:

Connect with a global network of nearly 100,000 stakeholders within the oil and gas industry.

Meet with a wide range of Norwegian oil and gas supply chain companies, operations and institutions in the sector.

Exposure at ONS will open doors for you in the highly competitive international oil and gas industry. Participating at ONS gives you four days of exposure to your target groups, which can lead to new clients and contracts.

Register now by sending an email to Ghana2ONS@gmail.com, offshoreafricamagazine@gmail.com or call + 233 54 739 5411/ + 233 26 239 4291.

New Age secures rig for offshore Cameroon wells

New Age has contracted Vantage Drilling's jackup Topaz Driller for a 150-day program on the Etinde production-sharing contract offshore Cameroon.

According to partner Bowleven, planning is under way for the appraisal wells with the IM-6 well set to spud during 2Q.

The rig is currently in Southeast Asia and will transit to Singapore before mobilizing to Cameroon.

Mauritania, Senegal to split resources from offshore Tortue gas field

The governments of Mauritania and Senegal have signed an inter-governmental cooperation agreement (ICA) allowing development of the cross-border deepwater Tortue natural gas field to move forward.

With this agreement in place, Kosmos Energy and its partners expect to take a final investment decision for the Greater Tortue project around the end of 2018, leading to first gas in 2021.

Chairman and CEO Andrew G. Inglis said: "Kosmos congratulates Mauritania, Senegal, and their respective ministries and national oil companies for working together so effectively to reach an agreement that enables their shared gas resources to be developed quickly and efficiently for the benefit of both countries.

"The innovative near-shore LNG concept being used for Tortue positions the development as one of the lowest cost greenfield LNG projects in the world. We look forward to working with BP and our national oil company partners to continue the front-end engineering design process."

Kosmos said the ICA is informed by industry best practice for the development of cross-border resources, based on the landmark Frigg Agreement of 1976 between the UK and Norway. The accord provides for development of the Tortue field through cross-border unitization, with a 50%-50% initial split of resources and revenues, and a mechanism for future equity redeterminations based on actual production and other technical data.

Tullow prepares to re-start drilling offshore Ghana

Tullow Oil expects the drillship Maersk Venturer to start development drilling later this month on the deepwater TEN and Jubilee fields offshore Ghana.

The ultra-deepwater drillship is contracted for up to four years for this program, with provisions for an early termination.

First up will be an Ntomme production well on the TEN fields followed by a production well in the northeastern area of the Jubilee field.

Tullow is finalizing the sequence of further wells to optimize output from both developments, and the partners may contract a second rig to speed up drilling in both cases.

To the west, the company has agreed to terms for two new exploration licenses offshore Côte d'Ivoire, CI-524 and CI-520, with the Ivorian cabinet and formal signing should follow during the current quarter.

CI-524 is alongside the maritime border with Ghana, next to the TEN fields. The initial work program includes re-processing of 3D seismic data ahead of a decision on whether to drill a well.

Borr starts development drilling at Tortue oil field offshore Gabon

Borr Drilling's jackup Borr Norve has spudded the DTM-2H production well on the Tortue oil field offshore southern Gabon, according to Panoro Energy.

Tortue, part of the Dussafu Marin production-sharing contract (PSC), is 50 km (31 mi) offshore in a water depth of around 116 m (380 ft). It contains oil in two main sandstone reservoirs – the Gamba and the Dentale D6.

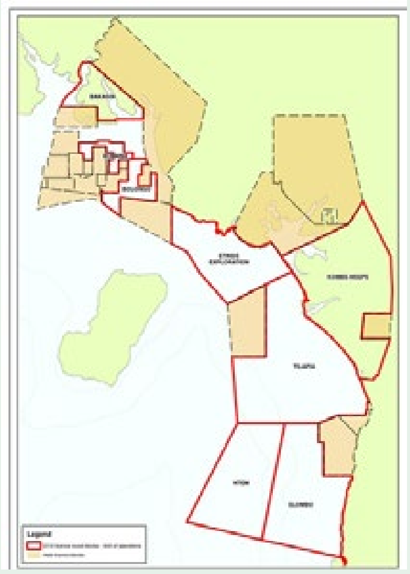
BW Energy Dussfau operates the PSC.

DTM-2H is being drilled as a horizontal well targeting the Dentale D6 reservoir at 3,140 m (10,302 ft) TVD subsea.

It will then be completed as a gas-lifted, subsea oil production well with a 500-m (1,640-ft) horizontal drain. The program should be completed within 70 days, after which the rig will drill the DTM-3 pilot hole to appraise the northwest of the Tortue field in both the Gamba and Dentale reservoirs.

Thereafter, it will drill the DTM 3-H production well targeting the Gamba reservoir at Tortue.

CGG supporting offshore Cameroon licensing road shows



CGG will help Cameroon's state oil company Société Nationale des Hydrocarbures (SNH) promote the country's 2018 licensing round.

The company will detail enhanced multi-client E&P data packages and interpretative products for eight blocks on offer, in various offshore and onshore sedimentary basins, at road shows to be staged in London and Houston – respectively from Feb. 28 to March 2, and from March 7 to 9.

Cameroon has oil and gas production from the Rio Del Rey (RDR) and Douala/Kribi-Campo (DKC) basins.

However, there are other significant opportunities for commercial hydrocarbon accumulations in both basins, CGG claims, with large tracts of open acreage available, particularly in the DKC basin.

Damen 3307 Patrol Vessel to Improve Security in Nigerian Waters

Homeland Integrated Offshore Services Ltd (Homeland) of Lagos, Nigeria, has taken delivery of another Damen 3307 Patrol Vessel for operations in the offshore oil fields in the Gulf of Guinea.

This takes the total delivered vessels since the first arrived in early 2014 to four. Guardian 4 has joined its three sister ships in providing security services to the oil majors active in Nigeria's territorial waters, together with additional support services including crew transfers and equipment deliveries.

Homeland is one of the few Government-approved, private maritime security companies operating in Nigeria with a valid MOU with the Nigerian Navy, and the arrival of the fourth Guardian adds significantly to its ability to meet its goal of providing turnkey security services that include deterrence of and intervention in piracy attacks, so as to make the offshore environment safer for the benefit of all legitimate stakeholders.

The Damen 3307 Patrol Vessel is a variant on Damen's best-selling Fast Crew Supplier 3307. It applies all the benefits of the basic FCS 3307 design; a top speed of 30 knots, rapid acceleration and excellent seakeeping, and adds a range of special refinements including an armoured wheelhouse and internal safe haven and is intended to carry up to 16 military personnel and their equipment.

Additional equipment specified by Homeland includes a Fast Rescue Craft, FuelTrax electronic fuel monitoring system and a self-cleaning fuel separator. 15 seats for crew transfers have also been fitted.

Homeland was founded in 2006 to support international oil companies working in Nigeria's offshore oil and gas fields by providing a wide range of services both at sea and on shore. 11 years later, it now operates a sizeable fleet that includes fast supply intervention vessels, platform support vessels, anchor handling tug supply ships, security and patrol vessels, and tugs.

Led by managing director Louis Ekere, the company works with many of the international oil companies (IOCs) operating actively in the region.

Spectrum starts 3D seismic survey offshore northern Gabon

Spectrum, in collaboration with the Direction Generale des Hydrocarbures (DGH), has begun the next phase of its shallow-water 3D multi-client seismic acquisition campaign offshore Gabon.

The campaign is focused on acquiring seismic programs in under-explored shallow-water open blocks. The DGH intends to make these blocks available through future shallow-water license rounds.

Up to 5,500 sq km (2,124 sq mi) of long offset broadband seismic data will be acquired alongside gravity and magnetic recordings. This follows the 11,400-sq km (4,401-sq mi) Gabon South 3D survey completed last year.

The new 3D data will be processed with PSTM, PSDM and Broadband products with first deliveries in early 3Q 2018 ahead of anticipated licensing rounds.

Offshore Sierra Leone blocks get resource boost

A new report on African Petroleum's (AP) license blocks SL-03 and SL-4A-10 offshore Sierra Leone has upgraded the company's net prospective oil resources to 2,530 MMbbl.

The new assessment, delivered by ERC Equipoise (ERCE) represents a 76.6% increase compared with ERCE's previous estimate in March 2015.

It includes findings on six undrilled prospects, two being the recently identified Leo and Vega structures.

Earlier this month AP secured agreement on entry into the second extension periods for the two licenses.

Following further assessment with ERCE, the company expects to provide the Sierra Leone Petroleum Directorate with confirmation of its drilling program on the concessions, ahead of the notification deadline of Oct. 31, 2018.

BP, Kosmos get rights to two oil blocks in Sao Tome and Principe

A consortium of BP and Kosmos Energy has won exploration rights to two offshore oil blocks in Sao Tome and Principe's exclusive economic zone, the country›s national oil agency says.

KOS acquired licenses to four other blocks in 2015-16, and the oil agency says it expects the company to begin drilling in 2019 based on seismic results.

The island nation in Africa's Gulf of Guinea has lacked significant discoveries so far but the industry sees its waters as likely to yield oil eventually since the area is surrounded by oil-rich neighbors Nigeria, Cameroon, Equatorial Guinea and Angola.

Niger Delta Avengers threaten deadly attacks

Nigerian militant group Niger Delta Avengers said on Wednesday it planned to launch attacks on the country's oil sector in the next few days. If it does, the attacks will significantly cut Nigeria's crude output which has improved since last year when a truce was reached between the Nigerian government and the militant groups.

It will also translate to less revenue for Nigeria which has been enjoying increased revenue with oil price hitting $70 in recent days, the best spike in price in years.

