# Oil, Gas & Renewables



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LIBYAN OIL PRODUCTION SOARS: 2024 YEAR-END TARGET ACHIEVED BY BEGINNING OF DECEMBER



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### LIBYAN OIL PRODUCTION SOARS: 2024 YEAR-END TARGET ACHIEVED BY BEGINNING OF DECEMBER

By Moutaz Ali and Michel Cousins

On 25 December, the day after Libya's independence anniversary, the National Oil Corporation (NOC) announced with some evident pride that daily crude oil production had significantly surpassed the planned year-end target, reaching that day 1,405,609 barrels of crude oil and an additional 52,633 barrels of condensates, a total of 1,458,242 barrels.



he target that the NOC had set for oil and condensate production by the end of December 2024 was 1.4 million b/d. In fact this was reached four weeks earlier than planned, because production in November exceeded expectations, growing during the month from 1.336 million barrels on 1 November to 1.391 million barrels on the last day of the month, an increase of over 55,000 b/d. Indeed, output on 30 November was just 9,000 b/d below the year-end target.

A few days later, on 3 December at the Libyan Energy Week in Cairo, NOC chairman Farhat Bengdara announced that Libya at that point now produced 1,403,680 barrels, an increase of 22,262 barrels on the preceding day and the highest production since 2013.

In its statement three weeks later on 25 December, celebrating the increase, the NOC was not slow to thank those throughout the industry for the surge forward in production. It said that the success would not have been achieved without the efforts of oil workers in their various fields and specialities. It also thanked those who guarded the numerous facilities "who work day and night" to ensure a secure and stable environment in the oilfields and terminals.

More significantly, in that same statement, the NOC also indicated that based on what had been achieved so far it hoped to reach two million b/d in 2025.

It is a major leap in expectations but the outlook is encouraging.

The NOC target for year-end 2025 is in fact 1.6 million b/d. If the current monthly increase of 55,000 b/d continues, then that particular target could be reached before the end of the first quarter of 2025.

Moreover, based on those figures, the NOC's target of two million b/d by 2028 could theoretically be reached by the beginning of November 2025.

But despite the constant reports in the last three months of 2024 of wells being reactivated and new wells being drilled and brought on stream in existing fields, the current momentum may not be easy to maintain if based solely on improving current production efficiency.

That is where the new concession tenders come in.

During the last quarter of 2024, the NOC had started revealing ambitious plans to further boost output in the coming years, supported by the launch of a new bidding round for oil and gas exploration and production-sharing agreements. It is reported that 22 new concessions will be offered in the Sirte, Murzuq and Ghadames basins as well as offshore.

In its statement on 25 December, the NOC made it clear that it is confident that the new public bidding round for exploration and sharing of oil and gas production will, once launched, result in major investment in the energy sector by leading international companies and consequently an increase in revenues. It also believed that with the participation of the local private sector, this will provide job opportunities for young Libyans as well as drive economic growth generally.

That the NOC is determined to achieve a dramatic boost in oil production is not to be doubted. Speaking on 1 December in Cairo where he was taking part in workshops with US-based oil internationals ahead of the Libya Energy Week, the aim being to encourage them to invest in new concessions, Bengdara said that Libya still has vast untapped reserves of oil and gas and that 70 percent of the country remained to be explored.

Meanwhile, the larger concessions that will be offered will take time to come on stream, certainly beyond 2025. But reactivating currently closed wells with new technologies could see oil flowing again within the next 12 months in the right circumstances.



### NOC LAUNCHES A PROMISING PARTNERSHIP WITH THE PRIVATE SECTOR

By Moutaz Ali



"It is a national commitment to pay attention to the private sector. We are an oil producer, but the added value of this [for Libya] is very limited. The more that private sector participation and investment in the oil sector increases, so the added value will increase."

This was a key point of the National Oil Corporation (NOC) chairman Farhat Bengdara's opening speech at a conference in Tunis on 23 November 2024 bringing together the NOC and its affiliates with executives from some 140 Libyan private oil service companies or companies planning to develop oil and gas operations businesses.

"The aim of this gathering and what we are seeking beyond it, is to know the ways and the proper paths to increase the participation of the private sector in Libya." he continued.

The Tunis gathering was just one a number of meetings organised the NOC or by others but with its support designed as first steps in radically transforming Libyan energy production, from a wholly state-controlled industry into a state-sector/private-sector partnership in which the private sector becomes directly involved in exploration and production of oil and gas.

The Tunis event was quickly followed by the 5th Libya Energy Week in Cairo on 3-5 December, organised by IN-VR but also fully endorsed by the NOC. Bengdara and almost all of its top leadership attended as did both a swathe of Libyan private-sector companies hoping to take on a new role in the business, as well internationals hoping to hear more about the planned new round of concessions.

Another part of the NOC's espousal of the private sector, is the upcoming Libya Energy & Economic Summit in Tripoli, on 18-19 January. Again, while organised by another company, Energy Capital & Power, it is enthusiastically supported by the NOC as a vehicle to showcase its expansion plans and present the NOC as a prospective partner with the Libyan private sector, and seek investment from them as well as from the multinationals.

In Tunis, the NOC said it believed it had indeed laid the foundations for a promising partnership with the private sector.

"We are looking forward to understanding the challenges facing the private companies and how the NOC can help them enhance their positions and business with it," said Bengdara.

He made it clear that it was a cause for regret that despite oil production starting in the 1960s, with a very few exceptions over the years, no Libyan private production companies had built up the expertise to invest and work in the oil and gas sector.

However, as noted, the Tunis event was simply a first formal step in seeing how the NOC can draw the private sector, and private sector investment, into the oil and gas ndustry and grow it. As such, it was a dialogue between private oil/gas service companies and the NOC, with Bengdara saying that the NOC would adopt the recommendations that emerged from the event.

