

Oil Review

Oil · Gas · Petrochemicals

Africa

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Nigeria's reviving economic lifeblood

Pipeline and LNG momentum in Africa

NOG 2022 Preview

Transforming South Africa's marine economy

Training, valves, country focus, market analysis



Nasadi Soluções' Noryvaldo de Almeida on the future of drone operation on African rigs (p34)

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A detailed analysis of Nigeria's PIA. Image Credit: Adobe Stock

EDITOR'S NOTE

THERE IS CERTAINLY a more optimistic mood across the oil and gas industry in Africa, especially in Nigeria, with the much-awaited Petroleum Industry Act (PIA). While the practical benefit of the legislation is yet to be proven, our cover story (p10) analyses the PIA and discusses if it is enough to solve Nigeria's very specific set of challenges.

Here's hoping that Africa will reach peak gas production at 470 bcm by the late 2030s, equivalent to around 75% of the expected amount of gas produced by Russia in 2022; it will be interesting to see how oil and gas majors ramp up Africa's gas production and development. The buoyant mood is certainly good news for Senegal and Mauritania, two West African countries hoping to ramp up production. Turn to page 20 to find the latest updates.

Moreover, this issue takes a deep dive into the latest technological developments in the energy sector. Turn to page 24 to see developments in the compressor segment and to page 28 to find exciting technological updates.

Deblina Roy

Editor, Oil Review Africa

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Executives Calendar 2022

JULY

4-7 NOG 2022
Abuja, Nigeria
www.nogevent.com

12-13 OWI WA 2022
Accra, Ghana
<https://offsnet.com/owi-wa>

SEPTEMBER

1-2 MSGBC Oil, Gas & Power
Dakar, Senegal
<https://energycapitalpower.com/event/msgbc-oil-gas-power-2022/>

13-14 South Sudan Oil & Power
Juba, South Sudan
<https://energycapitalpower.com/event/ssop-2022/>

27-28 UIOGS
Kampala, Uganda
<https://uiogs.com/en>

OCTOBER

3-7 Africa Oil Week
Cape Town, South Africa
<https://africa-oilweek.com/Home>

26-27 ReEnergy Africa Summit 2022
Kigali, Rwanda
<https://www.reenergyafrica.com/>

31 Oct-3 Nov ADIPEC
Abu Dhabi, the UAE
<https://www.adipec.com/>

NOVEMBER

15-17 EAOGS
Nairobi, Kenya
<http://eaogs.com/en>

Readers should verify dates and location with sponsoring organisations, as this information is sometimes subject to change.

OWI WA returns to Accra for fifth consecutive year

OFFSHORE WELL INTERVENTION West Africa (OWI WA) is returning to Accra for the fifth consecutive year, offering participants an unrivalled opportunity to identify the latest well technologies and innovative methodologies available to optimise production and maximise well stock value.

Taking place from 12-13 July 2022 in Accra, Ghana, the event will present the latest best practice from the Gulf of Guinea, including exclusive new case studies from BP, Newcross, Shell and Total E&P.

Around 150 well intervention decision makers are set to participate from the majors, national and regional oil companies, along with regulatory authorities and technology providers, with operators representing 30% of attendees.

The agenda is specifically designed to address the most important well intervention issues facing West African operators including:

- **Regional Operations** - Understand the unique challenges presented when operating in the Gulf of Guinea to ensure

regulatory compliance with regional authorities and a robust logistical strategy

- **Well Productivity** - Create standardised wireline and coil processes to manage the major issues affecting your wells such as water production, sand control and wax formation
- **Light Well Intervention** - Explore why light well intervention is on the rise and the rigless LWI opportunities available in region to understand how this could benefit operators
- **Digitalisation** - Discover how digitalisation can dramatically improve well operations with the identification of potential risk factors before they impact efficiency
- **Environmental impact** - Understand how to reduce the carbon intensity of your projects to account for the trend towards more environmentally conscious operating models
- **Future projects** - Hear about the major well intervention and P&A campaigns within the region that are planned in the

upcoming year to identify the activity hot spots within the Gulf.

Expert speakers include Matt Vick, subsea well engineer BP; Dr. Wisdom Enang, engineering technical lead; Ejimofor Agbo, senior completions engineer, Newcross EP; Chiwuike Amaechi, principal subsea intervention engineer, Shell; Ezra Kavana, project regulatory compliance and permitting management, Total Energies; Daniel Konadu, production chemist, Tullow Oil; and Feyi Okungbow, vice president oilfield equipment SSA, Baker Hughes.

Also returning this year is the Technology Showcase Hall, which not only unites the most innovative technology with West Africa's leading operators, but also provides a unique networking opportunity for the region's well intervention decision makers.

For any questions about speaking, sponsoring or attending, please contact project manager Rachael Brand, email: rbrand@offsnet.com, tel: +44 (0) 20 3409 3041.

Victoria Oil & Gas announces Q1 2022 update for Cameroon

VICTORIA OIL & GAS, whose wholly owned subsidiary, Gaz du Cameroun (GDC), is the onshore gas producer and distributor with operations located in the port city of Douala, Cameroon, has provided shareholders with a brief operations update for the first quarter of 2022 and an update on corporate matters.

As announced on 4 April 2022, the Arbitral Tribunal made its Partial Final Award under ICC Rules on 1 April 2022. The net award to RSM was US\$12.1mn, with interest and costs to be agreed by the parties separately.

Neither GDC, nor the VOG Group, has the ability to pay the Award and accordingly the trading of VOG shares on the London Stock Exchange was temporarily suspended as of 7.30am on 4 April 2022 pending resolution of this fundamental uncertainty to continue as a going concern.

As stated in the 4 April 2022 RNS, the parties continue to work towards a post-award settlement, albeit such settlement cannot be assured. However, the settlements reached in September 2021 and January 2022 show that these sorts of agreements are possible.

Roy Kelly, chief executive of Victoria Oil & Gas, commented, "GDC turned in another robust quarter of gas sales, partially buoyed by the AFCON football competition hosted by Cameroon, and that performance has continued into the start of the second quarter."

Synergy Consulting launches Synergy South Africa office in Johannesburg

SYNERGY, A GLOBAL leader in infrastructure advisory, is committed to sustainable development of the energy sector in Africa, engaging with government entities, developers and other stake-holders.

Leveraging on its PPP experience, it aims to support Africa to achieve its highest potential with Synergy becoming the 'Partner of Choice' for infrastructure and financial advisory services for all infrastructure sectors in Africa.

Affordable, reliable energy has enabled great progress. Energy in all its forms accelerates growth. With growing economies, advancing technologies, expanding population size, there is also greater demand for consumer goods, with greater consumer awareness for a clean environment.

Energy demand is evolving to meet changing needs and governmental policies are adapting to these fast changing times.

Currently, the renewables



Image Credit: Synergy Consulting

Synergy's new Johannesburg office will serve clients with projects across southern Africa.

sector has been abuzz with tremendous activity in South Africa. The South African Government Authorities have continued to expand their renewable programmes as well as their commitment to PPPs in water, transport and other infrastructure sectors. They have also expanded openings in government advisories.

Synergy's new Johannesburg

office, one of the 11 global offices across five continents that the company operates, will serve clients with projects in southern Africa. The company has noted its excitement at this development which will serve to expand its presence in Botswana, Namibia, Zambia and Mozambique in addition to South Africa, adding to the 400+ projects it already runs.

TGS enhances 3D seismic data offshore Liberia

TGS, A GLOBAL provider of energy data and intelligence, has announced an agreement with the National Oil Company of

Liberia (NOCAL) to reprocess more than 5,100 sq kms of 3D seismic data over Blocks 8 and 9 in the offshore Liberia basin.



Image Credit: Adobe Stock

The survey is supported by industry funding, with processing starting this month and final deliverables expected in Q2 2023.

The survey will be processed using a Pre-Stack Depth Migration (PSDM) workflow to enable optimal imaging of the main targets in the Cretaceous reservoirs to reveal the latest insights into the prospectivity of the Liberia Basin.

Since June 2021, the Liberia Petroleum Regulatory Authority (LPRA), in cooperation with NOCAL, has invited direct exploration licensing negotiations for all offshore blocks over the Harper and Liberia basins. Thirty-three blocks are available with a maximum block size of 3,500 sq km.

Petrofac grows presence in Mauritania with award of Tullow Oil

PETROFAC, ONE OF the leading providers of services to the global energy industry, has grown its presence in Africa, having been selected by Tullow Oil to provide well decommissioning services in Mauritania.

The contract, with potential total value of more than US\$60m, involves the project management, engineering, planning and plugging and abandonment (P&A) of seven subsea wells on Tullow Oil's Banda and Tiof fields.

Petrofac assumes responsibility for the subsea well decommissioning scope from Maersk Decom, which has been preparing the work since 2020. By mutual agreement, the parties have novated the contract to Petrofac who will take immediate responsibility for the project, with the offshore scope running from



Petrofac will provide all personnel, assets and equipment required for the project, including management of the Island Innovator drilling unit and offshore support vessels.

Q4 2022 throughout Q1 2023.

Petrofac will provide all personnel, assets and equipment required for the project, including management of the Island Innovator drilling unit and offshore support vessels.

Nick Shorten, chief operating officer for Petrofac's asset solutions business, said, "Today's award is further demonstration of

the international demand that exists for the skills and quality of delivery we have established in the North Sea. Since 2016 Petrofac has delivered three successful decom campaigns for Tullow Oil. We look forward to emulating this success for them in Mauritania, and across the African continent as we continue to grow our business here."

PetroNor provides update on Aje transactions in Nigeria

PETRONOR HAS PROVIDED an important update on Panoro's ownership interest in Offshore Mining Lease no 113 (OML 113) offshore Nigeria, containing the Aje oil and gas field, and for the transfer of OML 113 to Aje Production AS.

PetroNor has announced that, as an interim step towards

completion of the transaction, PetroNor and the OML 113 Operator, Yinka Folawiyo Petroleum (YFP) have executed amendments to agreements for the formation of the jointly owned Aje Production, originally signed on 5 December 2019.

The amendments provide for YFP's contribution to Aje

Production being limited to the shareholding in the YFP DW company. As a consequence PetroNor's ownership will be increased to 52% and Aje Production will hold a 15.5% participating interest and an economic interest in the order of 38.755% in OML 113 during the majority of the project period. YFP has undertaken to align its voting rights with Aje Production's objectives in the development of the Aje field.

PetroNor and Panoro continue to finalise documentation to complete other elements of the transaction, which is expected to take place before 30 June 2022 as previously announced.

All other terms and conditions of the transaction remain unchanged.

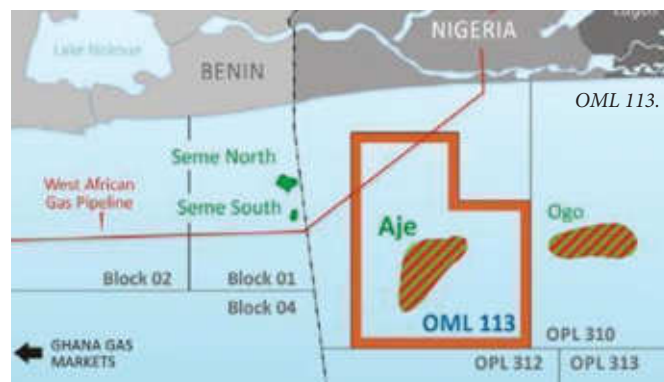


Image Credit: Panoro Energy

Zimbabwe: potential for multiple stacked hydrocarbon bearing zones in Mukuyu prospect

INVICTUS ENERGY HAS provided an update on the activities of its 80% owned and operated Cabora Bassa Project in Zimbabwe.

Seismic inversion results show potential for multiple stacked hydrocarbon bearing zones in new Post Dande target (Horizon 200).