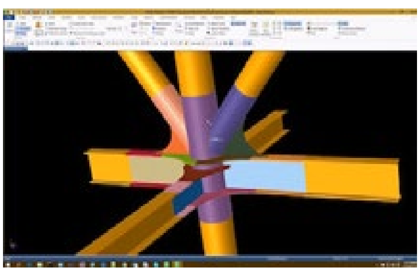
OFFSHORE ANALYSIS AND DESIGN SOFTWARE NOW OFFERS A DECOMMISSIONING COMPONENT

Source: Bentley Systems

Bentley's SACS now includes an integrated analysis and design solution for the complete lifecycle of offshore structures including construction, transportation, in-place, and decommissioning. This new capability enables engineers to reduce heavy offshore structures into manageable pieces when removing them from complex working environments.

Phil Christensen, SVP, analytical modeling, at Bentley Systems, said, "When the price of oil dropped by more than 50 percent, engineering companies in the oil and gas industry had to rapidly adapt to sustain their businesses. This disruption has created a very challenging market in which technology plays a key role in adjusting to the changed circumstances."

This latest advancement in SACS reinforces Bentley's commitment to adapt its offerings to meet the changing requirements of the offshore energy industry. According to a recent report by IHS Markit, there has been a significant rise in the number of planned decommissioning projects, which is attributed to global economic conditions and assets in mature fields reaching their end of life. As decommissioning carries similar risks and challenges to marine construction, special consideration must be applied to the safety, environmental, economic, and social aspects of any project.



» **SACS Precede drawing tools simplify meshed joint generation.**

The SACS decommissioning capabilities automate the process and allow engineers to determine optimal cutting plans to meet decommissioning project requirements, such as structure weight for lift and transport. Users fully control the structural weight through change in elevation and can apply automatic cutting of the structure at user-defined elevations. The sum of forces for any elevation can be reviewed graphically or in tabular reports.

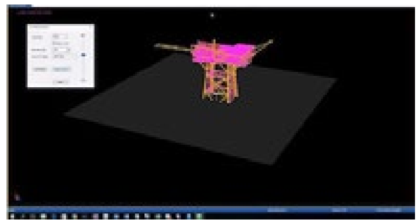
The new SACS release also includes improved intraoperability with AutoPIPE, an enhanced GUI for joint meshing, and other key advancements including:

- Rectangular hollow section (RHS) joint design
- Full-iterative solution for P-Delta analysis
- Wind loading based on API 4F functionality
- SACS-FAST non-integrated interface for wind turbine analysis
- Enhanced collapse analysis

With integrated workflows spanning AutoPIPE and SACS, piping design for offshore structures can be completed in hours instead of weeks. Workflows to add pipe loads to offshore structures improve efficiency and provide accurate analysis results. Importing piping geometry from AutoPIPE into SACS enables the design of secondary steel and piping connection supports on the primary offshore structure.

Users can perform combined stress, and pipe and stress analysis after they have imported piping connections and the structure from SACS into AutoPIPE. Moreover, importing support reaction results from AutoPIPE to SACS for structural analysis can save hundreds of hours of manual data entry. Lastly, completing the design and analysis with realistic models results in potential costs savings and improved risk mitigation.

Engineers designing FPSO topsides have indicated they can spend 40 percent of their time developing detailed finite element models of the complex joints in these structures. SACS Precede drawing options enable easy creation of plate surfaces from any orientation, improving efficiency for meshed joint generation. Additionally, the SACS methodology eliminates the requirement to model joints externally to determine SCFs or perform fatigue analysis or detailed strength analysis. A SACS finite element mesh, a model that captures complex connection behaviors, is fully integrated with SACS beam elements to enable simple and powerful workflows. Engineers can easily create meshes within seconds, for any complex joint, all within a single interface, and save hundreds of resource hours in manual calculations. The simplified process enables completion without requiring specialist finite element expertise.



» **Determine optimal cutting plans to meet project requirements with automated processes in SACS decommissioning tool.**

About SACS

SACS is an integrated finite element structural analysis package of applications for the design of offshore structures. The automated workflows and graphical interactive redesign capabilities improve project efficiency. SACS includes the latest offshore structural design standards for offshore structure compliance. The unified analysis environment enables the efficient exploration of alternatives and optimization.

By using Bentley's scenario services cloud computing capability, users can drastically decrease the run time for analysis types requiring thousands of time history analysis for fatigue and strength design for offshore wind turbine platforms. SACS has a comprehensive interface to Bentley's ProjectWise application allowing users to collaborate on projects from multiple locations.

SPECIAL ISSUE

Offshore Africa Magazine's Offshore Technology Conference 2018 Special Edition

For progressive companies in NIGERIA and GHANA wishing to step into the international limelight, this is for you.

Offshore Africa oil and gas magazine will publish a special, glossy 80-page issue focusing on West Africa's oil and gas sector (with special emphasis on Nigeria and Ghana) for the 2018 Offshore Technology Conference holding in Houston, United States (April 30-May 03, 2018), at the NRG Park. West Africa's petroleum industry has captured global interest. We will spotlight its attractiveness and celebrate opportunities and potentials.

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Advertising sales closing date deadline: 5 April 2018

Publication date: 20 April 2018

The publication will hit newsstands in the United States at the end of April 2018 and will be widely distributed at OTC 2018, targeting international companies looking to enter the Ghanaian and Nigerian markets in the coming months.

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COTE D'IVOIRE – GHANA Maritime Boundary Dispute - **THE GENESIS**

contd by Lawrence Apaalse

The Experts and Ministerial Meeting of the Economic Community of West African States' (ECOWAS) in Abuja and the subsequent Elking Meeting in Accra as mentioned in the first episode, deserve special mention in the evolution of the Ghana-Cote d'Ivoire maritime boundary dispute.

It was the 9th of February 2009 when nine ECOWAS member States of Benin, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia and Nigeria met in Abuja to "decide on practical measures to be taken to respect the deadline of 13th May 2009 fixed by the CLCS for the submission of Preliminary Information/submission to the UN Secretary-General".

Ghana was represented at the Ministerial level by Mr. Solomon Korbieh of the Ministry of Foreign Affairs and Regional Integration while I attended as expert. This was my first official opportunity to represent and take decisions that will have serious consequences on my country. The meeting was so hectic that it was only when the lights went off and brought proceedings to an abrupt end and delegates began using their mobile phones' torch lights to find their ways out of the conference hall that I realised the time was 2:00 am.

At the height of deliberations, grumbling and whistling could be heard amidst shouts of 'Monsieur Status Quo' and 'Monsieur Equidistance' from the French-Speaking delegates in apparent reference to Mr. Korbieh for his insistence on the status quo with respect to the observed boundary and my stance on the unequivocal role of Equidistance in boundary delimitation. What is gratifying is that what the Ghana technical team posited as early as that remained till judgement day, the 23rd of November 2017.

Tensed as the Experts' meeting may have been, it afforded Ghana and Nigeria the opportunity to call for a follow-up meeting. The call was based on a hint from Ambassador Longva of blessed memory, that the Kingdom of Norway was willing to sponsor such a meeting.

Mr. Korbieh then hatched a plan to get me to table a motion adjourning the meeting to be reconvened in the shortest possible time. However, the venue, sponsorship and all logistics for such a high powered meeting needed to be confirmed immediately to enable me table such a motion and that is where the dynamism and commitment of Prof. Dominic Fobih cannot be forgotten. With a few calls Prof Fobih agreed that Ghana could host the program notwithstanding the short notice; without hesitation, Mr Adu Gyamfi, the then NPP Financial Secretary, quickly made reservation at Elking Hotel and within minutes I had reached rappour with Ambassador Longva to secure funding from the Norwegian government. With these now within my reach, I tabled the motion which was accepted and captured as part of recommendations for consideration at the Ministerial Meeting. The Ministerial Meeting adopted a number of recommendations of the Experts Meeting including thus:

"The Government of Ghana in consultation with the ECOWAS Commission, with financing from the Norwegian Government shall organize a five member States workshop comprising Benin, Cote d'Ivoire, Ghana, Nigeria and Togo, as well as Sao Tome & Principe in Accra (Ghana) from 25-26 February 2009 to discuss technical issues regarding the preliminary Information/submissions".

This workshop ended with the declaration of "Absence of Dispute" amongst the ECOWAS coastal States on 26th February 2009 and a resolution as follows:

"Issues of the limit of adjacent/opposite boundaries shall continue to be discussed in a spirit of cooperation to arrive at a definite delimitation even after the presentation of the preliminary information /submission, Member States would therefore write "no objection note" to the submission of their neighbouring States".

The historic picture below says it all.

The declaration of "Absence of Dispute" and "no objection" were in fulfilment of Art 2(b) of Annex 1 to the Rules of Procedure (RoP) of the Commission on the Limits of the Continental Shelf, which enjoins coastal States making submissions to assure the Commission that the submission "will not prejudice matters relating to the delimitation of boundaries between States" and marked a significant milestone in the preparation of the outer continental shelf submissions of coastal States Parties to ECOWAS. Suffice it to say that this rendition was and is still being hailed by the UN as the best approach to satisfying the RoP because the consensus was achieved at the regional level and involved a Regional Grouping, ECOWAS.

It must be emphasised that all these were moves to set aside the boundaries delimitations in order not to impede the outer continental shelf submission processes rather than negotiations towards delimitation as an objective.

.........to be ctd

Libya, Nigeria at 'High Risk' of Oil Sector Disruption

by Andreas Exarheas

» Libya and Nigeria are at "high risk" of oil sector disruption, especially towards the end of 2018, according to oil and gas analysts at BMI Research.

Libya and Nigeria are at 'high risk' of oil sector disruption, especially towards the end of 2018, according to oil and gas analysts at BMI Research.

"Libya is exploring the possibility of elections at some point over 2018. While our core view here is that elections will be pushed into 2019, militant factions across the country will need to align support with their favoured presidential candidate and will likely turn to disrupting oil infrastructure to gain leverage," the analysts said in a brief research note.

"Similarly, Nigerian elections are scheduled for February 2019. While this remains a year away and potential candidates are unclear, if Buhari chooses to run again or suggests an alternative candidate from the north of the country, it will not sit well with the militant groups of the south," the analysts added.