Among these was a call for an energy bank to provide loans to private companies for business creation in the oil and gas industry. The idea appears to have gained traction with the NOC.

It was also agreed to appoint three representatives from the private sector, one each from south, east and west of Libya, to discuss private sector involvement in the oil industry with the NOC, to make proposals on this and help implement them.

In Cairo, a week and a half later, in the NOC's search for reliable partners in the development of the Libyan oil and gas industry, Bengdara's appeal was to a wider audience: the multinationals as well as the Libyan private sector.

Indeed, while in the Egyptian capital, he had talks with leading figures from several major

international oil companies, including Eni, TotalEnergies, Repsol and ConocoPhillips. In fact, there were representatives from some 28 of the largest oil companies and organisations worldwide at the Cairo event. Bengdara's statement that Libya still has vast untapped reserves of oil and gas, and that 70 percent of the country remained to be explored was clearly designed to arouse their interest. But his call was to more than the internationals.

At the earlier Italy-Libya Economic Forum in Tripoli at the end of October, the GNU's acting oil minister Khalifa Abdul-Sadek, said that the new exploration and drilling concessions that would soon be offered would be classified according to the scale of exploration and production, and new licences awarded accordingly. Major concessions would be awarded to major existing national or international exploration and production companies. However, the development of brownfield sites and marginal and smaller fields would generally go to local Libyan companies, providing they were in joint ventures with experienced international operators.

Bringing in the private sector is going to fundamentally change the Libyan oil and gas industry. Moreover, giving private companies small sites is probably just the first step in what is likely in the next few years to become a bigger move towards privatisation.



## SIDRA TANKS REINSTATEMENT PROGRAMME UNDER WAY

By Mohamed Elhajaj

aha Oil Company has been undertaking the redevelopment of the war-damaged Sidra Port, Libya's largest oil export terminal. The port is part of the Waha concession, co-owned by the National Oil Corporation (NOC) with a 59.18 percent holding and TotalEnergies and ConocoPhillips, each with a 20.41 percent stake.

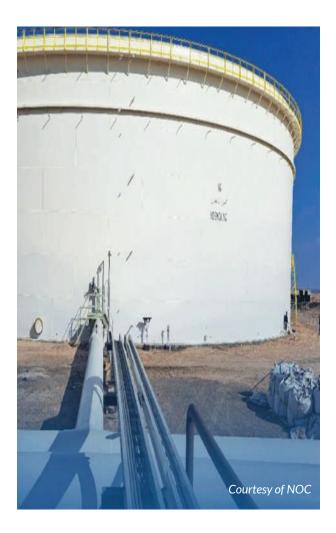
An engineer at Sidra Port revealed to *Libya Energy* plans to develop the port. He said that Waha is continuing to develop the tank farm, work which includes re-building five tanks, with an additional five tanks planned for 2025 to replace the ten tanks at the terminal that were damaged when militants attacked it in December 2014. Three of the ten were completely burned along with 1.48 million barrels of oil.

The source added that the first of five of the tanks, No. 16, has been completed. It was handed over to Waha management in September 2024. After undergoing inspection, it was then filled with oil and reinstated at the end of November, with an announcement being made by the NOC about the development a few days later. The tanks can contain up to 500,000 barrels of oil.

Two other tanks are 95 percent complete, while two more are still in the construction phase. The combined capacity of the five tanks is 2.5 million barrels, or 500,000 barrels per tank.

The source added that Waha management is currently planning to re-build the five remaining storage tanks in 2025, each again with a capacity of 500,000 barrels. However, the completion timeline may extend beyond the planned schedule, being contingent upon the allocated budgets.

According to the source, Sidra port had an export capacity of 24 million barrels a month before to the 2011 revolution. However, that figure has been significantly reduced in recent years as a result, not simply of war damage but also because of its ageing and deteriorating infrastructure.



The source revealed that tank farm's maximum capacity currently stands at three million barrels. It has been operating with nine storage tanks. Of these, seven are actively involved in export operations, while the remaining pair is used solely for storage, The new tanks being completed will boost total storage the 5.5 million barrels.

The final five tanks planned for 2025, as and when completed, will bring the farm's total holding capacity to eight million barrels.

Waha Oil Company reported on 1 November 2024, that its daily oil production has surged to 337,000 barrels. As a result, the NOC then released a statement applauding the company and its staff for boosting total production.



### NOC LOOKING IN PARTICULAR TO BOOST US ACTIVITY IN THE LIBYAN OIL INDUSTRY

By Paul Grant



n 3-4 December, oil companies from around the world, including many from the USA, were in the Egyptian capital for the 5th Libya Energy Week which was organised by international energy consultants IN-VR and co-hosted by the NOC.

Taking advantage of the companies' presence in Cairo, on 1-2 December the NOC organised in cooperation with the US Department of Commerce and a number of US companies its own series of workshops on the Libyan oil and gas industry.

The NOC's aim was simple: to develop or further strengthen partnerships with internationals, particularly US companies; to look at the use of new technologies in helping increase Libyan oil and gas output and last, but not least, to encourage new and existing companies, particularly US companies, to invest in the Libyan oil and gas sector.

During the event, which covered the NOC's strategies for boosting production rates, pushing greater efficiency, developing the oil sector including digitalisation of information relating to production and requirements, and making new discoveries, the NOC chairman Farhat Bengdara pointed out that, potentially, Libya is still a place of vast oil reserves. Seventy percent of it had not been explored he said, making it clear that there were still enormous opportunities to be grasped.