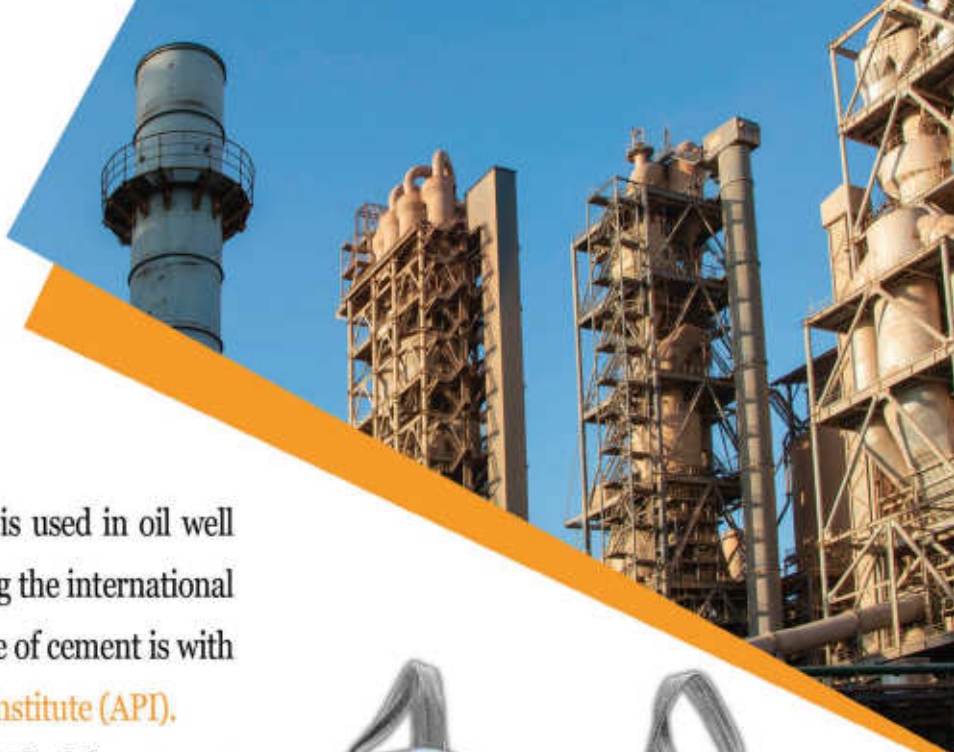
Further quantitative analysis (QA) studies continue to provide support for the presence of potential hydrocarbons in the Mukuyu structure. The results from a seismic inversion/QA study indicate that the section immediately below the Horizon 200 target is likely to comprise multiple stacked hydrocarbon bearing zones, ranging in thickness from 40 to 80m. Accordingly this has necessitated an update to the drilling programme to include a diverter system for the shallow sections of the Mukuyu-1 well.

The ASX release highlighted the extensive amplitude anomaly at the Horizon 200 level and the very positive correlation of amplitude extent and structural closure – this fit to structure is regarded as a strong attribute for any prospect and a potential Direct Hydrocarbon Indicator (DHI).

The Horizon 200 target is newly identified from the 2021 Cabora Bassa 2D Seismic Survey (CB21 Survey) and will be the first target tested in the Mukuyu-1 well.



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Tlou Energy provides update on Lesedi Power Project transmission line construction

TLOU ENERGY HAS reported that the construction activities for the transmission line to connect the Lesedi Power Project to the Botswana power grid have commenced.

Zismo Engineering has completed their preliminary work and bush clearing of the route is underway. Preliminary work included site handover, assembling the project team and resources, mobilisation of plant and equipment, line survey and design, pole structure modelling, and review and approval by Tlou's owners engineer, Mott MacDonald.

Zismo has also commenced procurement of equipment which includes manufacture of steel and wooden poles, cross-arms, line hardware, fittings, stay wire and assemblies. Equipment will be delivered in batches, with the first

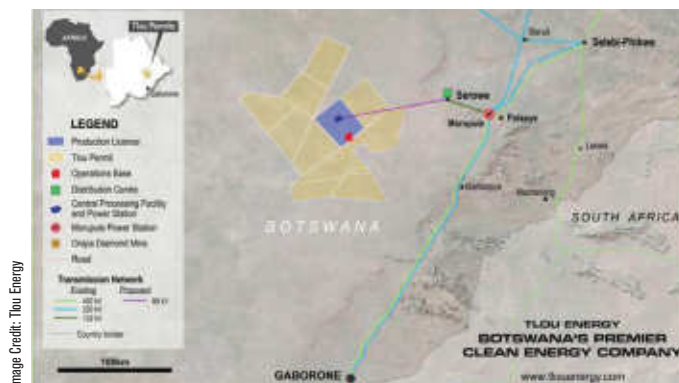


Image Credit: Tlou Energy

The Lesedi Power Project is located in Botswana's central district.

delivery of wooden poles expected next month.

Zismo's project site offices are set-up in Mogorosi village and a roving site camp will be located at convenient locations along the transmission line route.

Work commenced with route preparation which includes bush

clearing as mentioned above, as well as installation of farm gates where required, line pegging, inspection and approval.

Erection of poles will be performed in sections with work commencing on the Serowe end of the line and working towards Lesedi.

Panoro Energy announces extension of Block G PSC offshore Equatorial Guinea

THE MINISTRY OF Mines and Hydrocarbons of Equatorial Guinea and joint venture partners at Block G offshore Equatorial Guinea have agreed a material time extension of the Production Sharing Contract (PSC) until 31 December 2040, covering the producing Ceiba and Okume Complex Fields.

Prior to the extension, the PSC expiry for the Ceiba Field was 2029 and for the Okume Complex field 2034. Management expects that Panoro's net 2P reserves will increase by between two to three mmbbl as a result of the PSC extension.

John Hamilton, CEO of Panoro, commented, "Upon

entering the Block G Joint Venture, we had always identified an upside in extending the PSC expiry dates to realise the full potential in the Ceiba and Okume fields.

"The extension substantially increases Panoro's net 2P reserves in Block G and creates the time in which to unlock the material resources we believe to be present."

The extension is expected to support the next phase of investment by the joint venture partners with further development drilling anticipated to commence in H2 2023 to target material new production growth beyond current guidance. Further information on these wells will be communicated in due course as planning is refined.



Image Credit: Arabian Stock

The extension is expected to support the next phase of investment by the joint venture partners with further development drilling anticipated to commence in the H2 2023.

Apex International Energy tests well at 2,440 bpd in Egypt's Western Desert

APEX INTERNATIONAL ENERGY (Apex) announced that the Fajr-8 development well was tested at a daily rate of 2,440 barrels of oil and negligible water.

The well encountered 98 feet of high-quality oil pay in sandstone of the Bahariya Formation. The well was connected to production facilities and opened for the first production on 8 May, less than four days from rig release.

The Fajr-8 well, located in the Western Desert in the company's South East Meleiha (SEM) concession is operated by Farah Petroleum Company (PetroFarah), the joint venture operating company of Apex and the Egyptian General Petroleum Company (EGPC) established in April 2021.

PetroFarah has recently celebrated its first year of safe and efficient operations with no injuries to people or harm to the environment.

Fajr-8 will be the fifth producing well in Fajr Field since the commercial discovery was approved for development by the Minister of Petroleum and Mineral Resources in March 2021. Together with the producing Farah (three wells) and Mashreq (one well) fields in SEM, also approved for development in 2021, total SEM oil production is expected to increase from 4,300 bpd currently to more than 6,000 bopd from nine total wells.

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THE ROADMAP FOR NIGERIA'S ECONOMIC LIFEblood

Alex Booth, associate managing director for Kroll's Forensics Investigations and Intelligence Practice, has given an insight about Nigeria's Petroleum Industry Act (PIA) and about Nigeria's economic roadmap.

AFTER 20 YEARS of legislation proposals, Nigeria finally introduced major oil and gas reforms with the Petroleum Industry Act (PIA) in late 2021. But the practical benefit of the legislation is yet to be proven and the possibility remains that the desired effect may not be achieved. While petroleum is still the lynchpin of Nigeria's economy, the global market context has shifted considerably over the past decade.

While an immediate need for security of energy supply has kept demands for oil and gas high, the long-term future for non-renewable energy sources is uncertain, and the PIA may not be enough to solve Nigeria's very specific set of challenges.

The state of play in Nigerian petroleum

Fossil fuels are a far riskier investment than they were when legislation was first proposed over 20 years ago. There is now endemic corruption to contend with. In 2012, it was estimated by a government-commissioned task force that US\$100bn had been siphoned off from Nigeria's oil and gas industry throughout the preceding decade.

Despite having the largest oil and gas reserves in Africa, Nigeria attracted just 3% of the US\$70bn investment made across the continent's entire oil and gas



This 650,000 barrels per day (bpd) refining facility is expected to redefine Nigeria's domestic fuels production.

industry, from 2015 to 2019.

Indeed, major international oil companies have gradually been moving away from Nigeria. Shell plc sold its assets to indigenous consortium TNOG Oil and Gas in 2021. Eni and Total sold off major oil production areas following the 2014 crash and, since November 2021, Shell has also been in talks with the Nigerian government to sell its onshore oilfields to domestic companies. Most recently, leading Nigerian energy company, Seplat Petroleum

purchased ExxonMobil's Nigerian shallow water business in February 2022.

Indigenous Nigerian businesses are more agile and adaptable than their international counterparts and can often navigate local market issues more effectively than global companies. At the same time, even for indigenous companies, oil production in Nigeria remains replete with challenges – not least theft and sabotage. Austin Avuru, Seplat's former head, recently called for a state of national

emergency on the issue – suggesting that 80% of Nigerian crude oil is being stolen. While this claim is hard to substantiate, it does reflect the fact that theft does pose a threat to production.

Nigeria's crude output fell last year. The government reported that less than 1.5 million barrels a day were being produced in December 2021, down from 1.7 million in January and down from a peak of 2.5 million in 2005. Not only is production lower, the desired targets of Nigerian President, Muhammadu Buhari's, administration far exceeds past production capabilities with sights set on four million barrels a day by 2025.

The promise PIA

The PIA's broad terms aim to encourage more investment – particularly in smaller business operations – by creating a more competitive and transparent framework. Oil production is not the only beneficiary of this framework, the legislation also supports Nigeria's under-exploited gas sector, addresses environmental concerns, and lays out compensation for host communities negatively affected by oil production.

Privatising the national industry

The PIA sets out provisions for establishing Nigerian National Petroleum Company (NNPC

Limited) as a limited liability company to conduct business in an efficient, transparent, and profitable manner. The PIA also provides the NNPC Limited with the option of forming international joint ventures, which would operate with limited government interference, follow international corporate governance standards, and provide access to international capital markets.

A new regulatory regime – separating DPR and upstream

The PIA created two regulatory authorities – one for the upstream sector (known as the Nigerian Upstream Petroleum Regulatory Commission – ‘the Commission’) and one for the midstream and downstream sectors (the Nigerian Midstream and Downstream Petroleum Regulatory Authority – ‘the Authority’) which will take over the regulatory function from the Department of Petroleum Resources (DPR). This is a departure from the previous system, which was fully under the DPR’s control, although the DPR will still broadly supervise.

Under the PIA, the President appoints the board of directors for both the commission and the authority – subject to the confirmation of the National Assembly. On paper, this is a partial, but not a complete separation of the industry’s regulatory function from government. In reality, it has yet to be seen how far this separation will apply in practice.

Leases and licences

Nigeria’s current petroleum licensing procedure is often seen as opaque. While the DPR retains the power to issue licences and leases, under the PIA, it must now follow the Commission’s recommendations.

The new licenses themselves are similar in their conception to the ones they are replacing. The PIA though seeks to introduce a

more open and transparent bidding process for reallocating surrendered or revoked licences. As well, the PIA includes a conversion contract, allowing those who already hold a lease or licence to take advantage of the new tax benefits, or the reclaiming of inactive fields to help make sure that oil production meets spikes in demand.

A new dual income tax regime

PIA’s new dual income tax regime for upstream petroleum companies consists of the Hydrocarbon Tax (HT) and Companies Income Tax (CIT). HT applies to crude oil, field condensates and liquid NGLs obtained from associated gas in onshore or shallow water acreages but not profits from frontier and deep offshore acreages. CIT is applicable to all profits, whether those profits are subject to HT or not. Profits from midstream and downstream activities are subject to only CIT.

Tax visibility is important to investors, who tend to view everything through a long-view lens. Whilst the PIA’s proposed tax system aims to provide greater clarity than the old one, it has not been adopted across the board. Indeed, it is still possible to opt in or out of the regime and some indigenous oil companies may find their business operations are still better off under the old system, which requires a detailed assessment from the outset.