BMI highlighted that the Niger Delta Avengers group has already singled out the Egina FPSO as a potential target for attacks, among other infrastructure across the south. In 2016, Niger Delta Avenger attacks on Nigeria's energy infrastructure threatened West African production and power supply.

Mozambique, Equatorial Guinea to Cooperate on Mining and Natural Gas

Mozambique and Equatorial Guinea have signed a memorandum of understanding to enhance bilateral relations in the energy and mining sectors. The MoU was signed in Maputo by Equatorial Guinea's Minister of Mines and Hydrocarbons H.E. Gabriel Mbaga Obiang Lima and Mozambique's Minister of Mineral Resources and Energy H.E. Ernesto Max Elias Tonela.

This agreement is the latest in a series of bilateral energy cooperation MoUs signed by Equatorial Guinea with African oil and gas nations. It primarily seeks to promote the exchange of information, knowledge and experience with respect to petroleum and mining policy. In particular, Equatorial Guinea will provide technical assistance and advice on natural gas monetization and infrastructure building. Mozambique, in return, will assist Equatorial Guinea in the development of its nascent mining sector.

What is in store for AFRICA'S OIL INDUSTRY in 2018?

By Gilbert Da Costa

OPTIMISM

Guarded optimism are the key words for the industry in 2018 as Offshore Africa takes a look at trends and challenges that could define Africa's upstream petroleum sector this year. Operators remain cautious on oil prices but very judicious with capital.

» Eni officials on an oil and gas platform

Many in the oil industry are hoping 2018 will mean a return to increased project activity and healthy opportunities for investment. This would be a big shift from one of the toughest downturns the industry has seen in years.

The latest Barclays E&P Spending Survey indicates an 8 percent in global spending in 2018, an improvement from a 4 percent growth seen in 2017, which was preceded by two years of double digit declines.

The industry is in a slow recovery mode. More capital has shifted from development projects for upstream. Alan Free, a senior vice president at Argo Consultancy reckons the drilling business will be tight. "Overall, I expect 2018 to be a good year but I don't think we will see a lot of growth from new wells being drilled."

According to the Barclays Survey, international spending will rise 4 percent in 2018 compared with a 3 percent decline in 2017, from International Oil Companies (IOCs) coming back to the market. Spending by national oil companies(NOCs) to be up moderately in 2018, while IOCs will also be up mid-single digits following 15- 20 percent decline each year for the past three years (2015- 17).

Following international declines of 12 percent, 35 percent and 19 percent in 2015, 2016 and 2017 respectively, Barclays now expects another14 percent decline in offshore spending this year, which should mark the final year of decline, leading to growth in 2019.

Wood Mackenzie also does not foresee a surge in exploration activities this year, Dr. Andrew Latham, vice president, Research, Global Exploration, at Wood Mackenzie, said; "we expect most companies will maintain a highly cautious approach to exploration yet. Competition for the best opportunities will be fierce. Industry investment and well count will remain stubbornly low in 2018."

Most favoured will probably be the deepwater, high resource plays, offering rapid commercialization and break-even prices less than $50/bbl. These are concentrated around

the Atlantic margins, and comprise a mix of proven basins such as off Senegal/Mauritania and unproved frontiers, including South Africa and Namibia.

Exploration will seek to prioritize high impact plays in 2018. And as Dr. Latham noted, "global investments in conventional exploration and appraisal will be around $37 billion in 2018- 7 percent less than the 2017 spend of $40 billion, and over 60 percent below its 2014 peak."

Only the majors, a few NOCs and larger independents will drive high impact drilling. Africa has provided some good successes and enormous prospects for international explorers and producers. "Africa is still one of the most exciting places for exploring. The USGS estimates that 170 billion barrels of oil is yet to be discovered on the continent. Over the last couple of years, more than 13 billion barrels have been discovered," revealed ExxonMobil's vice president

ExxonMobil's Pushing for "Better" Incentives Framework

ExxonMobil, like other majors, is seeking to score an advantage with oil-rich African states by pushing for more favourable fiscal terms in new exploration and production agreements. They call it responding to a more competitive environment.

According to ExxonMobil's vice president for Africa Exploration and New Opportunities Dave Wilkin deepwater exploration is a high-risk business and therefore an investment framework that reflects Africa's risk profile is essential. "So while we agree that Africa has got the potential, it needs solid legal and fiscal investment framework that has to occur to kick-start exploration and subsequent development," he said. "Projects in Ghana, West Africa in particular, need to be built on solid investment frameworks that will attract leading operators with cutting-edge technologies."

SENEGAL/ MAURITANIA

The coast of Senegal/Mauritania was an exploration hot spot in 2017. And now two major deepwater projects in water depths of 1000-3000 are emerging.

First gas is targeted on the Greater Torture Area (GTA)

We expect to see LNG development in 2021, with first oil on the Shell North Edge Field following in 2021-23. Both projects have been driven by independents; Cairn Energy and Kosmos Energy.

The Tortue-1/Guembeul-1 gas find is thought to be the largest ever offshore West Africa with 15 trillion cubic feet (TCF) of recoverable dry gas discoveries so far, and up to about 25 TCF within the play, extending discoveries of Marsouin-11 and Taranga o the North (Mauritania) and South (Senegal).

SNE OPTIONS

Engagement of subsea contractors started prior to tendering, which was expected to start by the end of 2017. Final Investment Decision (FID) for SNE is being targeted by 2018, with first oil to follow in 2021-23.

BP is the operator of GTA and it is targeting Final Investment Decision on the GTA- also known as Greater Tortue Complex- development in 2018.

OFFSHORE GHANA

Resolving the maritime boundary dispute with Ivory Coast(in 2017) meant companies such as Erin Energy, AGM Petroleum, Amna, and a few others can commence work on their offshore blocks (previously contested by Ivory Coast) this year.

The Deepwater Cape Three Point (DWCT) block, operated by U.S. firm Hess as well as the ultra deepwater South Deepwater Tano (SDWT) block held by AGM Petroleum are considered some of the most exciting prospects offshore Ghana at the moment.

Initial assessments of the DWCT acreage suggest some 370 million barrels of recoverable oil and an estimated 650 billion standard cubic feet of gas. Development drilling is expected to commence in 2018.

ExxonMobil ia also expected to commence seismic work on its newly acquired deepwater asset in Ghana by the end of 2018.

NIGERIA

With about 37 billion barrels of oil 192 trillion standard cubic feet of gas reserves, Nigeria remains a big player in the market. But key elections in 2019 means investors will be extra cautious in taking up major positions in Africa's largest oil producer. Fewer new wells may be drilled. Or where we see drilling, it will be drill, cap and sit tight situations.

The government's immediate focus is on winning general elections in 2019 and the price of Bonny Light (Nigeria's premium crude oil grade) will be closely monitored in Abuja. And with oil prices currently hovering around $65 per barrel, The West African nation could see another oil boom after setting a benchmark price of $47 per barrel of oil for its 2018 national budget. The government desperately needs additional revenues to provide the roads, water, electricity and jobs it promised the Nigerian electorates.

According to Bloomberg data, Brent for March settlement reached $69.26 a barrel on the London-based ICE Futures Europe exchange. With OPEC, Russia and other non-OPEC producers agreeing (on November 30, 2017) to extend their oil production restraints through 2018, energy analysts expect a market rebalance in the second half of 2018. This, in turn, could cause oil prices to increase, they said. Most analysts believe the highest crude oil will be priced in 2018 is between $65 and $75 per barrel.

The one thing that stands out for optimism in 2018 is the rise in global economic climate. It's the reason we expect demand will rise.

Lekoil has announced that its joint venture with Green Energy International (GEIL) has signed a contract with Sinopec Changjiang Engineering Services to acquire 197 sq. km of 3D seismic data at the Otakepo marginal field in OML 11, onshore and offshore in the Niger Delta, to update the existing 2D coverage. The project will commence in Q1 2018.

ANGOLA

Like Nigeria, Angola was hit hard by the protracted fall in oil prices. Angola, Africa's second largest crude oil exporter needs crude to sell at $60 per barrel to make ends meet, according to Petroleum Minister Jose Maria Botelho de Vasconcelos. Fitch Ratings last April estimated that Angola needed oil to sell at $85 a barrel to balance its 2017 budget.

Newly elected President Joao Lourenco removed Isabel dos Santos, head of Sonangol in November, 2017, replacing her with Carlos Saturning. Sonangol, which accounts for 90 percent of the country's foreign earnings, is undergoing a major restructuring as well.

EQUATORIAL GUINEA

Equatorial is the third largest oil and gas producer in sub-Sahara Africa an is taking step to stem the decline in its oil production following a $650 million acquisition by Kosmos Energy and Trident Energy of fields currently operated by Hess Corp.

ExxonMobil is assessing potential commerciality at its Avestruz-1 well on Block EG-06,160 km offshore Malabo. The operator drilled the oil discovery last October, but has not released any data.

Ophir and partners are expected to announce the Final Investment Decision (FID) for the Fortuna FLNG development in Q1 of 2018. Ophir and its partner, state-owned GEPetrol are negotiating a $1.7 billion loan with an Asian bank for the project.

Located in offshore Block R, the Fortuna FLNG project aims to produce more than two million tpy of LNG starting in 2020. Ophir holds 80 percent operating stake in the project, while GEPetrol owns the remaining interest.

MOZAMBIQUE

In 2018, Mozambique expects to export its first LNG train of five million tonnes, with overall capacity for the industry to be ramped up subsequently to 20 million tonnes per year.

U.S.-based Anadarko expects to invest approximately $150 million in Mozambique's LNG project in 2018. The investment is a part of Anadarko's expected capital investment in the range of $4.2 to $4.6 billion for the year 2018.

In November 2017, Anadarko said it had reached a 20-year sales and purchase agreement for 2.6 million tons of LNG per year with Thailand's PTT. The first among over 8mtpa non-binding offtake deals to advance.

Anadarko and its partners have discovered more than 75 Tcf of natural gas resources. The discovered reserves are sufficient to support two initial LNG trains, each with a capacity for six million tonnes per annum.