That there is serious renewed American interest is Libya was seen not only in the presence of so many US companies at the Cairo event, but also in the number that have confirmed they will be attending the Libya Energy & Economic Summit on 18-19 January at the Rixos Convention Centre in Tripoli

These include Caterpillar, ConocoPhillips, Cudd Well Control, Elastec, Freedom First,

GardaWorld, Halliburton, Hill International, NOV, Pegasus Power Solutions and SLB (formerly Schlumberger). Other US companies are also expected to join them in the American pavilion at the event.

Almost exactly a year ago, there were claims that Libya was facing difficulties in persuading international oil firms to invest in Libya. Times have changed. Although companies are still looking at the situation carefully there is real interest, especially in view of the 22 or so new concessions that are to be opened to tender.

It is clear that there is new and wider international confidence in Libyan oil and gas. That is reflected in the number of internationals that have already restarted operations in the country in the past few months. In October, Eni began drilling in the concession in the Ghadames Basin it shares with BP after a 10-year hiatus. Austria's OMV restarted drilling operations the same month after a 13-year hiatus. On 31 December, the NOC announced that Spain's Repsol had resumed exploration activity in the Murzuq Basin after, again, a hiatus of more than ten years. It started drilling a well some 12 kilometres from the Sharara field.

Similarly, Poland's PGNiG Upstream North Africa (PUNA) which discovered gas at its Area 113 concession in the Murzuq Basin in early 2014 but then pulled out because of concerns about the security situation in Libya is now restarting operations. It has issued a prequalification tender for casing and tubing for use at the concession.

Libya has a long history of ties with US oil companies. They were in at the very beginning of the country's oil industry, so much so that Tripoli's Hay Al-Andalus district was so full of American oil families that it was sometimes called "Little America" or even "Little Texas", because so many of those living there were from Texas. The area was in fact developed in the 1950s to house incoming foreign oil workers.

One Houston-based company in particular, ConocoPhillips, has stayed on all the way through. It was one of the founding partners of Waha Oil (then called Oasis Oil) which gained its first Libyan concession in 1957. Although its then partners have since sold out, it remains today

as the joint foreign partner with TotalEnergies, themselves in partnership with the NOC.

ConocoPhillips's commitment and interest in further developing its operations in Libya seems solid. Back in mid-May 2024, its chief executive, Ryan Lance, and its senior vice president for global operations, Kirk Johnson, were in Tripoli for talks with GNU acting oil minister Khalifa Abdul-Sadek about the company's involvement in Libya. Almost immediately afterwards, Abdul-Sadek flew to the USA for meetings there, again with ConocoPhillips but also with other major US oil businesses. On his return, he told GNU prime minister Abdulhamid Dubaiba that several American companies, headed by ConocoPhillips, had confirmed that they wanted to invest in projects and exploration in Libya.

The Libya Energy & Economic Summit will see a significant American attendance. Given their interest and that of the NOC in attracting US companies to Libya, it could well be that the new round of concessions will result in a strengthened American presence.



# REPSOL RESTARTS EXPLORATION IN MURZUQ BASIN AFTER 10-YEAR HIATUS

By Simon Dowell



Repsol Exploration Murzuq S.A. (REMSA), the Libyan subsidiary of Spanish oil company Repsol, has restarted drilling operations in Libya after a ten-year break. The NOC announced on 31 December that Repsol (as it is more usually referred to in Libya, rather than REMSA) had started drilling an exploratory well, No A1-02/30, in the Murzuq basin. The well, also known

as Muamal Naser ("Hopeful Eagle"), is about 12 kilometres from Libya's largest oil field, Sharara. The new well will be drilled to a depth of 6,050 feet.

Plans to drill it by the end of November and six other exploration wells in 2025 were finalised in discussions between Repsol and the NOC which were announced earlier, on 19 November. Despite the apparent subsequent delay on drilling No A1-02/30, Repsol was reported saying at that meeting that, in its view, security in the area was excellent and that there had been no security incidents.

Repsol, of course, has a stake in the nearby Sharara field, along with OMV, TotalEnergies and Equinor. Representatives from those three companies were also present at the mid-November talks because of their interest in renewed exploration and production expansion in the Murzuq Basin.

## AFTER 13 YEARS, OMV OF AUSTRIA RESUMES OPERATIONS

By Simon Dowell

Austria's OMV has finally resumed its operations in Libya after a break of 13 years. The company's return had first been announced in November 2023 with the drilling of exploratory wells scheduled for February 2024.

In the event, it was not until last October that the National Oil Corporation (NOC) announced that OMV had begun work in plot 106/4 in the Sirte basin to complete drilling operations in the exploratory well No. B1-106/4.

The NOC said Zueitina Oil Operations is overseeing the drilling of the well, which is expected to reach a final depth of 10,130 feet (3,087 metres) when drilling is completed.





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### SAIPEM'S HYDRONE: REVOLUTIONISING UNDERWATER OPERATIONS IN LIBYA

By Vanessa Tomassini

Saipem, the Italian multinational oilfield services company, has secured a significant boost in Libya's energy sector. The company has been pre-qualified to undertake the Engineering, Procurement, Construction, Hook-up, Commissioning and Start-up (EPC) works for Production Platform E, a crucial component of the \$8-billion Structures A&E Development Project.



he project, led by Mellitah Oil & Gas, a joint venture between Eni and the NOC, aims to boost Libya's gas production capacity by 750 million cubic feet per day by 2026, supplying both the domestic market and European consumers.

"We are committed to Libya's energy future," said Giorgio Elia, Managing Director for North East Africa at Saipem. "The pre-qualification for Platform E, one of the largest in the Mediterranean, underscores our strong presence in the region and our ability to deliver complex projects."