Under the new regime, although oil-producing marginal fields can retain agreed farmouts and royalty rates, they must convert to PMLs within 18 months of the Act coming into force. Once this happens, they are subject to the Act’s double tax regime. Non-producing marginal fields declared before 1 January 2021 will be automatically converted to Petroleum Prospecting Licences (PPLs) and subject to the Act’s tax regime.

Compensating host

communities

The PIA requires petroleum businesses to establish a trust for the benefit of host communities, contributing the equivalent of 3% of their operation costs each year.

The trust will provide much needed compensation to the communities disrupted by petroleum operations across the Niger Delta. There is hope it will also help to alleviate the problem of theft and sabotage across this area, which has particularly affected indigenous oil companies.

Concern has been expressed over how much work the petroleum businesses themselves are required to do to establish and run the fund, when this would usually fall upon government. Some argue this could be counterproductive as it would take time and resources away from the oil operation itself.

President Buhari also approved the lower percentage of 3% over a 5% annual contribution to the fund for which host communities and local politicians had vigorously advocated. This could have the unintended effect of provoking more civil unrest in the future.

Harnessing natural gas

The PIA makes Nigeria’s under-developed gas industry a particular focus. As the cleanest fossil fuel, Nigeria has made gas a central part of its energy transition plan. In a nation where half the population has no access to electricity, LNG could bring electricity to rural communities, reducing both deforestation and the higher carbon emissions of charcoal burning.

The PIA establishes a fund to resource infrastructure related to midstream and downstream gas operations. The fund aims to increase domestic gas use and eliminate gas flaring. (A gas flaring penalty is payable by businesses for the benefit of host communities affected). These measures are primarily financed

by a 0.5% levy of the wholesale price of petroleum products and natural gas sold in Nigeria, collectible from wholesale customers.

Environmental management plans

The PIA also introduces an environmental management plan which must be submitted for approval within six months for projects deemed to require impact assessments. Though the PIA does not clarify this, these plans would presumably be assessed using relevant environmental legislation.

Boosting the domestic market

Despite Nigeria’s considerable resources, a lack of infrastructure means a large volume of its petroleum is refined offshore and imported back to meet local demand.

The PIA aims to tackle this issue by imposing targets for domestic supply and requiring the Commission to issue guidelines for domestic market crude oil allocation by 1 March each year, based on domestic oil needs.

Overall, the PIA’s provisions are intended to be a productive and stabilising influence which should be seen as favourable by both indigenous businesses and international investors. However, the Nigerian petroleum industry continues to face a myriad of long-standing issues which no single piece of legislation can fully address. Despite the limitations on their effectiveness, the new reforms reflect a changing landscape in Nigeria, where smaller indigenous players are making their way into the vacuum left by the majors. The region still has much to offer investors, but prospects of success will be increased to the extent that they can understand and navigate the changes made to the sector. ♦

TOP FINANCIAL AND LEGAL ADVISERS IN OIL AND GAS SECTOR

RBC Capital Markets has been named the top M&A financial adviser by both value and volume in the oil and gas sector in Q1 2022, with Latham & Watkins named as the top M&A legal adviser by value and volume in the oil and gas sector.

GLOBALDATA HAS ANNOUNCED the latest updates to its financial and legal adviser league tables, which rank advisers in these categories by the total value and volume of merger and acquisition (M&A) deals they advised on in Q1 2022.

Financial advisers

RBC Capital Markets was the top M&A financial adviser in the oil and gas sector for Q1 2022, finds GlobalData.

RBC Capital Markets has been named the top M&A financial adviser by both value and volume in the oil & gas sector in Q1 2022, according to the latest Financial Advisers League Table by GlobalData. The leading data and analytics company's Financial Deals

“The leading data and analytics company's Financial Deals Database reveals that RBC Capital Markets achieved the top ranking by advising on seven M&A deals worth US\$11.9bn.”

Oil & Gas M&A Top 10 Financial Advisers by Total Deal Value US\$ (mn) & Volume Q1 2022

Ranking by Value						Ranking by Volume									
Adviser Name	Q1 2022			Q1 2021			YoY Change	Adviser Name	Q1 2022			Q1 2021			YoY Change
	Rank	Value US\$ (mn)	# Deals	Rank	Value US\$ (mn)	# Deals			Rank	# Deals	Value US\$ (mn)	Rank	# Deals	Value US\$ (mn)	
RBC Capital Markets	1	11,935	7	2	17,813	9	+33.0%	RBC Capital Markets	1	7	11,935	2	9	17,813	-32.2%
Citi	2	9,415	4	4	16,204	12	-41.9%	JP Morgan	2	5	5,141	3	7	22,218	-35.6%
Bank of America	3	8,100	1	-	166	1	+767.8%	Citi	3	4	9,415	1	12	16,204	-44.7%
Centerview Partners	3	8,100	1	-	-	-	-	Barclays	4	4	6,388	13	3	17,745	-33.3%
Barclays	5	6,388	4	3	17,745	3	-64.0%	Jefferies	5	4	3,358	4	7	3,455	-42.9%
Perella Weinberg Partners	6	6,108	3	34	670	5	811.6%	Rothchild & Co	6	4	1,470	8	5	2,840	-50.0%
Goldman Sachs	7	5,534	1	8	10,300	2	-46.8%	Perella Weinberg Partners	7	3	6,108	10	3	670	-40.0%
Rayburn Wharlow LLP	7	5,534	1	-	-	-	-	RBC Capital Markets	8	3	789	15	3	4,879	0.0%
JP Morgan	8	5,141	3	1	22,218	7	-76.8%	DrivePath Advisors	9	2	3,100	-	-	-	-
Jefferies	10	3,358	4	13	3,455	7	-2.8%	Wells Fargo	10	2	935	-	1	164	+300.0%

Notes:

1. GlobalData's League table ranking is based on deal value. If value remains same for multiple advisers, the volume is given weightage, or vice versa.
2. League table ranks are considered till 96, any rank above that has been mentioned as ">".
3. YoY % change are considered till 999%, any change above that has been mentioned as ">".

Source: GlobalData Financial Deals Database

GlobalData

Image Credit: GlobalData

Oil and gas M&A top 10 financial advisers by total deal value US\$ (mn) and volume Q1 2022.

Database reveals that RBC Capital Markets achieved the top ranking by advising on seven M&A deals worth US\$11.9bn.

According to GlobalData's report, 'Global and Oil & Gas M&A Report Financial Adviser League Tables Q1 2022', a total of 377 M&A deals worth US\$58.5bn were announced in the sector during Q1 2022.

Aurojyoti Bose, lead analyst at GlobalData, commented, "While all of the advisers reported single-digit deal volume during Q1 2022, RBC Capital Markets was the only adviser in terms of value that managed to surpass the

US\$10bn mark. Of the seven deals advised by the firm, two were billion-dollar deals that also included one deal valued at more than US\$5bn."

An analysis of GlobalData's Financial Deals Database reveals other high rankers by value included Citi, with deals worth US\$9.4bn; Bank of America, with US\$8.1bn; Centerview Partners, with US\$8.1bn; and Barclays, with US\$6.4bn. By volume, JP Morgan occupied the second position, with five deals; followed by Citi, with four deals; Barclays, with four deals

and Jefferies with four deals.

Legal advisers

Latham & Watkins was the top M&A legal adviser by value and volume in the oil and gas sector for Q1 2022, finds GlobalData.

Latham & Watkins has been named the top M&A legal adviser by both value and volume in the oil and gas sector in Q1 2022, according to the latest Legal Advisers League Table by GlobalData. The leading data and analytics company's Financial Deals Database reveals that Latham & Watkins achieved the top ranking by advising on 12 deals worth US\$14bn.

According to GlobalData's report, 'Global and Oil & Gas M&A Report Legal Adviser League Tables Q1 2022', a total of 377 M&A deals worth US\$58.5bn were announced in the sector during Q1 2022.

Bose commented, "Latham & Watkins was among the very few advisers that managed to register double-digit deal volume, while also surpassing the US\$10bn mark in total deal value. Although Latham & Watkins went ahead to top the chart, it

faced close competition from Vinson & Elkins as it also advised on the same number of deals. However, Vinson & Elkins lagged by around US\$2.5bn in value and ended up occupying the second position by both value and volume."

An analysis of GlobalData's Financial Deals Database reveals other high rankers by value included Gibson Dunn & Crutcher, with deals worth US\$10.9bn; Kirkland & Ellis, with US\$10.8bn; and Willkie Farr

“ According to GlobalData’s report, ‘Global and Oil & Gas M&A Report Legal Adviser League Tables Q1 2022’, a total of 377 M&A deals worth US\$58.5bn were announced in the sector during Q1 2022.”

Oil & Gas M&A Top 10 Legal Advisers by Total Deal Value US\$ (mn) & Volume Q1 2022

Ranking by Value					Ranking by Volume				
Adviser Name	Rank	Value US\$ (mn)	Deals	% Change	Adviser Name	Rank	Deals	% Change	
Latham & Watkins	1	13,767	22	+4.8%	Latham & Watkins	1	22	+0.0%	
Vinson & Elkins	2	11,717	21	+6.8%	Vinson & Elkins	2	21	+0.0%	
Gibson, Dunn & Crutcher	3	10,928	11	+7.0%	Kirkland & Ellis	3	11	+2.0%	
Kirkland & Ellis	4	10,879	11	+22.0%	Willkie, Farr & Gallagher	4	11	+2.0%	
Willkie Farr & Gallagher	5	8,239	11	0%	Hambly, Alton, Dale, Hoaghe & Finn	5	11	+2.0%	
Hambly, Alton, Dale, Hoaghe & Finn	6	8,202	10	+2.0%	White & Case	6	10	+2.0%	
White & Case	7	6,701	9	+8.0%	Stromberg & Manning	7	9	+2.0%	
Gibson Dunn	8	6,700	8	+2.0%	White & Case	8	8	+2.0%	
UFP&D Charney	9	5,249	7	+2.0%	Dechert	9	7	+2.0%	
Loeb Loeb	10	5,200	7	0%	Loeb Loeb	10	7	+2.0%	

Notes: 1. GlobalData's league table ranking is based on deal value. 2. Values contain some fee multiple activities, the volume is given-weighted on the basis. 3. League table entry are considered as 0%, any rank above that has been mentioned as "N/A". 4. "N/A" to change are considered as 0%, any change above that has been mentioned as "N/A".

Source: GlobalData Financial Deals Database



Oil and gas M&A top 10 legal advisers by total deal value US\$ (mn) and volume Q1 2022.

& Gallagher, with US\$8.2bn. By volume, Kirkland & Ellis occupied the third position, with 10 deals; followed by Gibson Dunn & Crutcher, with five deals; and White & Case with four deals. ♦

GlobalData league tables are based on the real-time tracking of thousands of company websites, advisory firm websites and other reliable sources available on the secondary domain.

Image Credit: GlobalData

Performance Matters

Lubricant Additive Packages

- Automotive Engine Oil
- Transmission & Gear Oils
- Industrial Engine Oils
- Marine Engine Oils
- Viscosity Index Improver
- Industrial Oils
- Additive Components

Chemical Raw Material

- Distilled Animal Tallow
- Hydrated Lime Powder
- Rice Bran Fatty Acid
- Lithium Hydroxide
- Sodium Hydroxide Soap
- HCO
- Technical Grade Urea

Base Oils

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WEST AFRICA GETS READY FOR DESERTIFICATION COP15

West African representatives from the ministries of planning and finance, environment, and other stakeholders gathered in Abidjan for a capacity-building workshop on addressing land degradation and ecosystem restoration.

THE WORKSHOP WAS a precursor to the UN Convention to Combat Desertification conference, being held in Abidjan from 9-20 May. The two-day sessions focused on financing opportunities that have the potential to deliver transformative projects and programmes to boost the Great Green Wall initiative in West Africa.

The African Development Bank's Africa Climate Change Fund contributed to the workshop, developed by the UN Convention to Combat Desertification, in collaboration with several technical and financing partners.