Anadarko Petroleum Corp is also in talks with Chinese companies over liquefied natural gas supply from Mozambique.

TANZANIA

Wentworth Resources. The Oslo stock exchange listed independent says for 2018, it anticipates further growth in gas discovered from the Kinerezi-2 power facility as an additional four gas-fired turbines are expected to be commissioned during the year. New gas demand from the industrial sector in 2018 is also expected from Dangote cement factory when it begins using natural gas in its operations as well as other new industrial customers.

For 2018, based on growing demand and taking into account the annual seasonal lower demand during the Q2 raining season, full year average production is expected to be in the range of 45 to 75 MM scf/d.

Tembo-1 gas discovery; the company anticipates the drilling of the appraisal well in Q3 2018, subject to securing a partner. Amimex says it plans to drill Ntorya-3 and other exploration and development drilling in the Ntorya gas field and other assets in Tanzania.

GABON

Spectrum, in collaboration with the Directorate Generale des Hydrocarbons (DGH) has commenced the next phase of its shallow water 3D Multi-client seismic acquisition campaign offshore Gabon with a 3D survey in the north of the country. The DHG intends to make those blocks available through future shallow water license round.

Kjell Roland
NORFUND's CEO

NORFUND Opens Fourth Office in Africa

The Norwegian Government Investment Fund for Developing Countries,also known as Norfund, commenced full business operations in Ghana following the opening of its Accra office late last year.

Officials source tell Offshore Africa that the Fund is already providing credit and support to enterprises in the food and agriculture sector, with plans to look into other areas, based on requests and feasibility studies.

Norfund is considering investments in financial services, clean energy (such as solar and wind), in addition to agricultural projects. It started looking at opportunities in West Africa in the second half of 2015, leading to approval by its board in early 2017 for a Ghana presence. The Accra office is located on the sixth floor at One Airport Square, and is the fourth in Africa after Johannesburg, Maputo and Nairobi. The Fund is also contemplating setting up in Nigeria.

The opening of the Fund's regional office and the investments expected to flow into sectors such as financial services, agriculture and energy could be a boost for the Ghanaian economy.

Norfund was established in 1997 and is Norway's principal investment vehicle for developing business and creating jobs in developing countries, with more focus on sub-Saharan Africa. The Fund (with about $1.5 billion portfolio), prefers to make equity investments in companies and projects rather than providing loans.

A TOUR OF NORWAY'S OIL BANK

Norway's Core Store is a well-known facility for storing physical rock samples from the country's prolific oil-rich continental shelf. Rock samples are taken from the sub surface when drilling petroleum exploration or production wells.

Also known as the Oil Bank, the store was set up to facilitate access to data. The user can generally get data access within 30 seconds. Data is transferred to the user's computer for further interpretation. The rapid access is deemed an advantage for the petroleum industry.

On a recent visit to Norway's oil city of Stavanger, Offshore Africa's Editor-in-Chief Gilbert Da Costa was taken on a tour of the facility. He also spoke to Robert Williams, the manager in charge.

We have a little more, at the last count, about 1560 exploration wells from 1966 to the present. A company on the Norwegian shore is not allowed to operate without delivering all these courses and all the geological samples. It's not allowed to drill an exploration well without taking a full suite of geological samples. That is why every well has a full suite of data.

And can anyone come the next day and take a look?

No, after two years. Two years after the well is built, anybody can come and have a look. Just by taking the phone and making a date with the core store manager to find a vacancy, they can come and view the released wells. But if they want to take samples then they have to make an application on our online application form where they describe the project and tell which wells and how many samples they wish to have. And that is approved by a committee of geologists and in return we give the final report.

The Norwegian way of managing the shelf is making data freely available that is not interpreted. If it is interpreted data like reports and such then it falls under a different law, the intellectual copyright, which is outside the NPD and has 20 years release date. So reports older than 20 years are public and the raw data two years or more is public. Because we want them to spend their intellectual capital to find solutions not to use money and time to get a hold on data that is already there.

So it is a sort of a one-stop shopping. They come to us and they have access and the idea is in contrast to many other countries, petroleum provinces. There, companies compete on getting data. Here they compete on interpreting data. So we give them the data free but the competition between the companies is on the interpretation of the data. That is the essence of our system.

These are for exploration wells. What about production wells?

We have a little more than one quarter of the production wells because we don't have enough space. If we had all of the production wells, and we could have written all the regulations back in the 70s and we would have had all the samples, but we wouldn't have a parking lot because the building would be huge and the employees wouldn't like that, having to take the bus.

The amazing thing is you'll think that the companies wouldn't like to have this obligation to send us these

» Oil samples in NPD's core room


» Robert Williams in the Core Store

materials. But they like it. As a matter of fact they want to give us more material. They want to give us all production wells and they keep on sending more and more samples from production wells until we say stop. The reason is that they don't have to pay anything to store it here but the wells that they have to store they pay and it's a private company that almost has a monopoly on storage.

How often do people come here to study the course?

Everyday. Outside companies because they've either received permission to sample or they've made a day to view. The viewing rooms are almost always in use. However for the last five weeks there has been nobody here because the officer in charge was on holiday for four weeks. When he is gone there is no one else to fill in. It is not acceptable and we have informed management about it.

For exploration, we receive a 25% longitudinal cut of all the courses. So the operator license companies on this block they have the rest of the material. They have to store that themselves. That is what costs money. So they actually wanted us to expand our demands to have half the cut. Instead of six metres in this box we would only have three metres and twice as many boxes.

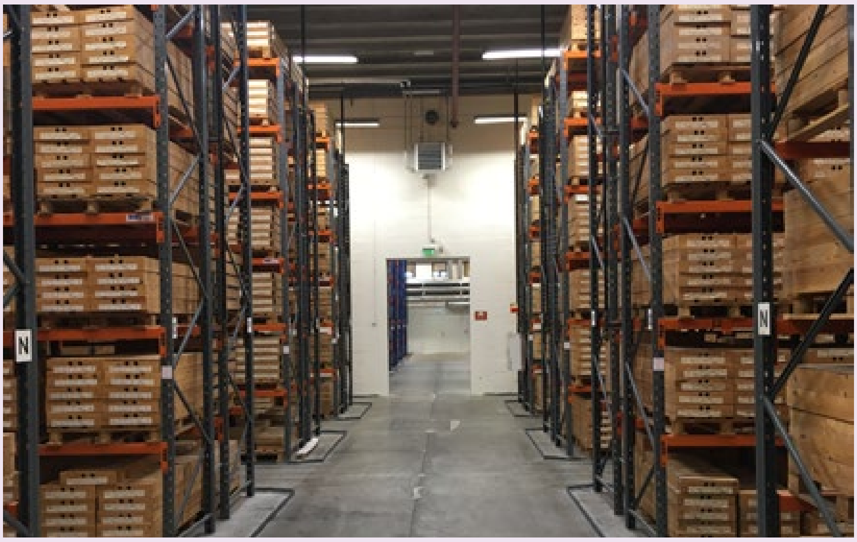
And what is in here?

This is the reservoir for Statfjord. This is a segment of one of our largest oil fields. This is Statfjord North, a small field connected to our software production facilities. So this is Statfjord Field North. The most common reservoir type is sandstone. About 65-70% of all our oil and gas is in river delta sands and very similar like you would have sand in the Nile delta, the type of environment.

Even the dimensions of the boxes are specified in the regulations. This created an industry back in the late 70s. There are actually companies that make these boxes and the reason was so that we could [store in these shelves].

Nobody thought the companies will be interested in using these boxes. As it turned out, everybody started using these boxes in their own core stores. In the end, everything was consolidated to a private company which stores them and the companies liked the system because they knew exactly where to get the boxes and they're easy to use and they are cheap because the pallets are made in prison. This is before these regulations were made in the late 1970s.

Drunk driving, for example. You are in prison for three weeks, instead of sitting in your cell you go to the workshop and do these things. We have about three million samples of what is called cuttings. Most of the wells are drilled with a rotary and it crushes the rock in the drilling process and that is most of the wells because that is the cheapest way to drill but you don't have the data. So the regulations specify that all the reservoirs are to be standard course and that is very expensive. It costs 100,000 kroners per metre up to (if there are technical problems) 300,000 kroners per metre. Some wells have several hundreds of metres of cuts and that is very expensive.



In Ghana, oil production started in 2010. I reckon in about 20 years from now we may have tangible and pragmatic evidence to tell the story of oil production. There is currently a lot of collaboration between NPD and the Ghana oil industry. So can you possibly assist Ghana to build up its fledgling oil industry into a detailed profile for posterity?

Geologically, the first well drilled in 1969 is just as important as the last well and the dry wells are even better for geological information because it is difficult to get information out of the oil zones.

And that is why the age of the wells has no meaning. And when companies are interested in it, say there's a new concession coming round and a number of blocks are available for application, the companies will study all the wells in the vicinity so far and that's what we provide as a way to spread information. The idea is that the more studies that have been done with these free material, the more knowledge is acquired and fewer mistakes are made. And you reduce costs as well. For example, you may avoid drilling some wells.

Review of Dahomey basin offshore Nigeria reveals major prospects

Lekoil has taken delivery of a technical evaluation report for the OPL325 lease in the Dahomey basin offshore Nigeria, straddling the western Niger Delta, 50 km (31 mi) south of OPL310.

The company has a 62% interest in OPL325 through Ashbert Oil and Gas.

Lumina Geophysical, which performed a geophysical evaluation of around 800 sq km (309 sq mi) of 3D seismic data supplied by Lekoil, identified 11 prospects and leads on the block.

These contain potential oil-in-place volumes of more than 5,700 MMbbl.

Lumina focused mainly on the Paleocene section of the block, creating new structural and stratigraphic maps using 3D pre-stack time migration seismic data.

Lekoil is looking to farm-down a portion of its interest in OPL325 following a detailed prospect/lead risking study.

CEO Lekan Akinyanmi said: "This independent report underlines our belief in the prospectivity of this asset that was part of our original Dahomey basin study. The deepwater turbidite fan play is particularly exciting for OPL325."