The announcement was made during the Libya-Italy Roundtable and VIP Networking Event in September, a high-level gathering focused on the country's oil and gas sector. Eni highlighted several other major upcoming Libyan projects, including the Bouri Gas Utilisation Project, which will recover associated gas from the Bouri field and incorporate a carbon capture facility, together with another significant gas production project also slated for this year. These developments underscore the growing importance of Libya's energy sector and the increasing role of international companies in supporting the country's economic recovery and development.

Saipem has a strong bias towards activities in harsh and remote areas, in deep waters as well as in extremely cold and hot environments, applying significant technological competences in many diverse fields such as gas monetisation and heavy oil exploitation. Ever since its initial steps in the 1950s as the construction division of Snam, the pipeline company of the Eni Group in Italy, Saipem has pursued a growth strategy, based on the development of internal assets, expertise and skilled resources, as well as on the acquisition of

other players with their own asset bases, such as Micoperi in the late 1980s, and many others more recently, including Bouygues Offshore in France, Moss Maritime in Norway, IDPE in India and Snamprogetti in Italy.

### Saipem's Core Competencies: Construction of Subsea Pipelines

One of Saipem's core competencies is in the construction of subsea pipelines, the lifeblood of offshore oil and gas operations. Recognised for its innovative approach and technological prowess, Saipem has pioneered ground-breaking techniques such as the S-Lay and J-Lay methods. These enable the efficient and safe installation of pipelines in even the most challenging underwater environments. As such, Saipem is seen as having set new industry standards and contributed to the development of sustainable and ecofriendly solutions. Over six decades, Saipem has laid over 30,000 kilometres of subsea pipelines, demonstrating its expertise in overcoming complex technical and logistical challenges. The company's commitment to safety, quality and innovation ensures that its projects meet the highest industry standards.

### Submarine Intervention Services for the Libya-Italy gas pipeline

Saipem has also been awarded a significant project by Greenstream BV: the provision of surveillance and subsea intervention services

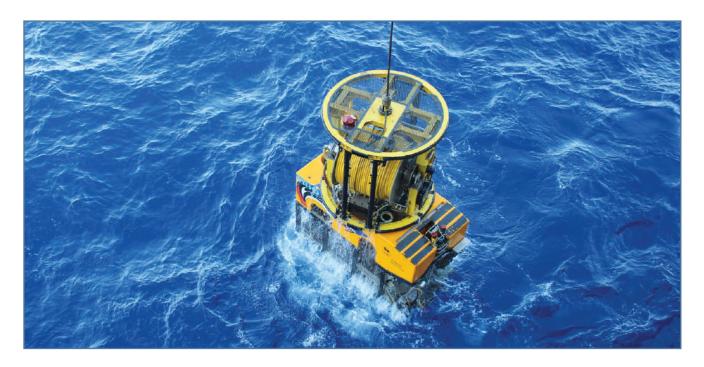
for the Greenstream pipeline, both offshore and onshore at the terminals at Mellitah in Libya and Gela in Sicily. Building on a long-standing relationship dating back to 2002 when it was awarded the contract to lay the longest underwater pipeline in the Mediterranean, Saipem will continue to provide essential services, including pipeline integrity, inspection, maintenance and emergency management, evidence of Greenstream's confidence in Saipem and its expertise.

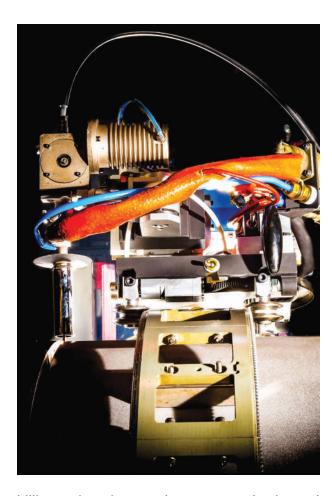
The new activities will be managed by Sonsub, Saipem's centre for underwater robotics, technologies and services, and carried out in coordination with the Saipem Engineering Hub located in Fano, south of Pesaro on the Adriatic.

The contract comprises a range of services, including inspection, spare parts management, engineering support and damage repair. A key aspect is the deployment of Saipem's innovative SiRCoS technology. This remotely operated repair system, developed by Sonsub, is capable of performing complex underwater interventions at depths of up to 2,200 metres. Its use should ensure the long-term integrity and reliability of the Greenstream pipeline.

### The Bouri Gas Utilisation Project

The company has also signed an important contract from Mellitah Oil & Gas for the development of the Bouri Gas Utilisation Project (BGUP). This \$1





billion project aims to enhance gas production and reduce emissions offshore. Saipem's scope of work includes the revamping of existing platforms and structures in the Bourifield, located in water depths ranging from 145 to 183 metres. The company will also be responsible for the engineering, procurement, fabrication, installation and start-up of a 5,000-ton offshore Gas Recovery Module (GRM), as well as the laying of approximately 28 kilometres of pipelines connecting multiple platforms. The project is expected to contribute significantly to Libya's energy security and reduce greenhouse gas emissions.

#### Hydrone: A New Era of Underwater Robotics

At the heart of Saipem's new technologies is Hydrone, an underwater drone for subsea operations developed by Saipem's research and development centre, Sonsub. It is capable of operating at depths of up to 3,000 metres without the need for a tether to the surface. With a battery life of up to 12 months, these underwater drones can be deployed for extended periods, enabling continuous monitoring and intervention. Operations the Hydrone can perform include:

- Inspecting, maintaining, and repairing subsea equipment, including pipelines, platforms and wind turbines.
- Monitoring the health of underwater infrastructure, such as bridges, tunnels and offshore structures.
- Studying marine ecosystems, identifying and monitoring fish species and mapping underwater topography.
- Assisting in search and rescue operations, environmental monitoring and disaster response.