Halting and reversing land degradation can transform the land from being a source of greenhouse gas emissions to a sink by increasing carbon stocks in soils and vegetation. Land degradation neutrality aims to balance anticipated losses in land-based natural capital and associated ecosystem functions and services with measures that avoid and reduce land degradation and produce alternative gains through land restoration and sustainable land management approaches.

During his opening remarks, Laouali Garba, manager for agriculture research, production and sustainability at the African Development Bank (AfDB),



Image Credit: AfDB

Participants who attended a workshop on addressing land degradation and ecosystem restoration through transformative projects and programmes.

said, "The Bank supports African countries in finding solutions for the sustainable management of natural resources to enhance the resilience of populations to the adverse effects of climate change and variability."

Since the launch of the Bank's Feed Africa strategy in 2015, more than 74 million people have benefited from access to improved agricultural and sustainable land management technologies. The Technologies for African Agricultural Transformation (TAAT) programme has provided 11 million farmers in 29 African countries with proven agricultural technologies, Garba added.

"As the champion of resource

mobilisation to accelerate the implementation of the Great Green Wall Initiative Priority Investment Plan (2021-2030), the AfDB welcomes this partnership with the Global Mechanism for the UN Convention to Combat Desertification," he said.

Cathrine Mutambirwa, programme coordinator of land degradation neutrality and land restoration at the global mechanism, said, "We work with partners to improve the capacity to design transformative land-based interventions to build resilience and improve rural livelihoods. With the African Development Bank and other partners, we complement each other well to move the projects quickly."

Rita Effah, senior climate finance officer and Africa Climate Change Fund coordinator, outlined, "The Africa Climate Change Fund supports regional member countries to directly access climate finance by preparing bankable projects to access climate funds and also by supporting the implementation of small-scale adaptation projects, including land restoration, to enhance communities' resilience."

Yasmina Oodally, an environmental specialist at the World Bank, explained how the World Bank supports the Great Green Wall, with future land restoration projects targeting policy and institutional reforms designed to empower local communities, especially women.

Sarah Toumi, programme management officer of the Great Green Wall initiative, said, "The Pan-African Initiative of the Great Green Wall is a nature-based solution to the complex challenges facing humanity and a compelling symbol of what is possible if we work together to protect and restore our planet. It is one piece in the puzzle in providing genuine alternatives for people increasingly working together to stop the drivers of land degradation and increase rehabilitation of degraded lands." ♦

RAMPING UP TOT PROGRAMME

The training of trainers is AFREC's capacity building programme has been designed to reduce skills gap in energy statistics and data processing. The training of the trainers (ToT) programme was created as a result from a lack of qualified African experts in energy statistics and the constant reliance from international experts.



Image Credit: Training of Trainers (ToT) Programme

The training will also empower trainers with coaching and mentoring skills necessary for coaching other national and regional energy statisticians.

WITH REGARD TO AFREC's ambition to decrease Africa's skills deficit in the area of energy statistics, and in turn improve energy data quality and accessibility across continent, AFREC has ramped up its capacity building initiatives.

The initiative continues to increase the African pool of trainers in energy statistic, through the training of the trainers (ToT) programme.

With support from the Africa-EU Energy Partnership (AEEP), a ToT programme is currently underway to build skills of trainers who benefited from a beginner training course which

was undertaken in Cote d'Ivoire, in December 2021.

The advance skills training aims to enhance knowledge and quality in energy data collection and processing at national and regional level. The one-week

“ The advance skills training aims to enhance knowledge and quality in energy data collection and processing at national and regional level.”

training which was held from 9-13 May 2022 qualifies 18 participating energy experts from various member states as trainers

of others, whilst getting them on par with the previous pool of trainer's who were trained between 2019 and 2021 at an advanced level.

Speaking on behalf of AFREC Executive Director, Abdoulaye

Oueddo, senior policy officer for Energy Information System (EIS) at AFREC, welcomed the participants and highlighted that

the training is in line with the call from member states, to ensure that statistics forms the basis of all policy formulation, monitoring and evaluation for Africa's energy sector development.

“The capacity building programme supports the National Focal Points (NFPs) in the AU member states to strengthen National information system by coordinating energy data collection and validation at national level,” he emphasised.

The training will also empower trainers with coaching and mentoring skills necessary for coaching other national and regional energy statisticians. ♦

FUELLING NIGERIA'S ENERGY TRANSFORMATION

The 21st edition of NOG Conference and Exhibition, Nigeria's foremost energy event, is set to take place in person at the International Conference Centre, Abuja from 4 - 7 July 2022.

FOR MORE THAN 21 years, the NOG Conference & Exhibition has provided a platform for presidents, ministers, heads of governments agencies and CEOs to discuss plans for policy, up-coming projects and solutions to current challenges in the industry.

dmg Nigeria events, the organisers of the event, stated that NOG 2022 will host key stakeholders from across the global energy value chain to discuss unique opportunities for Nigeria's energy resources in the face of global energy demand. It will focus on the strategies that will be employed by the Nigerian government and private sector leaders to harness the opportunities created by the historic Petroleum Industry Act (PIA), while navigating the global energy industry at a moment of significant transformation.

The conference will also discuss key issues such as financing opportunities for energy projects in sub-Saharan Africa, bridging the infrastructure gap for an improved domestic gas market, opportunities for indigenous companies in the PIA era, technology innovations for decarbonisation across the value chain, and other critical topics that will help set the nation's energy agenda for the next 12 months and beyond.

The conversation at this year's conference is significant as the industry navigates the growing global demand for renewable energy and climate-friendly sources of energy in the face of Africa's unique energy mix requirements. Many industry leaders have

“ NOG will host key stakeholders from across the global energy value chain.”



Image Credit: dmg events

NOG is Nigeria's leading energy event.

also dubbed this to be an opportunity to seek a lasting solution to Africa's energy poverty and bring much-needed socioeconomic development.

As part of its commitment to the development of the Nigerian energy industry, NOG will also provide the opportunity to showcase and train industry stakeholders on best-in-class technology innovations across the value chain through its CPD-certified NOG Technical Seminar. The Technical Seminar will host sessions in five different streams covering upstream operation, midstream, downstream, digitisation and project management.

2022 Sponsors include NNPC, ExxonMobil, Nigeria LNG Limited, Shell, Chevron, Total Energies, Oando, NCDMB, Prime Atlantic, DCPL, Coleman Wires And Cables, UTM FLNG Limited, First E & P, ND Westers, Samsung, Montego, Nivafer, Russell

Smith, Vurin Group, MG Vowgas, WAV, Trexm Chemicals, and MicCom, Niger Delta Exploration & Production Plc, Eleva Group and Heritage to date.

Speakers include H.E. Dr Timipre Sylva, Honourable Minister of State for Petroleum Resources; Otunba Niyi Adebayo, Minister of Industry, Trade & Investment; H.E. Mohammad Sanusi Barkindo, secretary general OPEC; Engr Gbenga Komolafe, Commission chief executive, Nigerian Upstream Regulatory Commission; and Mele Kolo Kyari, group managing director, NNPC.

The NOG Conference and Exhibition annually hosts over 500 delegates, 300 exhibiting companies, 4,000 exhibition visitors, 80 industry expert speakers, and 40 sessions across two conference streams. ♦

For further information see the website at <https://www.nogevent.com/>

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EFFECTING THE DEVELOPMENT OF THE NIGERIAN OIL & GAS INDUSTRY

Leading Nigerian oil services company Prime Atlantic discusses its activities and business prospects in Nigeria.

How do you view oil industry prospects currently in Nigeria and the region?

The oil industry in Nigeria is currently at an inflexion point that needs to be managed very carefully. The Nigerian oil industry is no longer the beautiful bride it was twenty years ago as there are other more attractive options around her, even in the region – options that do not come with regulatory instability, FOREX challenges, deepening community issues, and a very concerning security situation. While the country's proven reserves remain attractive, it is far too challenging to access them. Even when companies successfully access the oil, the disparity between production figures and quantity received at the terminals, which is increasingly reported as theft, is unprecedented. All of these issues have driven investments to other countries/regions and we see the IOCs divesting from shallow water operations in a bid to mitigate most of these issues.

Egina, our most recent win and pride, was discovered in 2003 and appraisal wells drilled over the following three years. It has taken over 15 years to get to production status, so when you consider that there has been no new FID by any IOC in almost a decade, the prognosis for the medium term is not great in terms of projects. NLNG Train 7 has saved the industry from total doldrums.

The long-awaited industry regulation (PIB) has finally been passed after so many iterations (as should be the case considering how long it has taken) but there are fears it has come a little too late to deliver on the original intention of preserving the existing industry and pulling in additional investment. There are concerns that the IOCs have experienced the ease of doing business in other countries and regions, such as the Caribbean. The regulation and its promises



Prime Atlantic has a strong focus on local capacity development.

are no longer able to keep the eyes of our suitors from wandering around.

However, it is not all doom and gloom.

“ We could come out of this period with deeper capacity, leading to the emergence of Nigerian players that can go on to build international operations across Africa and possibly beyond.”

Like all inflexion points, things can swing in different ways depending on perspective and management. We could come out of this period with a stronger local industry with deeper capacity, leading to the emergence of Nigerian players that can go on to build international operations across Africa and possibly beyond. We are witnessing Nigerian players contributing significantly to National Daily Oil Quota and this could take a quantum leap if the new and more commercial NNPC becomes the player it can be. We might just see the Nigerian Equivalent of Saudi Aramco, a virile local oil company that changes the game for Nigeria and the region at large. Several African countries look to Nigeria for leadership and if we are successful, we will see several local oil companies rise to the occasion in other African countries.

How are you looking to develop your business, and are there any projects you are working on that you would like to highlight?

We are actively seeking and exploring opportunities to further entrench our various companies' operations in the Nigerian oil & gas industry and potentially, expand our reach to Sub-Saharan Africa. The expansion of our training capabilities to include the offering of technical and vocational training at our Ipara Training Centre, the development of an engineering workshop geared towards supporting oil & gas installations maintenance activities, the establishment of a blending plant for specialty fluids and chemicals, and our continuous focus on the development of technology-based compliance management solutions for the oil & gas industry are some initiatives we anticipate will move us faster towards achieving our objective of being deep-rooted in this industry.

How are you contributing to local capacity development in Nigeria?

The oil and gas industry is one of the most regulated industries globally with regards to the requirements for occupational competencies and requirements for skills, safety and emergency response training, and it is one of the most globally standardised industries.

The drive for local capacity development in the industry has been championed by the NCDMB with the Local Content Development regulations. Our vision at Prime Atlantic from inception was to train locally to global standards and "indigenise" all our products and services. We are proud to say that over the years, we have achieved this and have recorded a few firsts along the way, including being the:

- ◆ First OPITO approved Centre for Provision of Management of Major Emergencies Initial Response Training in Africa
- ◆ First CISRS approved Centre for Scaffold Training in Africa

- ◆ First and only OPITO approved Centre for Provision of Advanced Firefighting training courses to include Offshore Emergency Response Fire Team Member Training and Offshore Emergency Response Fire Team Leader Training in Africa.

We are at the forefront of building capacity of Nigerians not only by making globally standardised training available in country but also by equipping Nigerians to deliver this training, formerly only delivered locally by expatriates.

What importance do you attach to innovation and technology development, and how are you promoting this?

Both terms are important and interwoven at Prime Atlantic. The oil and gas landscape is changing at a rapid rate. We have seen several factors affect our business models (COVID-19, Ukraine-Russia crisis, shale gas, and clean energy) and through innovation we seek to create an ecosystem that utilises data to

become more proactive in providing services to our clients. Looking ahead, it is imperative we continue to drive technological innovation, become more agile, and have at the core of our business, "data" as the essential ingredient in decision making. Promoting both concepts, we have taken a dual view – we will leverage our partnerships to learn and adopt cutting edge solutions beneficial to our clients, and we will seek to finance research and development within the Nigerian technology space.

What will be your focus at NOG, and how do you hope to benefit from participating?