Eni picks up Tarfaya shallow-water acreage offshore Morocco

Eni SPA has expanded its existing position in Morocco by entering a petroleum agreement with Moroccan state-owned Office National des Hydrocarbures et des Mines (ONHYM) in the Tarfaya offshore shallow-water exploration permits I-XII. The 23,900-sq-km area is offshore Sidi Ifni, Tan Tan, and Tarfaya in aas much as 1,000 m of water.

Eni operates Moroccan interests in the Rabat Deep Offshore license, with 40% interest, as well as the El Jadida Offshore license. The operator maintains 75% working interest in El Jadida and the Tarfaya acquisition. Rabat Deep partners include Woodside 25% and Chariot Oil & Gas Ltd. 10%. ONHYM maintains a 25% share in all three projects.

In September, Eni signed a contract for the deepwater drillship Saipem 12000 to drill the RD-1 exploration well in Morocco's Rabat Deep offshore permit

Spectrum to acquire seismic between Mauritius and the Seychelles in the Indian Ocean

(Courtesy Spectrum Geo)

Spectrum Geo will acquire and process 20,000 km (12,427 mi) of 2D broadband seismic over the Joint Management Area (JMA) covering the Mascarene Plateau between Mauritius and the Seychelles.

The new dataset will cover exploration blocks already delineated by the Joint Commission, which administers the JMA, under its Hybrid Open Door licensing system.

Spectrum Geo's Graham Mayhew signed an agreement to conduct the program with Dr. M. R. Badal, Director General of the Mauritian Ministry of Defence and Mr. P. Michaud, Special Advisor to the Vice-President of Seychelles in attendance.

The company says it is the first accord of its kind following the ratification of landmark treaties between the two countries in 2012 concerning management of the continental shelf of the Mascarene Plateau region, which extended their joint jurisdiction by 396,000 sq km (152,896 sq mi).

Since then, they have been jointly developing a legal and institutional framework, producing various documents including a Model Petroleum Agreement, Environment Code of Practice, Offshore Petroleum Safety Code, and a Joint Fiscal and Taxation Code.

Despite the location in the middle of the Indian Ocean, around 20% of the JMA area is in water depths of less than 1,000 m (3,281 ft), Spectrum Geo points out.

This area is surrounded by oceanic crust of Cretaceous age, and yet the shallow depth demonstrates that the crust has an anomalously low density.

Spectrum has modeled gravity response over the JMA to be compatible with a fragment of the Madagascar-West Indian Jurassic and Early Cretaceous Crust.

Neil Hodgson, the company's evp, Geoscience, said: "Our basin modeling puts the potential Seychelles style pre-volcanic source rocks into the oil window; this is corroborated by the presence of high-quality oil slicks above the prospective area captured on satellite data.

"A live working hydrocarbon system lying unexplored below the basalts across this whole area is clearly demonstrated. Modern seismic acquisition and broadband processing techniques will allow us to reveal the oil potential of this fascinating basin."

ExxonMobil in talks to join Namibia offshore license

ExxonMobil has been negotiating a 40% farm-in to Petroleum Exploration License (PEL) 82 in the Walvis basin offshore Namibia.

Following the conclusion of the transaction, Galp Energia and ExxonMobil will each have a 40% interest in the license, with Galp remaining operator.

The other partners are Namibia's state oil company NAMCOR and local company Custos, each with 10%.

According to Galp, the license covers 11,444 sq km (4,418 sq mi) in water depths ranging from 300-2,000 m (984-6,562 ft).

Deepocean takes Polar Onyx for construction program offshore Ghana

GC Rieber Shipping has entered a three-year firm charter agreement with Deepocean for the SURF vessel Polar Onyx.

The program could be extended by up to two years.

Mobilization is under way, with the vessel to be deployed offshore Ghana to support Deepocean's contract with Tullow Oil.

GC Rieber Shipping has a fleet of three vessels capable of providing offshore construction, Inspection Maintenance and Repair, walk-to-work, ROV survey, ploughing, cable laying and pipe laying operations.

One of these vessels, Polar King, is on contract with Nexans until August 2019, while Polar Queen is being marketed.

Hess to cut hundreds of workers as it battles activist investor

Hess has laid off several employees and streamlined operations as it battles an activist shareholder pushing for higher margins, Reuters reports.

Most of the cuts were centered in Houston, according to the report.

A Hess spokesperson confirms the cuts, saying ~300 workers, or ~13% of the company's workforce, would be released.

Kosmos outlines offshore Senegal, Suriname well targets

Kosmos Energy will P&A its Lamantin-1 exploration well in block C-12 offshore Mauritania after encountering only water.

The well, in 2,200 m (7,218 ft) water depth, was drilled to a TD of 5,150 m (16,896 ft), and was designed to assess a previously untested Lower Campanian base of slope fan supplied from the Nouakchott River system, thought to be charged from underlying, oil-prone Cenomanian/Turonian and Albian source rocks.

Kosmos said the prospect failed probably due to a lack of trap, related to a combination of up-dip sand pinch-out and top/base seal effectiveness.

Chairman and CEO Andrew G. Inglis said the company's forward drilling program remained unchanged in view of the independent nature of the prospects.

The drillship will next drill the Requin Tigre prospect offshore Senegal, a Cenomanian/Albian base of slope fan supplied from the proven Senegal River system.

The location is roughly 150 km (93 mi) offshore in 3,100 m (10,170 ft) water depth, 60 km (37 mi) west of the Tortue gas discovery, and 80 km (49.7 mi) north of the Yakaar discovery. Drilling should take around 60 days to complete.
Thereafter, Kosmos plans two potentially high-impact wells targeting oil offshore Suriname in mid-2018.

Mike Wirth, chairman/CEO of Chevron

Australian oil and gas explorer FAR Ltd said on Tuesday that an independent study of two of its offshore blocks in West Africa's Gambia found potential for a total of 1.1 billion barrels of oil.

The company said 926 million barrels could be obtained on a net basis in the A2 and A5 blocks in the Mauritania-Senegal-Guinea-Bissau (MSGB) Basin, in which it has an 80 percent stake.

Operations are underway to prepare for drilling in late 2018, the company said in a statement.

An FAR unit signed a so-called farm-in deal with ERIN Energy Corp in March for the blocks, under which it will fund ERIN's share of exploration costs up to $8 million.

FAR on its own is expected to bear $25 million to $30 million in exploration costs. The Gambian government approved the deal in July, 2018.

In the region, FAR also shares Senegal's first oil development, the deepwater SNE project, with Britain-listed Cairn Energy and Australia's Woodside Petroleum . Production there is expected to start by 2021.

TULLOW-LED GROUP IDENTIFY DRILLING PROSPECT OFFSHORE NAMIBIA

Tullow Oil and its partners have opted to drill the Cormorant prospect in the Walvis basin offshore Namibia. Targeted spud date is September 2018.

The company recently farmed into 10% of the surrounding petroleum exploration license 37 (PEL 37) from Pancontinental Oil & Gas, agreeing to carry the latter for $5.5 million of the costs of the well. ONGC Videsh Vankorneft and Paragon Oil & Gas are the other partners.

Tullow has started the procurement process for drilling, which remains subject to government endorsement and entry into the next exploration period.

Cormorant is in a water depth of around 550 m (1,804 ft). This is one of a series of large base-of-slope turbidite fan prospects mapped from 3D seismic in the area that could hold significant combined resources, Africa Energy said.

The fans overlie a mature oil-prone source rock of Aptian age, as proven by the nearby Murombe-1 and Wingat-1 wells.

In the Outeniqua basin offshore South Africa, Africa Energy has agreed to farm into the exploration right for block 11B/12B, 175 km (109 mi) off the country's southern coast.

The block extends across 19,000 sq km (7,336 sq mi) in water depths ranging from 200-2,000 m (656-6,561 ft).

Total operates with a 50% stake, with CNR International (South Africa) holding the remaining 50%. Under the farm-in deal, Main Street 1549 Proprietary Ltd., owned by Africa Energy, would acquire 5% interest from each of the current partners.

South Africa Drives Infrastructure in Africa's Oil Industry

» Nnial Kramer of SAOGA

South Africa's relatively advanced economy has placed it in a pole position to take advantage of some of the opportunities in sub-Saharan Africa petroleum industry.

Offshore Africa's Chief Editor Gilbert Da Costa has been speaking to Nnial Kramer, Chief Executive of the South African Oil and Gas Alliance (SAOGA) about South Africa's aggressive expansion into the oil and gas sector in the rest of Africa. Details below:

Tell us briefly what you do

So I look after investment promotion in the services sector, so I focus on oil and gas infrastructure and ICT enabled industries.

Is it something you look at within the context of Africa or is it South Africa?

Generally, it's foreign direct investment into South Africa but in terms of the ocean economy we look at African projects as well.

So how is it going? Can you give me an idea as to how you're faring?

We're doing quite well within the scope of operations like you said; we've attracted quite a lot of investments. We're still embarking on the African initiative where we're looking at the port infrastructure and shipping and working vessel tenders. We hope to implement that second part of the strategy in the next few months.

I know South Africa is not a major oil and gas producing country but you have very ambitious targets in terms of Africa. Can you tell us a bit about that?

Initially our objective was to provide services and support with vessel repairs for the industry in Africa focusing on western and eastern and also capturing some of that shipping traffic. There are approximately more than 30,000 vessels across the coast each year and we'd like to bring that into South Africa, refurbish and see the value added there.

Do you think the idea South Africa has a much more sophisticated and developed economy, does it give you an advantage with how you relate to the rest of Africa?

I think it does so what we do is that we support our initiatives in Africa and support the different countries in the region so it will provide foreign direct investment a base to work into Africa. I think we're also working to develop regional supply chains and regional integration and that would be to the benefit of Africa and ourselves so the thinking in government is that we can't grow alone. We need to grow with our partners.