Hydrone's versatility makes it a valuable tool for various underwater operations, not just in the offshore oil and gas industry. Using advanced robotics and artificial intelligence, the Hydrone is seen as a significant step forward in the development of subsea technologies, paving the way for a safer, more efficient and environmentally friendly future.

It can perform complex tasks in hazardous environments, reducing the risk to human divers. Additionally, it can contribute to a more sustainable future by minimising the carbon footprint of offshore operations. Understandably, Sonsub's technology was honoured with the 2021 Offshore Technology Conference's Spotlight on New Technology Award for its groundbreaking Hydrone-R underwater drone.

Key features of the Hydrone-R include:

- Extended Endurance: Capable of operating continuously for up to 12 months, the Hydrone-R can be deployed for long-term monitoring and intervention missions.
- Advanced Autonomy: Equipped with advanced artificial intelligence, the drone can perform tasks autonomously, minimising human intervention and reducing operational risks.
- Remote Operation: The Hydrone-R can be controlled remotely from land, allowing for efficient and cost-effective operations.
- Environmental Friendliness: By minimising the need for vessel-based operations, the Hydrone-R contributes to a more sustainable future.

The use of the underwater drone will substantially change the way offshore platforms off the Libyan coast are run and maintained.





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### News from the Fields . . . .

## Zueitina/OMV well Drilled in concession 103



The NOC announced on 2 December that drilling at Well No. B1 in Block 106/4 of Concession 103 in the Sirte Basin had reached its scheduled depth of 10,042 feet. Drilling started in October and has

been done by Zueitina Oil on behalf of the concession holders, Austria's OMV.

Zueitina is half-owned by OMV which in 2017 acquired the 37.5 percent stake of the other foreign partner, Occidental Petroleum. OMV already had its own 12.5 percent stake in the Zueitina.

OMV also has Concession 102 as well as Concession NC29/74, south of Sidra. The restart of work in these concessions and other projects in 2025 was discussed by the NOC and OMV, Zueitina's joint owners, in Tripoli on 2 December.

## Mellitah completes Abu Attifel oil well maintenance



On 26 November, the NOC announced that Mellitah Oil and Gas had completed maintenance work and restarted production at oil wells Nos. A62 and A80A in the Abu Attifel field. Tests indicate they have a combined production

capacity of 4,200 b/d.

## AGOCO links Well Y5 with the Nafoura field infrstructure



AGOCO announced on 16 November that it had completing connecting Well No. Y5 in Zone Y to the rest of the infrastructural network in the Nafoura field and that it had started production

immediately, producing 2,000 b/d. The company added that it is currently working on linking 16 other wells in the various AGOCO's fields to the infrastructural networks there.

## Sirte Oil boosts well production with new technology



Sirte Oil Operations (SOO) announced on 19 December that it had managed to further boost production by completing horizontal well-drilling at Well No. C353H in the Zeltan oilfield

using the latest geosteering real-time reservoirmapping while drilling. At that date, the company's average production was 103,000 b/d, a figure not achieved since 2007.

SOO says that the well was brought into production in record time, after tests conducted the same morning showed exceptional results. The well's flow rate exceeded 2,300 b/d of water-free oil.

A month earlier, on 17 November, there was much the same news from SOO regarding another two wells. It announced the completion of the drilling of two wells in the Zeltan and Wadi fields using horizontal drilling technology. Evaluation tests at Well No. C355H-6 in the Zeltan field showed it had an estimated initial production rate of about 1,200 b/d. The initial estimate for Well No. D27H-149 in the Wadi field was 1.100 b/d.

## Messla oilfield airport reopened



The first day 2025 saw the reopening of the airport at AGOCO's Messla oilfield after a period of maintenance and upgrading in line with the Civil Aviation Authority's specifications. The reopening was

performed by AGOCO's chairman, Mohamed Ben Shatwan. It follows the reopening on 14 October also by Ben Shatwan, of AGOCO's Nafoura oilfield airport further north. Messla airport is some 150 kilometres southeast of Jalu. Ben Shatwan said that the reopening would allow AGOCO to operate in the oilfield more efficiently, but would also improve air transport services in the region in general.

## Harouge launches new oil flow measurement system in Amal field



Harouge Oil Operations has launched an advanced oil-flow measurement system in its Amal field with the aim of improving performance and raising production efficiency. In

an announcement on 24 December, the NOC said that the system comprises three main platforms, one to measure oil produced from Amal field, another to measure oil received from AGOCO and Sarir companies and the third to measure oil sent to Ras Lanuf port for export. According to the NOC, which supervised the start-up of the measurement system, Harouge also operates other systems for sample-taking and calibrations, with all operating through a state-of-the-art control room.

## Zallaf inspects pipeline to supply crude to Obari power station



A team from Zallaf Oil has inspected the fuel pipeline supplying Obari power station. The inspection in mid-December was linked to preparatory work at the nearby southern refinery site,

the aim being to ensure its readiness to feed the refinery when it opens. The pipeline from the Sharara field will feed both the planned southern oil refinery and Obari power station. Other plans at the refinery site include the construction of a three-kilometre road, an accommodation camp and the drilling of a water well.

## AGOCO tests new power turbine at Nafoura field



Operation tests were successfully carried out on the second of two new power turbines at AGOCO's Nafoura field, the company announced on 15 November. It said that the tests lasted six hours,

using diesel fuel, that they "achieved very good results" and that the trials would continue until the actual operation stage is reached.