Our focus at this year's NOG is to showcase our businesses, our service offerings, and network with other players within the oil and gas space to see how we can collaborate to proffer innovative solutions to the industry. We will also be actively looking to engage in discussions around the changing landscape in exploration and production of oil as it affects operations and safety services, as well as the future of renewables. ◆

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EUROPE LOOKS TO AFRICA FOR NEW SUPPLIES

Africa is conservatively forecasted to reach peak gas production at 470 bcm by the late 2030s, equivalent to about 75% of the expected amount of gas produced by Russia in 2022, according to a Rystad Energy research.

IN EARLY MARCH, the European Union announced it aims to reduce its dependence on Russian gas by two-thirds by the end of this year alone and is currently headed for a supply crunch that will reverberate around the globe.

Even with the number of gas projects being developed or currently delayed, Africa still has significant production potential. The continent is forecast to increase its gas output from about 260 bcm in 2022 to as much as 335 bcm by the end of this decade. If oil and gas operators decide to up the ante on their gas projects on the continent, near and mid-term natural gas production from Africa could surpass the above conservative forecasts.

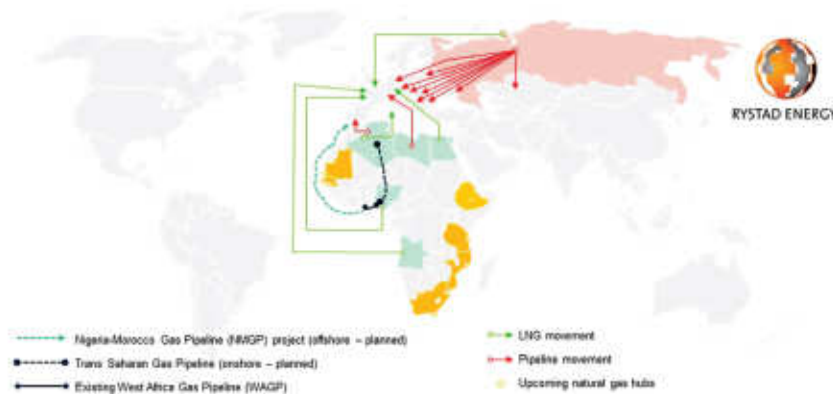
Russia has historically been the dominant natural gas supplier to Europe, with an average of about 62% of overall gas imports to the continent over the past decade. Africa has also been a consistent gas exporter to Europe during that time, with an average of 18% of European gas imports coming from Africa.

Projects in Africa are, however, historically seen as having increased risk and can be delayed or go unsanctioned due to high development costs, challenges accessing financing, issues with fiscal regimes and other above-the-ground risks. Recent signals from oil and gas majors such as BP, Eni, Equinor, Shell, ExxonMobil and Equinor indicate a shift, however, in strategy towards further investment in Africa, with several projects that were previously on ice – including liquefied natural gas (LNG) projects – as they consider restarting or accelerating previously shelved projects in response to rising global demand.

“The geopolitical situation in Europe is changing the landscape for risk globally. While LNG flows from the US are substantial, demand is much higher. Asian and European importers will need to consider African

Pipeline and LNG movements from Africa and Russia to Europe and FSU/CIS

Including upcoming natural gas hubs and gas pipelines in Africa



Source: BP Statistical Review of World Energy 2011–2021; Rystad Energy UCube; Rystad Energy research and analysis

Pipeline and LNG movements from Africa and Russia to Europe and FSU/CIS.

priorities as they develop projects, as many African producers are focusing on supplying energy locally as well as to intra-African markets along with catering to global markets. Existing pipeline infrastructure from Northern Africa to Europe and historical LNG supply relationships make Africa a strong alternative for European markets, post the ban on Russian imports,” said Siva Prasad, senior analyst at Rystad Energy.

African nations that have historically been gas suppliers to Europe are well placed to scale up their exports. Africa’s advantage is that it already has existing pipelines connected with the wider European gas grid. Current pipeline exports from Africa to Europe run through Algeria into Spain and from Libya into Italy. Talks of long-distance pipelines connecting gas fields in Southern Nigeria to Algeria via

the onshore Trans Saharan Gas Pipeline (TSGP) and the offshore Nigeria Morocco Gas Pipeline (NMGP) have picked up in recent months. While the TSGP aims to utilise existing pipelines from Algeria to tap into European markets, NMGP aims to extend the existing West Africa Gas Pipeline (WAGP) all the way to Europe via West African coastal nations and Morocco.

Europe is now considering how gas-rich African nations can be helped to scale up production and exports in the years to come. The European Union’s decision earlier this year that all natural gas investments are equivalent to investments in “green” energy signal that African gas is considered sustainable. The supply crisis driven by security interests may push Europe to fund projects that will also help with energy

Major upcoming natural gas start-ups in Africa



Project	Country	Operator	FID*	Start-up*	Resources* (MMboe)	Liquids	Gas
Alum (Area 1 LNG - T1 & T2)	Mozambique	TotalEnergies	2019	2026	1060		
Gofinho (Area 1 LNG - T1 & T2)	Mozambique	TotalEnergies	2019	2026	1735		
Greater Tortue Ahmeyim FLNG Phase I	Mauritania	BP	2018	2023	920		
Greater Tortue Ahmeyim FLNG Phase II	Mauritania	BP	2022	2027	320		
Coral FLNG	Mozambique	Eni	2017	2022	240		
Marine XII Fast LNG	Congo	Eni	2022	2023	200		
Sarika Lean Gas	Angola	Chevron	2021	2023	115		
Marine XII FLNG	Congo	Eni	2022	2023	85		

Source: Rystad Energy UCube; *conservative estimates

Major upcoming natural gas start-ups in Africa.

Image Credit: Rystad Energy

affordability back home. For instance, Europe could be a key financier of the proposed US\$13bn TSGP project.

A boost for uncontracted gas in Senegal-Mauritania

BP chief executive Bernard Looney has said that the decision to exit Russia is not only the right thing to do but is also in the company's long-term interests. The UK giant recently booked pre-tax charges of US\$24bn and US\$1.5bn in the Q1 2022 financial results due to its decision to pull out of Russia. The company is now looking at African projects to seize the opportunity to target European markets with gas supplies.

BP has several big gas projects in Senegal and Mauritania – the Greater Tortue Ahmeyim (GTA), Yakaar-Terenga and BirAllah LNG projects. LNG volumes from the 2.5 million tonnes-per-annum (tps) GTA floating LNG (FLNG) Phase 1 has already been sold, and some gas from Yakaar will be used as feedstock for Senegal's gas-to-power plant. Meanwhile, gas from GTA LNG Phase 2, the remaining gas from Yakaar-Terenga and BirAllah are still uncontracted and these volumes could benefit from what is expected to be a supply-constrained LNG market in the coming years.

Eni plans ramp up of African gas to Italy

Italian major Eni has said that it can alleviate Europe's dependence on Russian gas to an extent through supply from its African projects, including in Algeria, Egypt, Nigeria, Angola and Congo-Brazzaville. In the past

month, Italy, in association with Eni, signed deals to boost gas imports from the North African nations of Algeria and Egypt, and then more recently, two more gas supply agreements with two sub-Saharan African nations, Congo-Brazzaville and Angola. Other African nations where Eni holds important upstream portfolios on the back of which the Italian authorities could potentially sign gas-related deals include Mozambique, Nigeria, Ghana, Cote d'Ivoire and Libya.

Nigeria is currently in the process of ramping up capacity at the Nigeria LNG project from 22 million to 30 million tpa through its Train 7 scheme and debottlenecking, while Eni is now a stakeholder in many upstream fields that provide feed gas to the LNG plant as well as in the processing plant.

Equinor, ExxonMobil and Shell, like BP, have significant LNG portfolios in Africa that are yet to be developed, and they can look to these massive gas resources to counter the potential gas supply deficit in the future. ExxonMobil has a 25% stake in Area 4 in Mozambique, with significant potential to add further expansion trains. Mozambique was expected to benefit from the EU's move to classify gas investments as green, even after an Islamist insurgency in the gas-rich Cabo Delgado province had paralyzed planned investments. The current scenario of a potential gas supply crunch could see the country accelerate the development of its gas resources. The US major's pullback from Russia could lead to it finally sanctioning its envisaged Rovuma LNG scheme in Mozambique. 🔴

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TRANSFORMATION IN SOUTH AFRICA'S MARINE ECONOMY

As Subtech South Africa (Pty) Ltd, completes major B-BBEE transaction, managing director Anton Van Zyl and finance director Bjorn Anderson have highlighted South Africa's offshore economy, and the goals to transform the country's marine sector. Deblina Roy reports.



IMAGE CREDIT: ADOBE STOCK

South Africa's offshore marine economy is all set to accelerate in the coming years.

What are the key challenges faced by South Africa's offshore marine economy?

We are in a key strategic location geographically from a shipping perspective, with good ports facilities. It is the efficient operation of these resources that lies at the forefront of our ability to capitalise on the geographic attractiveness of South Africa as a global shipping resources that will determine our success in this segment.

South Africa is rich in offshore natural resources and the exploitation of these resources for the betterment of the country as a whole needs to be expedited in an efficient

“ South Africa's offshore maritime economy need to be supported by efficient operation of the South African ports, to increase economic acceleration as well as regional development.”

and transparent manner. This will stimulate the offshore maritime economy but will need to be supported in parallel by efficient operation of the South African ports as previously mentioned.

What is Broad-Based Black Economic Empowerment, and how is it crucial for equitable growth in South Africa?

B-BBEE is the mechanism by which the state seeks to address the racial economic imbalance that has resulted from the decades of apartheid rule that precluded the majority of the South African population, along racial



Image Credit: Subtech South Africa

Anton Van Z is the managing director at Subtech South Africa.

lines, from engaging and benefiting from economic opportunity. While the policy continues to create frustration for many, as by its very nature it reminds us of the historic injustices, it is necessary in some shape or form to assist in addressing the racial economic imbalance.

The challenge faced in execution of this strategy is to do so in a manner that does not stifle growth and development for the country's economy and yet provides growth opportunity for the minority equity groups that have suffered under the historic injustices. In South Africa, the top B-BBEE score level is 1, and a score of level 4 or lower is crucial to the growth of any company. The aim for Subtech South Africa is to implement the necessary structural change to achieve at least a level 3, preferably a level 2 B-BBEE score, and in so doing continue to contribute to meaningful transformation within our sector.

How Subtech South Africa is leading the journey in developing the country's offshore marine sector?

Subtech South Africa is both IMCA and ISO9001 compliant with significant international experience. We have always been

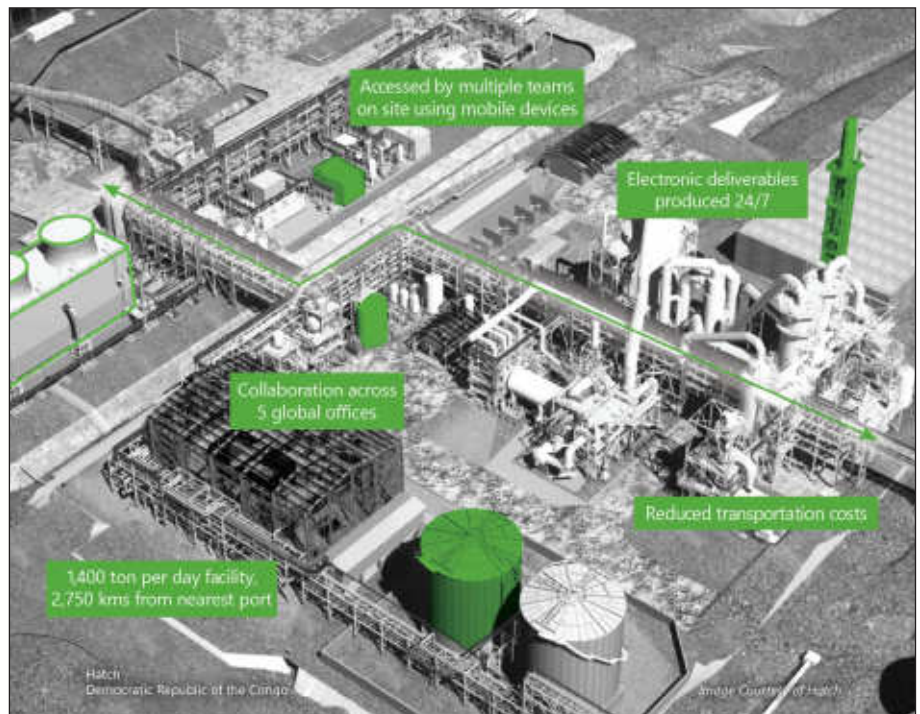
“The key geographic focus areas for Subtech South Africa would be the eight main ports within South Africa, Mozambique and Namibia.”

at the forefront of driving the standards of local service delivery to an international level. We continue to pride ourselves in the training and development of our employees to ensure we continue to transform the South African marine economy, to deliver proudly South African Solutions to our Clients at internationally accepted standards. We are also continually seeking to improve on our B-BBEE status and in so doing remain

committed to local skills development.