QATAR PETROLEUM SET TO JOIN TOTAL IN OFFSHORE SOUTH AFRICA WELL

Total has agreed to farm out a 25% interest in exploration block 11B/12B offshore South Africa to Qatar Petroleum, subject to regulatory approval.

Arnaud Breuillac, Total's president, Exploration & Production, said: "This transaction enhances the partnership on block 11B/12B in preparation for the high potential exploration well scheduled to be drilled on the block at the end of 2018."

Saad Sherida Al-Kaabi, president and CEO of Qatar Petroleum, added: "This is an important milestone in our strategy to expand our international upstream footprint. "We hope that the exploration efforts are successful, and we look forward to collaborating with Total, CNR, Main Street, and the South African authorities on this project."

The block is in the Outeniqua basin, 175 km (109 mi) off the southern coast of South Africa, and covers 19,000 sq km (7,336 sq mi) in water depths ranging from 200-1,800 m (656-5,905 ft).

Assuming the transaction is cleared, the new partnership structure will be Total (operator, 45%), Qatar Petroleum (25%), CNR international (20%), and Main Street (10%).

Total and Qatar Petroleum have a long-standing cooperation in Qatar, where Total has stakes in the upstream part of the Qatargas 1 LNG project, Dolphin Energy and Qatargas 2 train 5.

In 2016, Total also entered the offshore Al-Shaheen concession with a 30% interest. Offshore West Africa, Qatar Petroleum has a 15% stake in Total E&P Congo.

SCHLUMBERGER AND DMWA RESOURCES TO COLLABORATE ON AFRICA OIL AND GAS PROJECTS

DMWA Resources, an emerging African energy player, has entered into a memorandum of understanding with the world's largest oilfield services company, Schlumberger, to collaborate on African oil and gas projects.

The three-year agreement, signed on 20 December 2017, reflects the intention of the parties to work together on energy projects in Central and West Africa and the emerging East Africa region. Effective immediately, the agreement kicks off discussions on the Schlumberger products and services that DMWA Resources would use to develop newly acquired upstream assets.

DMWA Resources will use its agreement with Schlumberger to consolidate and grow its upstream oil and gas position across Africa. "DMWA is currently looking at assets across Africa. We are successfully leveraging our team's marketing and trading knowledge with the support of first class upstream firms like Schlumberger," said Executive Director of DMWA Resources, Sebastian Wagner. "We see enormous value-add in offshore and onshore Africa, where huge opportunities have been overlooked by larger operators in the past. We and our partners have a different vision on Africa and are delighted with its geological prospectivity."

HELIUM GAS TO BECOME A KEY COMPONENT IN DRIVING INDUSTRIALIZATION IN TANZANIA

» Helium One, University of Dar es Salaam (UDSM) held workshop on Helium Gas in Dar es Salaam

Helium One the mineral exploration company that has been conducting surveying and exploration activities for helium in the Rukwa Region, in partnership with the Geology Department of the University of Dar es Salaam (UDSM) and Oxford University, had organized a one-day workshop at UDSM to build local capacity and awareness on the origin, exploration and development of helium in Tanzania.

Held at the Council Chamber, University of Dar es Salaam, the workshop's main objective was to bring together experts/scientists and key stakeholders from local, national and international communities to share their expertise, experiences and disseminate research findings on helium in the context of its use in enhancing industrialization in Tanzania and globally. The workshop also featured high level noble gas scientists from Oxford University, collaborating with UDSM's geology department, decision makers, development partners, policy developers and practitioners from Government, researchers, private sectors and the local and international media.

Speaking at the workshop, Helium One's Chief Executive Officer, Thomas Abraham-James said: "Helium One believes there is an opportunity through helium exploration and development to develop world-class technical skills and scientific expertise locally in Tanzania. We continue to build on our partnership with UDSM through knowledge-sharing, training for students and Ministry of Minerals' staff, and development of a scholarship programme".

During the workshop Helium One awarded two UDSM students a funded MSc programme, which includes a placement at Oxford University, a sponsorship that he said was geared towards imparting world-class technical skills and scientific expertise to Tanzanians as well as fostering the existing productive partnership between Helium One and UDSM.

Helium One has so far discovered an estimated 98.9bcf of helium, representing a major helium discovery in the global context of rapidly diminishing supply and growing demand for the resource. "We believe our Rukwa basin helium project holds the potential to become a flagship example of the Government of Tanzania's industrialization agenda, set out in the 2016/17-2020/21 National Development Plan", Thomas added.

On his part, Mr. Mussa Abbasi, representative from the Ministry of Energy who commended Helium One for its productive helium exploration activities, said that Tanzania was committed to creating a conducive environment for all genuine investors who were keen on investing in various economic sectors in the country.

Eni brings Zohr on stream offshore Egypt

Eni SPA has brought Zohr, a giant Mediterranean Sea gas field, on stream on Shorouk block offshore Egypt. Production started less than 3 years after discovery, and Eni estimates Zohr has resources of more than 30 tcf (about 5.5 billion boe).

Previously Eni has said it expects production will reach about 75 million standard cu m/day of gas by 2019. The field lies in 1,500 m of water.

Claudio Descalzi, Eni chief executive officer, said Zohr will allow Egypt "to turn from an importer of natural gas into a future exporter." Eni has 60% interest. Partners are Rosneft with 30% interest and BP PCL with 10% interest.

Eni is co-operator of Zohr through Petrobel, jointly held by Eni and the state Egyptian General Petroleum Corp. (EGPC), on behalf of Petroshorouk, jointly held by Eni and the Egyptian Natural Gas Holding Co. (Egas).

Zohr's development was put on a fast track. Eni previously amended the project scope to add more onshore processing and pipeline capacities to accommodate its start-up timeline.

The project's second phase, or the accelerated ramp-up-to-plateau, will add more wells to bring the total to 20 wells, boosting production to 2.7 bcfd by yearend 2019.

Second-phase plans include another gas line as well as an additional onshore processing plant, Eni previously said.

The two gas processing plants will each host four processing trains of 350 MMcfd each.

Eni has worked in Egypt since 1954, where it operates through its subsidiary IEOC Production BV.

Reggane Nord gas starts flowing in Algeria

Repsol and Sonatrach have started production from four of six natural gas fields in the Reggane Nord complex in the Sahara Desert of southwestern Algeria.

The companies share operatorship of the complex. Production is to reach 280 MMcfd of dry gas in January.

The project encompasses Azrafil Sud-Est, Kahlouche, Kahlouche Sud, Tiouliline, Sali, and Reggane gas fields. Repsol expects production to extend at least to 2041.

The operators and their partners have drilled five exploration and delineation wells and 18 development wells. Initial production is from 10 wells. Further drilling is planned.

The project's central processing facilities include a gas treatment plant, a gathering network, and a 74-km pipeline connecting the treatment plant to a new transmission line.

Interests are Sonatrach, 40%; Repsol, 29.25%; DEA Deutsche Erdoel AG, 19.5%; and Edison, 11.25%.

World Oil Consumption Reaches 100 Million Barrels


» OPEC's Mohammed Barkindo

The world's consumption of oil is around 100 million per day and growing, reflecting the critical importance of crude despite calls and agitations for "cleaner" alternatives, observed Mohammed Barkindo, Secretary General of Vienna-based Organization of Petroleum Exporting Countries (OPEC).

"To meet demand, investments worth U.S.$10.5 trillion will be required, underlining a sustainable oil market," noted Mr. Barkindo at the maiden Nigeria International Petroleum Summit in Abuja. Long term crude demand is expected to increase by 15 million barrels per day by 2040.

He attributed the current stability in the price of oil (following the worst downturn in history) to what he said was "the most innovative enterprise." In particular, the bringing together of OPEC and non-OPEC ministers to hammer out a resolution to cut back on supplies, helped to re-balance the oil market.

He therefore identified over-supply as driving down prices. As he noted," from 2014 to 2016, world oil supply outpaced that of oil demand, with the world oil supply growing at an estimated 5.5 million barrels a day, while world oil demand increased by only 4.1 million barrels a day, sending the supply equation into disequilibrium."

Equally, exploration and production spending fell by 27 per cent in both 2014 and 2015. Nearly $1 trillion in new investments were frozen or discontinued. "Our industry was on life support and a medical breakthrough was necessary to revive it," he said.

A voluntary production adjustment of 1.8 million barrels per day at the OPEC/non OPEC ministerial forum in Vienna, led to significant cut backs and stability on the international price of crude.

Nigeria Turns to African Oil Market as Global Market Tightens

Nigeria says henceforth it will make the African market its number one priority as it strives to remain relevant in the fast-changing dynamics of global petroleum shenanigans. At a time oil producers around the world are cornering regional markets to themselves, Nigeria reckons it is best suited to be a regional industry player.

"The increasing number of African countries joining the league of oil producers calls for greater co-operation among the new and old, large and small producers," declared Vice President Yemi Osibanjo in Abuja, at the Nigeria International Petroleum Summit. He noted that with the largest proven gas reserves in Africa, the seventh largest in the world; over 38 billion barrels of oil reserve and daily production of over two million barrels, as well as the continent's largest pool of oil and gas skilled manpower, "Nigeria's experience can be useful to other African countries."

Professor Osibanjo noted that the oil industry faces huge challenges as other markets seek alternatives. "Collaboration, synergies and knowledge sharing are critical. We have to work hard to make the best of our God-given resources."

Petroleum Minister of State Dr. Ibe Kachikwu was equally effusive about the African market. "The African market holds potential for us, whether it is refined petroleum, transfer of skills or taking advantage of the opportunities by local Nigerian companies, we must begin to target the African market and protect it to the fullest."

Output in Africa's Top Producer to Reach 3 Million

Crude oil production in Nigeria, Africa's largest producer, could reach three million barrels per day as part of the government's five-year plan for the sector, according to Petroleum Minister of State Dr. Ibe Kachikwu. "We are targeting three million barrels per day over the next five years. The projects we have currently can get us there, "he told delegates at the first Nigerian International Petroleum Summit in Abuja.