### Moves on gas flaring in Sirte Basin



Members of the NOC's 2030 Initiative Committee for Flare Gas Reduction visited Sirte Oil's Zeltan, Al-Laheeb and Al-Raqouba oilfields in mid-November to assess their plans to reduce the amount

gas that is flared and the possibility of benefiting from them by improving operating conditions and finding alternative and appropriate uses to enhance production capacity. The three fields, respectively some 60 kilometres east, 70 kilometres southeast and 15 kilometres southwest of the oasis town of Marada, itself some 200 kilometres south of Ras Lanuf, are a main source of employment in the town. One of the proposals is that the gas currently flared would be collected and transported through a supply network. Satellite imaging shows considerable flaring, especially at Al-Laheeb. According to the NOC, it and its subsidiaries "will spare no effort" to reduce flaring rates as well as investing in clean energy, not least to benefit from the gas currently flared.

On 1 December, the NOC announced that it had launched of a package of development projects in Marada. These include the establishment of a physiotherapy centre and a petroleum engineering laboratory, maintenance of the Marada water desalination plant, maintenance of a school, street lighting on one of the town's main roads, along with a football pitch and the drilling of water wells.

## Sirte Oil's methanol plant rehabilitated



On 4 December, Sirte Oil announced on that it had completed the rehabilitation of methanol tank No. D-05-79. The company said that its operations team had managed to complete

the works in just only 92 days although it had been projected to take 240 days. Some four weeks earlier, on 14 November, the company announced that during rehabilitation work it had managed to replace 540 thermal pipes at the plant in just 20 days, rather than the originally-planned 60. It has put all these successes down to the efficiency and professionalism of the workforce.

### **Promising results at Sirte well**



Sirte Company announced it had finished drilling at Well No. E120 in contractual area 20 in its Al-Raqouba field near Marada as part of the first phase of development drilling in the area and that

the results had been promising in terms of production. Based on the outcome, the well is thought to be able to provide a natural flow of 900 b/d and the aim is to drill up to 5,400 feet deep into the oil reservoir in north Raqouba.

### Mellitah restarts offshore well



Mellitah Oil and Gas Company has successfully restarted gas Well No. CC13 in the offshore Bahr Salam field. According to a NOC announcement on 3 November, it has a production capacity of 33 million cubic feet of gas and 525

barrels of condensate a day.

## Sarir Oil celebrates five years without accidents or lost time



On December 2024, one of the NOC's smaller affiliates, Sarir Oil Operations (SOO), announced that over the past five years it has had no accidents, no incidents and no production time lost as a result.

SOO put out a statement characterising the five-year record as "a great achievement that we can all be proud of". Part of that achievement, the company said, came about because of the high level of awareness among company staff of its health and safety guidelines. Not surprisingly SOO top management singled out the company's Health, Safety and Environment (HSE) department for keeping employees up to date on the latest safety requirements.

The NOC has also praised this outstanding HSE performance. In a letter sent to the company on 23 December, it spoke of its pride in the SOO workforce in operating for five years without any accidents but also in achieving a daily production rate of over 50,000 barrels of crude oil, plus some 2,000 barrels of condensate a day. SOO had reached this output at the beginning of December.

## Repair work on Sharara tank finished as field output hits 303,452 b/d



One of the two largest tanks at the Sharara field was handed over to Akakus Oil engineers towards the end of December after the completion of maintenance works by Wazan Oil Services Company.

The tank, with a capacity of 100,000 barrels is reported to be undergoing final works before being bought back into operation. It had been under maintenance since March following a leakage issue. The other main tank at the field, with the same capacity, has remained out of service since 2017.

On the last day of December, Akakus reported that production at Sharara had increased to 303,452 b/d.

That is up from 257,000 b/d in January 2024. It also announced at the same time that it had started drilling a new well, No. H-50, and that this was expected to produce 1,500 b/d. Earlier, on 18 December, the company said that at that point daily production had increased by 10,600 barrels following the completion of four new wells in the 115 concession: Nos. A41H, A42H, B51 and B53. It also added that two other wells, Nos. O14a and R37, had started producing, with a capacity between them of 4,500 b/d.

The day before that, Akakus said that drilling had been completed on a further well, No. M-21 and that it was expected to produce 3,000 b/d.

## New Nafoura well connected to network



AGOCO announced on 7 November that it had connected Well No. O-02 in the Nafoura field's Zone O, to the field's electrical and mechanical network ahead of bringing it into production.

In mid-October, the company announced that it had completed work connecting two wells, K-7 and K-9, in the K area of the field to the pipeline network and that their production capacity was expected to be 3,500 b/d.

The company added that it is still working on connecting a further 11 wells to the networks in four different areas.

### **BENGHAZI OIL EXHIBITION**

### By Paul Grant



Sponsored by the NOC, the 4th Benghazi International Oil, Gas, and Energy Conference and Exhibition kicked off on 25 November with some 80 local and international companies specialising in the oil and gas industry and in renewable energy taking part and showcasing their services and technologies.

Several Libyan production companies including AGOCO, itself based in Benghazi, along with Waha and Sarir participated in the four-day event. Sarir expressed particular satisfaction at what it said was the "remarkable" number of visitors who came to its pavilion to learn about the company's operations and future plans.

Speaking at the opening of the event, NOC's head of management in Benghazi confirmed that the corporation is committed to sponsoring such events in the country in order to highlight the oil and gas industry's achievements as well as providing an occasion where businesses can display products and services that can be of value in helping expand the industry.

He also confirmed the NOC's belief that the private sector can and must be a key pillar in increasing oil and gas production, and that it is committed to supporting the sector to achieve that position.

## ARDITO DESIO: THE MAN WHO REALLY DISCOVERED LIBYA'S OIL

By Moutaz Ali



sk almost anyone in the oil industry in Libya about when oil was first discovered in the country and they will say that it was in 1958, although not in commercial quantities, and that it was the next year that the first serious discovery was made. After all, that is what searches on the internet say, so it must be true.

Except it is not true.