Which regions are the key focus areas for Subtech South Africa?

The key geographic focus areas for Subtech South Africa would be the 8 main ports within South Africa, Mozambique and Namibia, as well as to collaborate, innovate and support on any growth opportunities and initiatives that may present themselves within the wider maritime sector. ♦



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AIR COMPRESSOR MARKET SEES A ROBUST GROWTH

The growing demand for the innovative air compressors to effectively provide power to the tools at low cost is driving the market growth.

THE GLOBAL AIR compressor market size was valued at US\$33.31bn in 2021. The global air compressor market is expected to grow rapidly during the forecast period owing to the surging demand for the air compressors across various end use verticals such as food and beverages, mining, electronics, healthcare/medical, oil and gas, construction and others.

The growing demand for the innovative air compressors to effectively provide power to the tools at low cost is driving the market growth. Moreover, the surging investments in the development of enhanced oil and gas pipeline networks in countries like the USA and the rapid industrialisation of the developing regions are the most prominent market drivers. The constant product launches by key market players is further fuelling the growth of the market across the globe.

Rising demand for the durable compressors

The demand for the highly durable air compressor is rising for the applications in the drilling process. The increment in the use of various machineries in the manufacturing and other industries has fuelled the market growth. The rapidly growing oil and gas industry owing to the rising demand for power and fuel across the globe is significantly boosting the demand for the

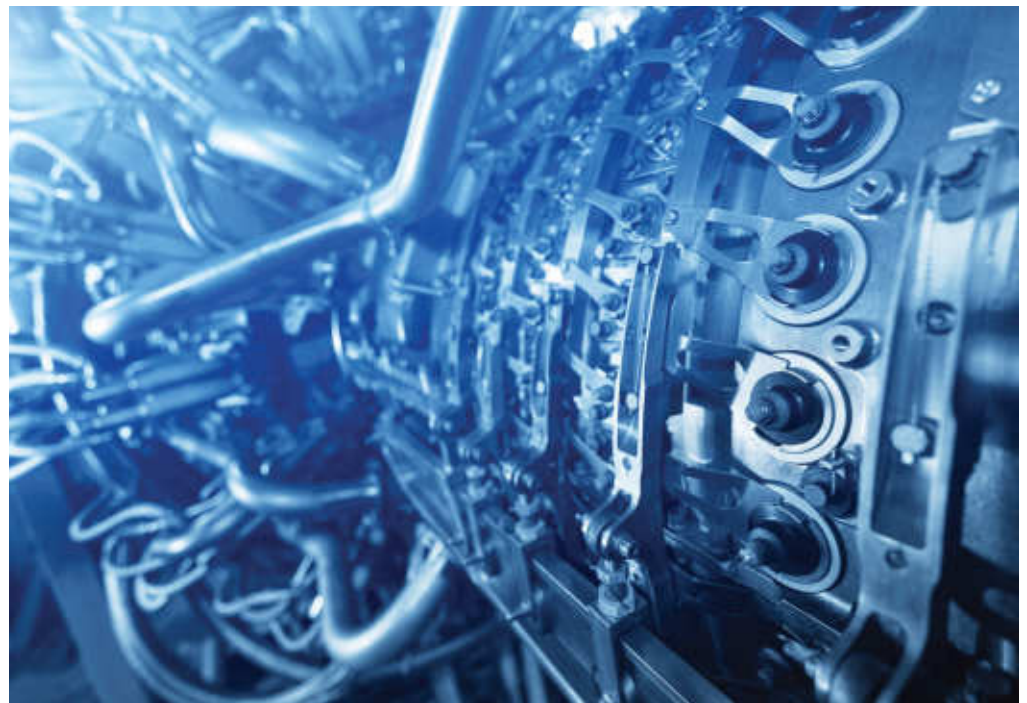


Image Credit: Adobe Stock

The manufacturers are investing heavily in the R&D and are constantly engaged in the introduction of new and innovative features in the air compressors.

durable air compressors. The surging consumption of oil all over the globe is expected to drive the demand for the air compressors among the oil producers to increase productivity at lower costs.

Expensive installation costs

The installation of modern and innovative air compressors like rotary air compressor involves a high procurement and installation costs. The high capital investments may restrict the end users with restricted

financial capacities to adopt the modern air compressors. This is major restraining factor that may hamper the market growth during the forecast period.

“ The demand for the highly durable air compressor is boosting for the applications in the drilling process.”

Constant product launches

The manufacturers are investing heavily in the R&D and are constantly engaged in the introduction of new and innovative features in the air compressors. For instance, in February 2021, Sullair introduced its Mid-Range Series Portable Compressors. This product is integrated with the electronic spiral valve technology that offers flexibility and enhanced operational efficiency. These new features may provide various growth prospects in the foreseeable future. ♦

MAATS BOOSTING AFRICA'S RENTAL FLEET MARKET

Michael Mertes, responsible for the sales and rental in Africa, has highlighted the company's vision and plan for the rental fleet market in Africa.

What have been Maats' biggest successes?

Relating to the African Market one of Maats' biggest successes was to design and produce the Welding Tractor SR714 and SR716, one of the most sold welding tractors in the continent of Africa. These welding tractors are based on a Liebherr dozer and changed into a welding tractor by Maats.

At this moment, Maats has more than 25 units running on jobsites in pre-dominantly desert-like semi-arid conditions in the Sahara. Surviving these harsh environmental conditions is the pinnacle for all machines. On the other hand, the same welding tractors act in +/- 40 degrees surroundings as well, also without problems.

In general, Maats succeeded to build up one of the biggest and youngest rental fleets of pipeline

“ A recent success is the developing of the Maats Internal Bender. This bending machine is designed to bend insulated pipes on the jobsite and from the inside, without breaking the insulation.”



Left: Michael Mertes, responsible for the Sales and Rental in Africa; Right: Gerben Wansink, CEO of Maats.

related machines in Europe and in Asia.

A recent success is the developing of the Maats Internal Bender. This bending machine is designed to bend insulated pipes on the jobsite and from the inside, without breaking the insulation.

How does Maats stand out from its competitors?

Maats has the youngest rental fleet on the market, as most machines are new or merely a few years old. Furthermore, does Maats have an added value to her customers as Maats can connect them to possible Joint Venture partners, allocate suppliers and let them use her vast network and 30 years of experience in the pipeline construction industry. Another advantage is that machines rented or bought from Maats, can be serviced by the

global Liebherr service network since Maats uses Liebherr basic machines and/or Liebherr components. Other rental companies do not have comparable worldwide service possibilities.

Moreover, Maats is the first rental company that can supply the customer with a CO₂-free rental of the pipeline equipment.

What strategies have helped you succeed in the recession?

As during recessions the budgets for purchasing equipment are shrinking, Maats expanded her fleet even more, in order to accommodate the rising demand for rental.

What services will provide growth for Maats?

Most dominantly is our rental service. Customers know us from our quality, reliability and

flexibility in the rental business for nearly 40 year already. Besides that, Maats' service of bending on site with the internal bending machines can be a huge advantage for our customers.

Also the sale of high quality Used Equipment (not necessarily pipeline equipment) is growing the last years.

What regions have the greatest potential for Maats?

Maats sees the biggest potential in Northern Africa, especially in the countries of Algeria and Libya. Maats has a vast sales experience in both countries and is aware of the local peculiarities and potentials. However, Maats also acknowledges Nigeria and Kenya and several other countries as upcoming Pipeline bearing countries.

What is the medium-to-long-term plan for Maats in the African region?

The medium-term strategy involves establishing additional rental projects and increasing our brand awareness. To realize this, Maats founded the subsidiary Maats Africa sarl, located in Tunis, Tunisia. Via Maats Africa we can act more direct and more locally. Our local staff members travel every week to different African countries, in order to meet customers and governmental executives. The long-term plan is to build up a "local" (Northern African) rental fleet. ♦

POSITIVE GROWTH FOR OFFSHORE COMMUNICATIONS

The offshore oil and gas communications market share is expected to increase by US\$1.35bn from 2021 to 2026, at a CAGR of 6.64%, according to Technavio.

ONE OF THE key factors driving growth in the offshore oil and gas communications market is the increasing investments in enhancing network infrastructure. For decades, the oil and gas industry has relied on its own telecommunications networks, according to the analysis.

In times of crisis, these privately owned and maintained networks are utilised to handle day-to-day operations and coordinate emergency assistance. Many mission-critical networks nowadays face a two-fold dilemma. First and foremost, there is a need to modernise.

Today's demands on infrastructure, such as real-time data, sophisticated control and monitoring closer to the network edge, and high-level security, surpass what narrowband networks can offer. The second point to consider is the need for good communication. Oil and gas field communications necessitate dependable, durable, and high-capacity wireless networks that can operate across broad areas and in harsh environments.

The digitalisation of oilfield communications is another factor supporting the offshore oil and gas communications market share growth. The fast acceptance of 4G wireless communication technology and the evolution of 5G standards to accommodate industrial use cases will open up more options

“The increasing cybersecurity risks will be a major challenge for the offshore oil and gas communications market during the forecast period.”



Image Credit: Adobe Stock

Distinct aspects of the oil and gas industry come with different risks and therefore different tactics.

for the oil and gas industry to deploy private long-term evolution (LTE) and 5G networks. There is still a lot of uncertainty when it comes to 5G adoption plans in the oil and gas business. However, it is apparent that 5G will become a significant competitive advantage for oil and gas companies in the near future.

Oil exploration and production (E&P) is becoming more efficient and agile, fuelling ambitious digital projects in the E&P sector of the oil value chain. The benefits of 5G would include ultra-reliable low-latency communication (URLLC), massive machine type communication (MMTC), and enhanced Mobile Broadband (eMBB).

Key Offshore Oil and Gas Communications Market Challenge

The increasing cybersecurity risks will be a major challenge for the offshore oil and gas communications market during the forecast

period. Because the industry uses connected technology such as the Internet of Things (IoT) and artificial intelligence (AI), cyber attackers have been targeting crude oil and gas businesses with sophisticated attacks for years.

Distinct aspects of the oil and gas industry come with different risks and therefore different tactics. Development drilling and production have the highest cyber risk profiles among upstream operations, while seismic imaging has a lower risk profile. The increased requirement to digitise, eStore and integrate seismic data into other disciplines could increase the company's risk profile in the future. Apart from its critical infrastructure classification, the upstream industry's sophisticated computation, networking and physical operational procedures scattered throughout the globe make it extremely vulnerable to cyberattacks. 🔴

MODMAG M2000 ELECTROMAGNETIC FLOW METER RECEIVES BTL CERTIFICATION

Badger Meter's ModMAG M2000 Electromagnetic flow meter is now available with BACnet MS/TP communication protocol.

THE M2000 METER has also completed rigorous testing for the BACnet testing laboratories (BTL) certification programme, assuring seamless integration with building management systems (BMS). The M2000 meter is the first full-bore inline electromagnetic meter to achieve BTL Certification.

"The BACnet MS/TP protocol is a critical component of automated building management systems, and we're proud that the M2000 meter has completed the comprehensive evaluation process necessary to qualify for BTL Certification," said Dale Matthews, director of sales, Badger Meter.

The M2000 meter is a trusted technology to measure the flow of water and conductive liquids with zero straight run required. Its zero straight run performance has been validated to OIML/MID standards, providing accuracies of $\pm 1\%$ with zero straight run upstream or downstream or $\pm 0.2\%$ with required straight

run. This meter supports both accuracy ratings out of the box, without the need for firmware adjustments.