Nigeria currently has $40 billion in Final Investment Decisions (FDI) for major offshore oil projects over the next five years, including Egina, Bonga, and Zabazaba. "But $40 billion is not enough to drive the industry. Our estimate is that we need about $100 billion to drive this sector," observed Dr. Kachikwu.

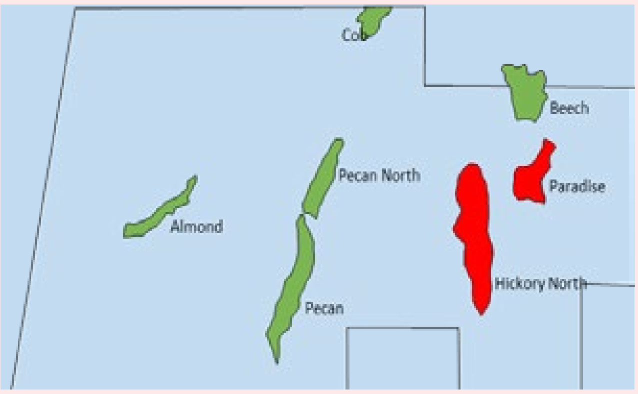
Most of the new investments envisaged under the $100 billion investment profile will go into gas projects, replacing old pipelines, building new plants and intensifying LPG assembly plants to reduce the rate of gas flaring.

Local content compliance is currently 28 per cent and the government expects what the minister described as "over the 50 per cent finish line"in five years. Dr. Kachikwu pledged government's incentives to get more indigenous Nigerians involved in oil and gas production. Nigerian exploration and production companies currently produce 10 percent of the national oil output.

"I like to see major Nigerian oil companies on board. They have about 10 per cent in oil production today. We want to see them move to 25 per cent, 30 per cent in the next five years,' said the minister of state.

The government plans to launch Project 100 in April, involving selected 100 most promising and enterprising indigenous companies to be groomed into top oil and gas firms. The government will support the selected companies with incentives such as financing and technical skills.

Aker Energy Takes Over DWT/CTP Block, First Oil in 2021



Norwegian company Aker Energy, a new joint venture between Aker ASA and TRG, is the new operator at the Deepwater Tano Cape Three Points (DWT/CTP) block following agreement to acquire Hess' 50 per cent interest in the acreage, in the Tano basin offshore Ghana.

Total cash consideration for the transaction is $100 million, with a further $75 million payable following approval of the plan for development and operation (PDO) for the 2,101-sq km (811-sq mi) block.

Over the past decade seven exploration and five appraisal wells have been drilled on the block, with estimated 2C discovered resources of 550 MMbbl, and prospective upside of around 400 MMbbl.

Aker Group is currently progressing a development solution incorporating the company's experience with various projects offshore Norway, and the current plan is for a fasttrack first phase targeting around 400 MMbbl.

The aim is to submit the PDO later this year, followed by first oil in 2021.

Development will be based on an FPSO with a subsea production system and will employ multilateral wells with completion solutions designed to provide improved reservoir contact and achieve a higher recovery factor.

Proven artificial lift solutions should further enhance recovery, while infield pipeline solutions will be designed to provide suitable flow assurance.

The subsea production system will be engineered to facilitate swift tiebacks to the centrally located FPSO during the development's second phase.

Aker Energy plans to create an independent organization to manage the exploration and appraisal programs and ongoing field development work: it currently has more than 60 people engaged on the project.

One of its goals is to adopt Aker BP's record on the Norwegian continental shelf, including a strong commitment to time-efficient solutions, digitalization, use of alliances, and a flexible organization.

These factors, Aker Energy says, have led to extensive use of advanced well completions and an efficient field development process on Aker BP's various Norwegian projects.

TRG, the main shareholder in Aker, has been involved in Ghana since 2014 and has an interest in the 3,500-sq km (1,351-sq mi) South Deepwater Tano (SDWT) block through its investment in Petrica Holding.

SDWT block, immediately south of DWT/CTP, contains various strong exploration prospects, and is currently undergoing high-resolution seismic coverage ahead of exploration drilling.

Aker Energy anticipates synergies between the two blocks with potential for a regional development.

Kjell Inge Rokke

Born 25 October 1958, Kjell Inge Rokke is a Norwegian businessman and is among the richest people in Norway, controlling the Norwegian company Aker ASA.

Aker Energy, which has acquired Hess Corp's interest in Tano Cape Three Points block offshore Ghana, is a firm owned 50 per cent by Aker, Rokke's main listed investment vehicle and 50 per cent by TRG, the businessman's privately held holding company.

Rokke launched his business career with the purchase of a 69-foot trawler in the United States in 1982, and gradually built a leading worldwide fisheries business. In 1996, the Rokke-controlled company, RGL, purchased enough Aker shares to become Aker's largest shareholder.

Rokke, who started out as a fisherman aged 18, and has no secondary or higher education, has a real net worth of $3.8 billion and reputed to be the third richest Norwegian.

Norway Hosts Investment Forum in Accra

Norway's Minister of International Development, Nikolai Astrup, is leading a high-level delegation of more than 20 Norwegian companies to the Norway-Ghana Business Forum scheduled for the Movenpick Hotel in Accra on Monday 19th March, 2018.

Many of the existing 50 Norwegian and Norwegian-Ghanaian companies will also join the event. "They represent the petroleum, renewable, offshore, maritime, shipyard, agriculture, fisheries, real estate and other sectors and are active partners in building a "Ghana beyond aid," a statement from the Norwegian Embassy in Accra said.

Top Ghanaian officials are also expected at the one-day event. The programme will feature the official launch of Norfund's new West Africa office in Accra.

Norway has emerged as a key country for oil and gas as well as other important sectors. Relations between Ghana and Norway have flourished over the years, particularly following the discovery of oil in Ghana in 2007.

Norway has implemented an oil-for-development scheme in Ghana to help build the West African nation's capacity to take charge of its fledgling upstream petroleum sector.

Nigeria's Still Flares 700 MMscf/d of Gas By Kate Da Costa


» Nigeria's President Buhari and Ghana's Nana Addo. Ghana imports natural gas from Nigeria under the West Africa gas project

The World Bank inspired Gas Flare Commercialization Programme (NGFCP) projected to drive in an annual investment of $3.55 billion into the economy and to create 300,000 jobs will revolutionize the Nigeria gas industry, authorities say. Designed as the biggest market driven gas project in the world, the Nigerian government expects that the gas flare monetization programme will leverage investments into the country and convert the resource that has been wasted in the last 50 years into wealth.

With expected $500 million annual revenue to the federal government, the introduction of 2.5 gigawatts of power to the national grid, an inclusive structure that will give host communities' ownership of the resource and end restiveness in the region.

Senior Technical Advisor on Upstream and Gas to the Hon. Minister of State for Petroleum Resources, Dr. Gbite Adeniji presenting the roadmap to end routine gas flaring by 2020 had indicated that Nigeria was putting the necessary legal and regulatory frameworks to make the project a reality.

Currently, Nigeria flares close to 700 mmscf of gas daily, one of the largest in the world. The government, through the NGFCP appears committed to reversing this trend and making the country a model for other gas flaring oil producing countries to emulate.

A gas expert, Justice Ifaka was optimistic that Nigeria will succeed and the template will be replicated in Iraq, Russia and other oil producing countries committed to ending gas flaring.

"This is the biggest gas project in the whole world, so the World Bank is interested, the USAID is interested. And they are looking to see how this will succeed and then they can replicate and use the template. Maybe for Iraq, Russia and of course other countries that are flaring gas," he said.

So far, NGFCP has identified 150 onshore and offshore gas flaring sites and identified the appropriate technology to exploit the resource. Not less than 500 interested parties have indicated interest in investing in the project, he revealed.

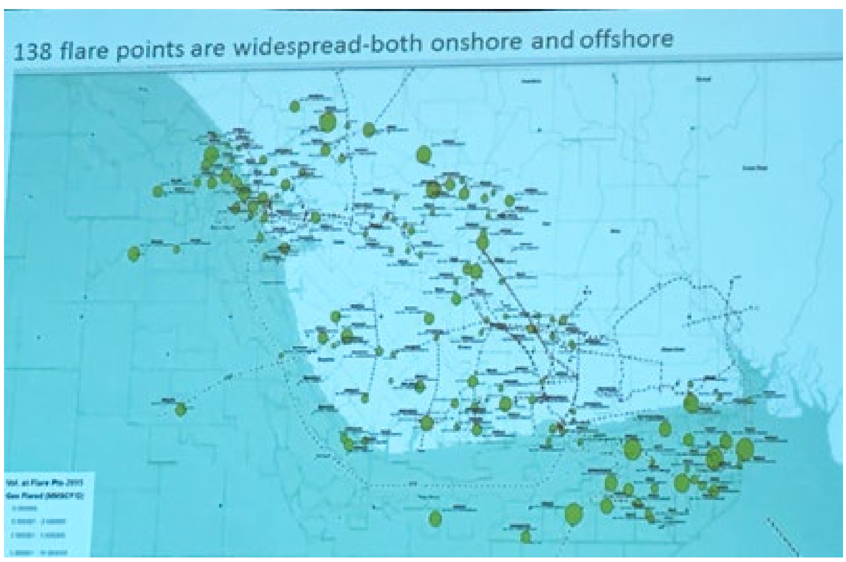
In order to engender integrity and guarantee investor's money, Ifaka said, the NGFCP has engaged foreign experts from the World Bank to verify the figure of 700mmscf gas flaring the international Oil Companies (IOCs) supplied government with.

"So we are going beyond what the Department of Petroleum Resources. We are going for further verification which you will see to make sure. We have done checks, where the gas are and try to find the gas. We have called for independent verification. So that at the end of the day, we know we can take the flare data to the bank for endorsement," he noted.