In a house in Rome, the home of the daughter of an extraordinary Italian explorer, proudly sits a small bottle. It contains a little of the first oil known to have been discovered in Libya. The discovery was in 1938, not 1958.

Geologist, researcher, cartographer, adventurer and mountaineer, Count Ardito Desio is largely forgotten today, but it was his feisty exploration of the Libyan interior in the 1920s and 1930s which eventually led in 1938 to his discovery of oil, which two decades later was to lay the foundations for the country's prosperity.

Desio's geological expeditions reached as far south as Jabal Arkenu and the Tibesti Mountains. Though sometimes sponsored by Italy's Geological Society, he himself financed a number of his forays with camel-riding escorts to smooth his way past naturally suspicious locals. The picture that emerges is of a scientist absolutely devoted to his researches, to the extent that some of his trips deep into the country took place during the punishing Libyan summers.

His expeditions resulted in major contributions to knowledge of Saharan geology in general, of the area's mineral and petroleum potential, and in particular, its hydrology. Indeed, Desio was one of the first researchers to document Saharan climate change at a time when this fundamental shift in the environment was still hardly even considered.

When Desio was probing the secrets of the Libya desert there were no topographic maps, no air or satellite photos, and certainly no GPS. Navigation was by compass and theodolite.

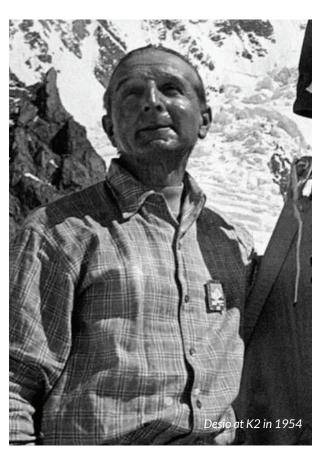
His travels took him over much of Libya, which of course was then occupied by the Italians. Between 1935 and 1936 he explored the Fezzan, from both the geological and hydrological

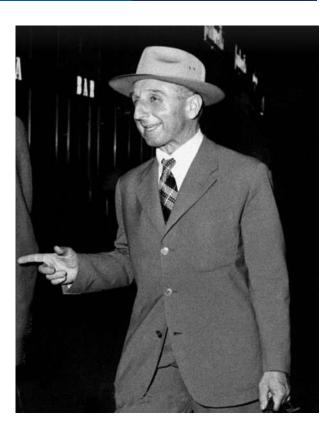
point of view, as well as the Tibesti massif in the Central Sahara. In addition, he spent long periods travelling in Cyrenaica and to Kufra. These journeys sometime lasted months at a time.

Up until 1940 he organised and directed the Libyan Geological Survey, which included research into mining as well artesian waters. in 1938, the same year that he discovered oil in the subsurface of Libya, he also discovered exploitable deposits of Carnallite, a source of potassium and magnesium, in the oasis of Marada along with rich artesian aquifers in some zones of northern Libya. This helped boosted the development of agriculture. However, his further explorations in this region were terminated by the outbreak of World War II which led to the end of the Italian occupation.

It is said that his discovery of oil was never followed up because it was not in viable amounts but that was never tested. The war put paid to any efforts at exploration and production.

In later years Desio was feted in Tripoli for his contributions to Saharan geology. During one of his return visits to the capital of the now independent Libya, a man introduced himself to





the professor as one of a raiding party that had attempted to murder him in the desert many years before.

Desio's geological maps and reports of the 1920-30s formed the basis for oil exploration in Libya in the 1960s. His findings were an essential part of the database that guided the oil companies in their initial exploration. Libya's subsequent oil wealth was thus largely based on Desio's earlier remarkable fieldwork.

Ardito Desio was born in Palmanova, in northeast Italy, in 1897 and served as a lieutenant in the Alpine Regiment during WW1. He then studied geology at the University of Florence, before being appointed to a lectureship in Milan, subsequently being promoted to Professor and Director of the Geological Institute. His researches in Libya were dictated as much by his scientific enthusiasm and curiosity as by any loyalty to Italy. His epic travels, which over a period of some 70 years took him also to Ethiopia, India, Pakistan, Afghanistan, Iran among many other places, and in the face of considerable privation are a testimony to his doggedness. Indeed, he himself lived to be no less than 104. By the time he died in 2001 he had been able to see Libya benefit handsomely from the fruits of his extensive early researches.



# LOOKING AT THE LIMITS ON LIABILITY IN OIL AND GAS CONTRACTS UNDER LIBYAN LAW

By Mohamed Dinka, Senior Consultant at Zahaf & Partners

he Libyan Civil Code was amended in 2016 by Law No 6 of 2016 (Law 6/2016). The amendment focused on the following issues: liquidated damages, waivers and limitations on liability. In 2020, the Libyan Legislature enacted a sweeping law, Law 1/2020, which was intended as a blanket nullification of a wide range of laws and decrees that were issued after 2014.

At the time of its enactment, Law No. 1 of 2020 (Law 1/2020) was understood and interpreted by some to have the effect of repealing Law 6/2016. However, the doubt over the validity of Law 6/2016 has been cleared and the debate has been settled by the Libyan Supreme Court which upheld Law 6/2016 and confirmed its validity and its ongoing applicability in recent decisions. Ruling 453/64, Libyan Supreme Court (LSC), (May 26, 2021).

Thus, it is a devastating mistake (yet very common) to ignore Law 6/2016 when one structures caps and limitations on liability in contracts governed by Libyan law. This is especially true when it comes to the oil & gas sector.

Law firms inside Libya make this mistake because of a common misconception; basically, that Law 6/2016 is repealed by Law 1/2020. This article addresses this common mistake and provides detailed analysis to correct wrong practices in the legal field.