With the BACnet MS/TP communication protocol, the M2000 meter seamlessly integrates into existing operations to provide enhanced data points, including bi-directional flow rate, totalisers in both directions, empty pipe statuses, leak alarms, no flow statuses and more. Existing M2000 meters can be retrofitted with the BACnet MS/TP protocol using an upgrade kit – installation takes a single user less than 30 minutes without the need for additional wiring or products.

For customers, the integrated communication module means the M2000 meter has a direct connection to the gateway or PLC, without the need for a converter or extra components. Fewer components result in better reliability and decreased maintenance and commissioning costs.


Whether you're looking to reduce costs,

“ The M2000 meter is a trusted technology to measure the flow of water and conductive liquids with zero straight run required.”

comply with regulations or upgrade to the latest technology without significant modifications to your system, the ModMAG M2000 Electromagnetic flow meter provides dependable, rugged and cost-effective flow measurement for a wide range of applications, including heated/chilled water systems, data centres and other mission-critical HVAC installations.

"When there is a need for the highest possible measurement accuracy and versatility, the M2000 meter is an ideal choice," said Michael Steiner, product manager, Badger Meter.

"It eliminates complexity by working out of the box with industry-leading features, including the option for BACnet MS/TP communication protocol, at a very competitive price."

For greater visibility and enhanced day-to-day efficiencies, the ModMAG product line – including the M2000 meter – can be paired with the AquaCUE flow measurement manager, a cloud-based software suite that offers a cellular data solution for measuring and monitoring sustainable water usage. 

With more than a century of water technology innovation, Badger Meter is a global provider of industry leading water solutions encompassing flow measurement, quality and other system parameters. These offerings provide the customers with the data and analytics essential to optimise their operations and contribute to the sustainable use and protection of the world's most precious resource.

Image Credit: Badger Meter



Badger Meter

ModMAG® M2000
ELECTROMAGNETIC FLOW METER
NOW BTL CERTIFIED FOR USE WITH
BACNET MS/TP COMMUNICATION
PROTOCOL

The BACnet MS/TP protocol is a critical component of automated building management systems.

AFRICAN RIG COUNT

COUNTRY	March 2021	April 2021	March 2022	April 2022
ALGERIA	25	27	30	28
ANGOLA	4	4	6	6
CAMEROON	1	1	3	3
CHAD	3	3	3	3
CONGO	0	0	1	1
CÔTE D'IVOIRE	0	0	1	1
EQUATORIAL GUINEA	0	0	1	1
GHANA	0	1	1	1
KENYA	3	3	5	4
LIBYA	12	12	15	7
MAURITANIA	0	0	0	0
MOROCCO	0	0	0	0
MOZAMBIQUE	1	1	0	0
NIGERIA	6	5	10	11

Source: Baker Hughes

Macdermid releases water-based hydraulic fluid for offshore drilling rigs

MACDERMID OFFSHORE SOLUTIONS (MacDermid), one of the leading providers of high-performance and environmentally-friendly products for the offshore oil and gas industry, has expanded its product line with the release of Erifon THF 32.

The hydraulic fluid is designed to meet the complex needs of the drilling industry quickly and efficiently. This fire- and explosion-resistant HFC water-based fluid reduces wear and provides exceptional lubricity in motion compensation devices and tensioning equipment in offshore drilling rigs.

The water-based fluid complements MacDermid's existing product lines and offers outstanding technical performance while withstanding extreme compression ignition and stress, meeting stringent military requirements including military spec DEF STAN 91-110. In keeping with the company's commitment to performance and sustainability, this is a safe product that maintains compliance with all environmental regulations to help companies operate responsibly and effectively.

Erifon THF 32 is a powerful high-viscosity lubricant and corrosion inhibitor that meets all global and environmental compliances, including the US EPA Gulf of Mexico General GMG 290000 Permit requirements for riser tensioner fluids, so customers can use this

product safely for any project, regardless of location.

Erifon THF 32's lubricity serves extremely well for extended travel, having withstood a 50,000-kilometer cylinder endurance test from a major cylinder manufacturer. Erifon THF 32 meets stringent tensioner fluid requirements and is appropriate for use with all cylinder manufacturers' wireline, in-line or direct acting tensioners. The fluid meets all regulations from port to port, so customers never need to change fluids in the middle of a project. The fluid operates effectively in both warm and cold climates.

Eric Handley, vice-president of technology, said, "Customers can purchase Erifon THF 32 from MacDermid globally, making this safe and reliable fluid accessible for offshore drilling rigs anywhere in the world."

MacDermid Offshore Solutions supports companies throughout the oil and gas industry to enhance offshore production and drilling operations. The control fluids are used in subsea equipment to function critical valves, safely and reliably throughout the world's oil and gas fields.

MacDermid Offshore Solutions is a business unit of Element Solutions Inc. Element Solutions Inc is one of the leading specialty chemicals companies whose businesses supply a broad range of solutions that enhance the products people use every day.

CGG and Kent announce strategic carbon capture and hydrogen partnership

CGG, A GLOBAL technology leader in geoscience, has announced a strategic partnership with Kent, a leading energy services engineering company, to work together on realising decarbonisation opportunities through CCUS development and hydrogen production and supply.

CGG and Kent will be providing customers in the energy and industrial sectors with 'end-to-end' services across the life cycle of the projects. For example, from subsurface characterisation required for storage screening and evaluation to project engineering, planning, construction, and commissioning, including late-life activities such as decommissioning and long-term monitoring, that include instrumentation and data management.

This collaboration brings the capability to masterplan entire CCUS clusters. CGG will deploy its world-leading capabilities for subsurface characterisation and subsurface risk analysis for CCUS and H2 projects as well as monitoring and instrumentation technologies for long-term monitoring and environmental assessment. CGG also has an extensive Earth Data library of geology and seismic multi-client data to help clients quickly identify suitable storage sites in depleted oil and gas reservoirs and aquifers.

Kent has been involved in more than 50 CCUS projects worldwide

and was a key player in one of the world's largest operational CCUS projects at Boundary Dam, Canada. Kent also has more than 50 years' experience on hydrogen projects, including most recently HyNet in the UK. Kent and CGG will use their industry-leading experience to develop realistic feasibility studies and concept designs to support client stage gating processes.

John Kent, chief energy transition officer, Kent, said, "By bringing our complementary capabilities together, we can help each other, and our customers, move at a faster pace on the energy transition journey. Working together is critical if we are going to decarbonise the sector fully - no one company or organisation can do it alone. So we at Kent are actively looking for partnerships such as these that facilitate information sharing and a faster transition to net-zero."

Peter Whiting, executive vice-president, Geoscience, CGG, added, "By capitalising on the capabilities of both companies we can bring to our customers a fully integrated view of their projects from the subsurface to the surface across the lifecycle of these projects. Kent and CGG both share the same commitment to playing an active role in the energy transition, and to service excellence, helping our clients to meet their net zero targets."

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TGS delivers Facies Map Browser 4.7.0

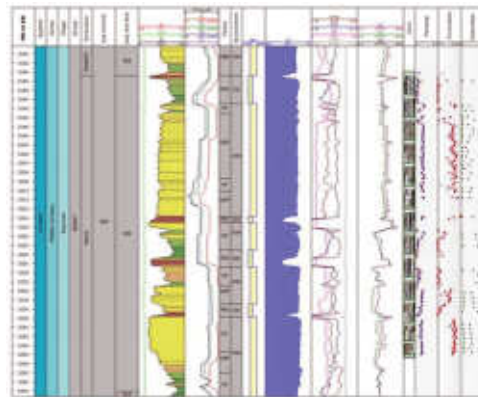
TGS, A GLOBAL provider of energy data and intelligence, has announced the release of the North West Europe Facies Map Browser (FMB) 4.7.0.

The industry-supported FMB continues to provide operators with a cost-efficient data-rich interpretation tool that provides critical subsurface insights to support conventional oil and gas exploration, and regional carbon storage assessment, across the UK and Norway Continental Shelf.

The latest version results from a year-long process to supply customers with the most updated, comprehensive and well-interpreted map data suite available for the region. Updates include all newly released exploration and appraisal wells from the UK and Norway Continental Shelf and new data types to assist with both regional and infrastructure-led exploration workflows. Further enhancements to the stratigraphic model have been completed, including a review of the Cenozoic stratigraphy integrating well data and TGS seismic data – providing a robust stratigraphic framework to support new hydrocarbon play concepts for near-field exploration and carbon storage assessments.

FMB 4.7.0 desktop browser includes functionality

Image Credit: TGS



FMB 4.7.0 desktop browser includes functionality updates that make it even easier to visualise and analyse the largest cross-border well database in North West Europe.

updates that make it even easier to visualise and analyse the largest cross-border well database in North West Europe. FMB data is also available via the FMBCoast API data services, allowing users to seamlessly connect well and map data directly from TGS Cloud into their workflows.

Halliburton introduces real-time StrataStar visualisation

HALLIBURTON HAS INTRODUCED its latest deep azimuthal resistivity service, StrataStar.

The new technology provides multilayer visualisation to maximise well contact with the reservoir and improves real-time reserves evaluation.

“Beyond its superior depth of investigation, StrataStar is different from other azimuthal resistivity technologies due to its ability to deliver a high-fidelity picture of the reservoir, along with a comprehensive understanding of resistivity, including anisotropy,” said

Halliburton vice president of Sperry Drilling Jim Collins.

“This means faster, more accurate reservoir characterisation to precisely place wells in the most productive zones to maximise asset value.”

The StrataStar service is the latest addition to Halliburton’s iStar intelligent drilling and logging platform, which combines deep subsurface insights with artificial intelligence to achieve improved drilling performance and more consistent well delivery.

Acquiring real-time measurement and visualisation of surrounding geology and fluids up to 30 feet around the wellbore, StrataStar applies a sophisticated algorithm to map the position, thickness, and resistivity of interbedded rock and fluid layers, helping operators stay within targeted boundaries.

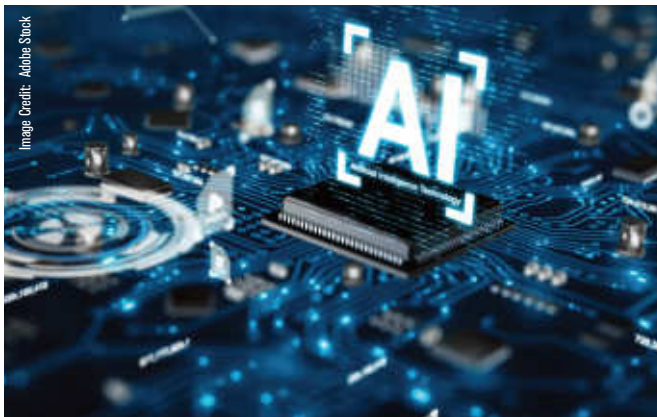
Schlumberger and Sintela announce technology sharing agreement

SCHLUMBERGER AND SINTELA have signed an agreement to co-develop new fibre-optic solutions for multiple industrial markets. Schlumberger will market and deliver the solutions in the energy, carbon capture and storage (CCS), and geothermal industries, with Sintela delivering the combined solutions to other industrial markets.

The solutions will integrate intellectual property (IP) from Sintela’s distributed fiber-optic sensing (DFOS) portfolio with IP from Optiq Schlumberger fiber-optic solutions, enabling simpler, cost-efficient fibre-optic interrogator deployments and new digital workflow capabilities.

“Working together with Sintela, we will deliver a range of fiber-optic solutions that enhance measurement data handling capability at the edge, rapidly delivering actionable insights to our upstream and midstream customers in domains such as geophysics, well integrity, production monitoring and pipeline monitoring,” said Aparna Raman, president, reservoir performance, Schlumberger.

“Sintela brings years of cross-industry R&D knowledge and experience with DFOS technologies—including optical interrogators—that we will leverage with our combined IP and industry domain knowledge to accelerate the pace of innovation, deploy solutions at scale and develop more integrated and open workflows with customers, leveraging AI and ML.”



The StrataStar system utilises insights and artificial intelligence.

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Sandvik adds Sanicro 625 bar to its offering

SANDVIK IS ADDING super alloy Sanicro 625 bar (UNS 06625) to its growing family of high-performing nickel-alloys. The bar will be used to machine advanced components that are exposed to acids, alkalis, seawater and other wet corrosive conditions in both cryogenic environments and temperatures up to 593°C (1100°F).