A robust legal regime has been put in place to ensure enforcement, he said, citing paragraph 9&11 of the Petroleum Act, particularly 35(B) (1) of the law which empowers the petroleum minister to take flared gas from oil producing companies at no cost. The legislation also gives all third party investors' unfettered access to the flare sites. Non-compliance with the legislation will attract severe penalties that will definitely bite but won't kill, Ifaka disclosed.

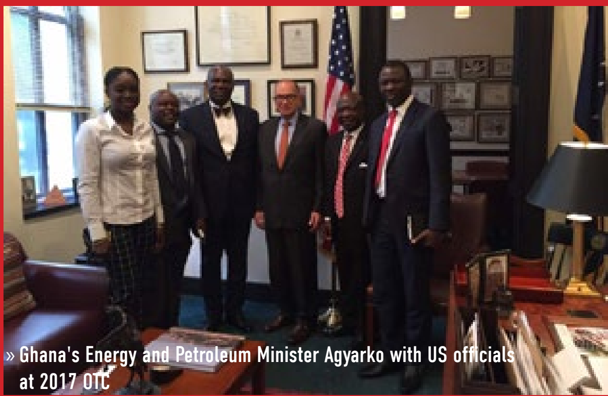
"So in terms of enforcement, this is what the regulation will do. There will be flare penalty to bite, painful enough but it won't kill," he clarified. Penalty will cost the defaulting oil producing company as much as $10,000 fine and possible suspension of license for extreme violation.

Nigeria is a leading gas flaring country despite a 70 percent decline in flaring in the past decade. As of 2012, Nigeria emitted the equivalent of 301,010 kt of CO2 in green house emissions into the atmosphere.



» Some of Nigeria's gas flare points

A Pavilion for Ghana at OTC 2018



» Ghana's Energy and Petroleum Minister Agyarko with US officials at 2017 OTC

For the first time in the 50-year history of the Offshore Technology Conference (OTC), held annually in the American city of Houston, Ghana will have a pavilion at the April 30 to May 3, 2018 event. The commercial section of the United States Embassy in Accra, in collaboration with the Ministry of Energy and Petroleum, and Ghanaian-owned logistics company CONSHIP, have acquired space for 15 exhibitors in what will be Ghana's pavilion.

"This is the first time in the 50-year history of the OTC event that Ghana has been given this platform for businesses operating in Ghana to exhibit and showcase themselves and make the important deals," an email from the Commercial Department of the U.S. Embassy said.

Exhibitors at the Ghana pavilion are expected to pay between $9,500 and $12,000 to use one of the 15 booths on offer.

Some Ghanaian oil and gas executives have long complained about the lack of a tangible Ghanaian presence at the annual showcase event, even though dozens of oil and gas representatives from Ghana attend as part of an official delegation organized by the Embassy.

Nigeria, Africa's largest oil producer, had always had a huge presence at OTC, attracting 400 to 500 participants. But fewer Nigerians may attend this year's OTC following the government's decision not to sponsor anyone to OTC. Angola, Africa's second top producer, staged its first ever pavilion at OTC last year, hugely impressing with a solid display.

Ghana's Energy and Petroleum Minister Mr. Agyarko is expected to launch an investment drive for the fledgling oil and gas industry during OTC 2018. In particular, the Minister will drum up support for Ghana's first bid round for petroleum exploration licenses and natural gas development..

Voltaian Basin Close to Striking Oil

State-owned Ghana National Petroleum Corporation (GNPC) is expected to intensify current exploration activities at the Voltaian basin following confirmation that the presence of a petroleum system has been established on-site.

"The GNPC as a result of its pilot survey in the Voltaian basin, has established a working petroleum system. I hope eventually there will be something for us to cheer about," President Nana Akufo Addo told Ghanaians in his 2018 State of the Nation address before parliament in February.

Ghana has intensified efforts to discover hydrocarbons in the Voltaian basin, which stretches across the Eastern, Ashanti, Brong-Ahafo, Northern and Volta regions of Ghana. The basin has been described as a potential game-changer in Ghana's fledgling oil and gas sector. The Voltaian basin covers 103, 600 sq. km, representing 40 percent of Ghana's land mass.

$850 Million Hedging Bonanza for Tullow

British oil firm Tullow Oil says it gained about $850 million extra revenue over a period of two years during the recent oil prices downturn through prudent risk management, specifically through hedging.

"Hedging has been a really important part of our financial risk management," revealed CEO Paul McDade in an overview of the company's Q4 2017 financial results. "We're very proud of the fact that over the course of the last two years we've delivered about $850 million of revenue that would otherwise not have come had we not had hedging."

Tullow is currently hedging 60 per cent of its production at $52 per barrel and had implemented hedging over the past 10 years with great results.

Production from the TEN field in Ghana averaged 70,000 barrels per day. Tests so far indicate that the TEN FPSO designed to store 80,000 barrels per day, can hold up to 100,000 barrels per day.

The costs environment remained equally low for Tullow in Ghana, where it also operates the Jubilee field. According to Mr. McDade," I think the cost performance in Ghana was exceptional. We set ourselves a target back in 2015 to get to $8 a barrel in 2018. We were below $8 a barrel in 2017, and I think there's more to come."

Tullow Ghana Has a New Head as Darku Retires

Tullow Ghana has picked a new head upon the retirement of Charles Darku. The new head, who assumed the role at the beginning of March is electrical engineer and businessman Kweku Awotwi, the company said in a statement.

Tullow is lead operator of two oil fields in Ghana including the West African nation's flagship offshore Jubilee reserves which began commercial production in late 2010.

Awotwi, 57, is the founder of South African-based gold explorer African Precious Minerals Ltd and principal of Triton Group Ltd.

He was one-time chief executive of Ghana's state-run power utility Volta River Authority for more than four years and had previously worked at Ashanti Goldfields as managing director for strategic planning and business development.

Charles Darku, the first Ghanaian managing director, served the company for five years, Tullow said.

Aside its flagship Jubilee field, Tullow is also lead operator in the offshore TEN (Tweneboa, Enyenra, Ntomme) reserves which came on stream in August 2016

» Tullow Ghana's Kweku Awotwi

NIGERIA'S PETROL PRICING DILEMMA DRIVING SHORTAGES

» Nigerian Vice President Yemi Osibanjo at a fuel pump in Lagos

Nigeria may be losing a minimum of U.S.$14.3 million daily as the authorities grapple with a controlled fuel pricing regime that could be spiraling beyond the government-approved N145 per litre, instead of the current market price (landing Cost) of N171 per litre.

Maintaining the price at N145 results in an "under-recovery" of N26 per a litre of fuel sold at the pump and with national consumption currently standing at a record 55 million litres per day, $14.3 million daily "subsidy" results in a revenue loss of about $430 million monthly.

Long queues have been a recurring feature for several weeks at filling stations across Africa's most populous nation as it struggles to keep up with the supply of refined oil to its domestic market. Private oil marketers have arbitrarily increased prices, resulting in a major clampdown and forced closure of erring filling stations.

Despite producing more than two million barrels of oil daily, Nigerians have had to endure perennial shortage of refined fuel as the country import almost all its refined petroleum requirements. State-owned Nigerian National Petroleum Corporation (NNPC) assumed responsibility for importing all the country's refined fuel last October when private importers pulled out citing rising costs and government's inability to pay for the resulting price differential.

NNPC reportedly owes private fuel marketers about N800 billion due to differentials arising from the disparity in the landing cost and government-regulated price at the pump.

The Independent Petroleum Marketers Association of Nigeria (IPMAN) says it currently buys fuel from wholesale distributors at N162 per litre, instead of the official price of N132.28, making it impossible to sell fuel at the government-approved N145.

NNPC says demand for fuel has expanded rapidly in recent times from 35 million litres per day to 55 million. It plans to boost supplies and get rid of the intractable queues by importing two extra fuel cargoes of 100 million litres. Smuggling has also been blamed for the shortages. Fuel prices remain low in Nigeria compared to what obtains in neighboring countries. Petrol sells for at least a dollar in most West African countries, as against the 40 cents U.S. per litre official price in Nigeria.

With key elections due early next year the government is resisting growing pressures to increase prices.

Dangote Refinery engineers promise an end to fuel scarcity when Refinery takes off

Returnee indigenous India trained Graduate engineers of the Dangote Refinery have promised to deploy the knowledge and skills acquired during the training to ensure Nigeria is saved the embarrassment of fuel scarcity when the refinery come on stream.
The engineers who described their experience as second to none in the history of Nigeria oil and gas sector said never again would Nigeria experience fuel scarcity as the Dangote refinery would be operated in the most efficient manner.
Dangote Oil Refinery Company had in preparation for take off sent in batches local graduate engineers to Bharat Refinery in India, arguably the biggest in the world for training in refinery operation and production. The nation is anxiously awaiting the Dangote refinery with a capacity to produce 650,000 bpd to commence operation as the country's four refinery have gone comatose.

KASPERSKY LAB HELPS UNCOVER VULNERABILITIES THAT MAKE GAS STATIONS EASY PREY FOR HACKERS

Kaspersky Lab researchers have helped uncover a number of unknown vulnerabilities that have left gas stations around the world exposed to remote takeover, often for years. The vulnerabilities were found in an embedded gas station controller of which there are currently over 1,000 installed and online. The manufacturer was notified when the threat was confirmed.
Kaspersky Lab experts found the controller during unrelated research into devices with open connections to the internet. In many cases the controller had been placed in the fuel station over a decade ago and had been connected to the internet ever since.
The controller, which runs a Linux machine, operates with high privileges and the researchers discovered a number of vulnerabilities that leave the device and the systems it is connected to open to cyberattack. For example, the researchers were able to monitor and configure many of the gas station settings. An intruder able to bypass the login screen and gain access to the main interfaces would be able to do any of the following:

- Shut down all fueling systems
- Change the fuel prices
- Cause fuel leakages
- Circumvent payment terminals to steal money (the controller connects directly to the payment terminal, so payment transactions could be hijacked)
- Scrape vehicle license plates and driver identities
- Execute code on the controller unit
- Move freely within the gas station network

The vulnerabilities have also been reported to MITRE and the research is ongoing.