“This is great news for customers who are looking for a reliable supply of high-quality 625 bar stock,” said Henrik Zettergren, global product manager. “625 is among the toughest of nickel-based alloys and really sets the gold standard for safety, reliability and performance. When you’ve got a flange, valve or fitting that simply cannot fail, it ensures high strength, extraordinary corrosion resistance, good fabricability and



Image Credit: Sandvik

The chemical composition has a very high 62% nickel content.

excellent welding properties.”

The decision to manufacture Sanicro 625 bar and build up local stocks with trusted distributors and at its own mills in the US, Europe and Asia was largely prompted by customers experiencing sourcing challenges during the pandemic, says Zettergren. Local stocks were (and are) often scarce, production

complicated and maintaining inventory costly. Yet the need for extreme safety and reliability is high among energy producers, refineries, chemical processors and marine companies.

The bar material, which has an ASTM classification of Grade 1, is provided in the soft annealed and quenched condition in 3 to 7-meter lengths (9.84 feet – 22.96 feet) with an outer diameter of 3 to 9 inches (76.2 to 228.6 mm). OD tolerances are +/-0.8, according to ASTM B637.

The chemical composition has a very high 62% nickel content, making Sanicro 625 bar virtually immune to wet corrosion. A high 21% chromium content also offers superior corrosion resistance to oxidizing (acid) environments, and a high 8.5% molybdenum content ensures high resistant to pitting and crevice corrosion.

Gall Thomson launches emergency mooring release system

IN ORDER TO reduce the significant safety risks associated with the manual emergency release of mooring systems during FPSO tandem offloading ocean towage, heading control, positioning and decommissioning, Gall Thomson has released the PODx (Powered Offshore

Disconnect) – an innovative new automatic actuation system.

PODx minimises the risk of personnel injury, damage to equipment and subsequent downtime by remotely releasing mooring hawser chains under full load, quickly and safely. It utilises release bolt technology that

automatically separates on demand, providing an identified parting point in the mooring line. This allows for a reliable release in under 100 milliseconds.

Designed for use in a variety of offshore applications including FPSO, emergency mooring release systems and anchor handling vessels, PODx uses a range of block and release bolt sizes specific to the load requirement.

Fred Boufennane, business development director at Gall Thomson, said, “PODx is a simple and robust solution to a serious safety problem that has long been recognised as presenting significant risks to personnel and capital equipment. The technology is proven, and its operational costs are substantially lower than traditional alternatives.”



Image Credit: Adhik Stock

PODx minimises the risk of personnel injury and damage to equipment by remotely releasing mooring hawser chains under full load, quickly and safely.

AWS introduces equipment health and performance optimisation solution

AMAZON WEB SERVICES (AWS) has introduced its Equipment Health & Performance Optimization solution, which helps oil and gas operators reduce operational downtime by delivering real-time visibility and insights on equipment health and monitoring.

This enables prediction of equipment failures days or weeks ahead, while also optimising equipment to ensure optimal performance.

Upstream and midstream energy production assets are comprised of millions of pieces of equipment that support the development and production of fuel sources. These critical assets often experience downtime and deferred production due to equipment failures. According to the U.S. Department of Energy, predictive maintenance saves 8% to 12% over preventative maintenance costs and upwards of 40% over reactive maintenance costs.

The Equipment Health & Performance Optimization solution ensures efficient equipment maintenance applications and enables operators to transition from costly reactive or time-based maintenance schedules to maintenance based directly on the health of the asset.

AWS technology partners for the Equipment Health & Performance Optimization solution include Shoreline IoT and Seeq, and other partners.

Frigmaires Engineers launches mobile plants

FRIGMAIRES ENGINEERS' NEWLY-DEVELOPED ABB (Automatic Batch Blending) skid-mounted and containerised plants are designed for firms wishing to enter the lubricant business.

They are recommended for installations in remote and logistically challenged areas. These units can be installed indoors, as well as outdoors. A provision for connecting a generator to operate the entire system can be provided as an option to make it independent of the local power supply.

The units are assembled and fully tested at the company's facility before being delivered in 20 or 40 FT containers with no need for on-site assembly,

pipework, electrical wiring or mounting of components. These are simple plug-and-play units. The base oils are charged directly from flexitanks to be connected to the feed manifold.

The main components of the plant are the feed manifold, feed and discharge pumps, load cell mounted blenders, additive dosing unit, heating unit, online filters, piping, valves, instrumentation and filling station, which are connected and operated through a semiautomatic PLC system with HMI controls.

The end user has to simply connect the base oils from flexitanks to the feed manifold. Each package is provided with basic laboratory testing

equipment, a set of spares, maintenance tool kit, a booklet for starting formulations and basic laboratory quality tests. A quick change-over flushing system is also provided for product turn arounds.

This plant is used for production of automotive, industrial, bio and marine lubricants. Advantages include:

- ◆ Short delivery and installation time
- ◆ Quick and homogeneous blends
- ◆ Connects directly to flexitanks
- ◆ Low investment costs
- ◆ Reduced on-site erection and hook-up time
- ◆ Factory tested and

manufactured

- ◆ Single source responsibility, ensuring fewer interfaces for our client to handle
- ◆ Self-contained operations
- ◆ Manufactured to CE specifications.

Frigmaires also offers turnkey solutions for the production of lube oil blending and grease plants that cater to the requirements of small or large scale lubricant and grease manufacturers. Constant innovation remains their top priority, ensuring delivery of high-quality solutions to customers in the industry.

Frigmaires Engineers provides turnkey solutions for the production of plant and technology.

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DRONE TECHNOLOGY: IS THIS THE FUTURE FOR O&G?

Africa's oil and gas sector is seen to drive the use of drone services across the continent. Noryvaldo de Almeida, managing director, Nasadi Soluções, Lda, speaks exclusively with Oil Review Africa about the future of drone operation in African rigs. Deblina Roy reports.

What is the future of the oil and gas drone service market in Africa?

The drone service in the oil and gas market in Africa has a big potential and I see it growing fast. The urge of oil operators and service companies to have drone services is no longer targeted only for inspections. Besides inspections, drones can be used in oil spill response and surveillance of pipelines and other infrastructure in the O&G field.

What are the challenges in implementing drone operations for African rigs and refineries?

The main challenge is the difficulty in changing people's mindset when it comes to drones. To convince the oil companies, service companies, and even government officials of the advantages of drones: the cost and time saving, as well as safety of people, becomes a hard task, especially when drones are most seen in the entertainment and military industry. With the oil crisis in 2016, oil companies had to adapt and adjust their operations strategies, looking also now to the cost factor, becoming then more open to these new technologies.

What kinds of new drone technologies are emerging across the continent?

The need for faster, low-cost, safer technologies in the O&G grows



Image Credit: Nasadi Soluções, Lda

According to de Almeida, Africa is seeing all kinds of drones, from O&G, mining, security, environment, and even in healthcare.

rapidly, and so does the drone technology. In the continent, we see almost all kinds of drones, from O&G, mining, security, environment, and even in healthcare. Here on the continent, we can find drones that do confined space inspections (O&G), drones that fly to places to deliver

medicine and blood (Healthcare), to drones with LiDAR Technology (Environment)

Which African regions have the leading operations for the company?

Looking at the top oil producing countries in Africa, we will find

Angola and Nigeria (SSA), where the biggest export is crude oil and which represent close to or more than 75% of their total export goods in value, thus having a big impact in their GDP. That just shows us that the exploration of this commodity is at a high rate, where there is a need for service companies to adapt to new technologies ensuring continuity of operations, as well as the quality of the service. As the drone market extends to both onshore and offshore services, from inspections up to surveillance of pipelines. There is huge scopes that a drone service can cover.

Please tell the readers about Nasadi's operations across Africa. Which African countries the company has leading operations and what is the company's plan of action?

Nasadi Drone Solutions is an Angolan company based in Luanda and with a background in drone operations in Angola with mapping, O&G inspections, oil spill response, as well as drone solutions consultancy. We intend to expand to other African countries and provide solutions to satisfy the needs of the companies to develop the drone market in other African countries, helping to identify market opportunities and thus create more jobs, especially for the young Africans. ♦

“The need for faster, low-cost, safer technologies in the O&G grows rapidly, and so does the drone technology.”



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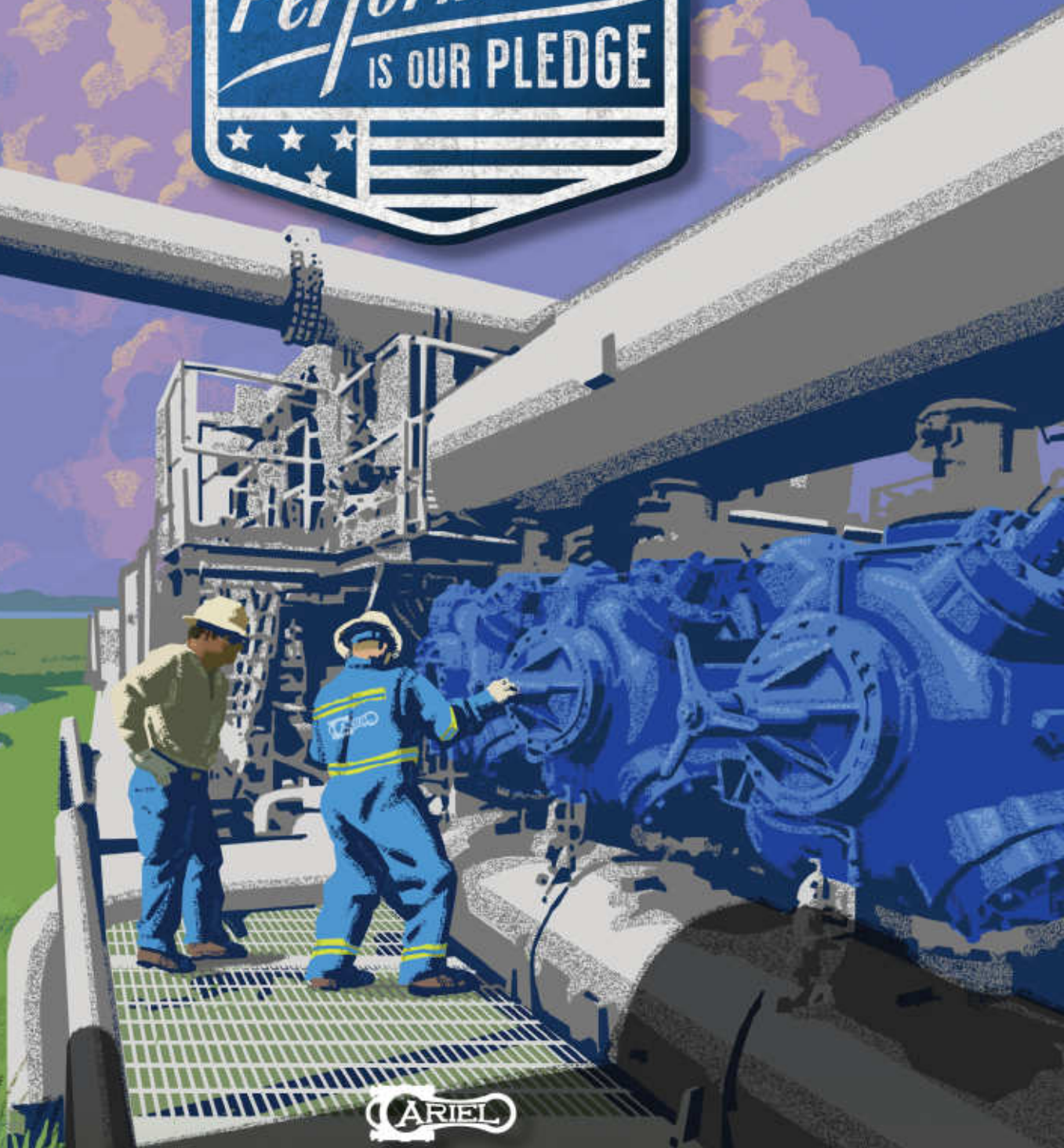


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