## Oil and Gas Contracts: Indemnities, Liquidated Damages and Caps on Liability under Libyan Law

#### A. Perimeter of Legal Analysis

Construction contracts in the Libyan oil and gas sector are addressed by Resolution 107/2019. The Resolution is an integral part of those contracts and it includes mandatory rules, mandating, for instance, late fees and fines on delays and for the deviation from scheduled

Works. Those mandatory rules are binding on the contractual parties. The Resolution, however, leaves many aspects of the contract to the free will of the parties unless there are mandatory rules elsewhere within the Libyan body of law; in that case, the mandatory rules in other Libyan laws must be followed.

Construction contracts, including the EPCI Contracts, are commercial contracts which invoke the application of mandatory rules in the Libyan Commercial Code. In the absence of mandatory rules in the Commercial code, the Contract will be subject to the mandatory rules of the Libyan Civil Code.

### B. Limitations on Liability, Liquidated Damages and Indemnity Schemes

Liquidated damages in the form of a fixed amount or percentage of the contract price are generally prohibited and only exceptionally allowed. In general, Libyan law does not allow the contracting parties to limit their liability in transactions such as the sale of goods, supply agreements, and the vast majority of contracts. See Art. 226, Libyan Civil Code (amended 2016) (stating that "the parties shall not fix in advance the amount of damages in the contract ..."). Exceptionally, the Libyan law allows the parties to limit their liability, through the use of liquidated damages, in certain types of contracts: namely, services/ works contracts such as construction contracts, agency agreements and public utility contracts. Id. (asserting that pre-fixed damages in services contracts are allowed).

Generally, Libyan courts will view liquidated damages as a limit on liability, a cap on damages, rather than a hard fixed amount to be paid by the breaching party. This is true unless the breach was due to gross negligence, unlawful acts, or wilful misconduct. See Ruling 229/48, Libyan Supreme Court, 151 (2005) (reversing a lower court's judgement that awarded compensation

in excess of the liquidated damages; the Supreme Court reasoned that in the absence of "fraud or gross negligence," it is not permissible to award damages exceeding the agreed upon/fixed amount in the contract even if the actual damages did.). See, also, Civil Code at Art. 228 (stating that "when the loss exceeds the amount fixed by the contract, the [aggrieved party] cannot claim an increased sum, unless they are able to prove that the [breaching party] has been guilty of fraud or gross negligence.").

It is also important to note that if the non-breaching party has participated in or contributed to its own losses, "the judge may reduce the amount of damages or may even refuse to allow damages" whether there is liquidated damages in the contract or not. Id. at 219.

Further, "if the breaching party established that the [innocent party] suffered no losses," then liquidated damages shall not be due nor owed to the non-breaching party. Id. at 227 (1). Thus, while the parties are free to set the limit on liability at whatever amount they agree is appropriate, the injured party shall only be entitled to actual losses. See, also, id. at 227 (2)

(stating that "the judge may reduce the amount of the fixed damages if ... the amount fixed was grossly exaggerated or that the core obligation has been partially performed."). Those rules cannot be contracted out of, and once invoked, the judge's intervention in this manner cannot be circumvented by a prior agreement in the contract. Id. at 227 (3).

#### C. Torts & Personal Injury

Furthermore, under Libyan law, the extent of liability for personal injury is heavily reliant on and determined by the following: wrongdoing, causation and the actual harm/injury. Thus, if a wrongdoing directly caused personal injury, the wrongdoer must compensate and make the physically injured person whole, and the extent of the liability is limited by the extent of the injury and cannot be pre-emptively limited in the contract. See, e.g., Art. 166, Civil Code (1953) (stating that "every wrongdoing causing injury to another imposes an obligation to make reparation upon the person upon whom it is committed."). Note that the same can be said as to vicarious liability. Cont. P. 25



D. Waivers & the Complete Release of Liability Libyan law has a total ban on waivers relating to contractual obligations. Waivers or a complete release of liability for contractual breaches or tortious actions are prohibited by Libyan legislation and Libyan case law. Art. 220, Civil Code (amended 2016); Ruling 1637/56, Libyan Supreme Court, 167 (2013); Ruling 129/51, Libyan Supreme Court, unpublished (2006).

#### Conclusion

To sum up, the treatment of Law 6/2016 as non-existent by scholars and Libyan law firms will lead to inaccurate advice and multi-million dollars losses to major clients in the oil and gas sector. This is particularly true when it comes to EPCI contracts in which "knock for knock" clauses and cross indemnity schemes are very common. Our recommendation is to think carefully about Law 6/2016 and to take it into account when one is consulted on caps and the limits of liability in the Oil and Gas industry.





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## PAINT IN THE OIL AND GAS INDUSTRY

By Moutaz Ali

The oil industry is heavily reliant on the innovations and products of many other industries, not least that producing something as apparently straightforward as paint.

Throughout the oil production process, protective coatings are critical to safeguard infrastructure, such as pipelines, tanks and refineries, from corrosion, extreme temperatures and environmental degradation.

Moreover, protective coatings enhance safety, reduce operational costs and ensure compliance with industry standards by protecting infrastructure in harsh energy environments. They play a wide range of different roles in the oil industry.

Coatings provide corrosion resistance which prevents metal structures from degrading due to exposure to moisture, salt and chemicals. Fire and heat protection coatings deliver safety-critical insulation in high-temperature processes. Moreover chemical resistant coatings protect surfaces from corrosive spills and splashes.

All in all, the employment of the correct coatings reduces the upkeep costs and prolongs the service life of equipment.

"This minimises maintenance and enhances safety, especially in harsh environments, contributing to a more efficient oil production cycle," says the chemical engineer Fawzy Ibrahim, Protective Sales Manager of Jotun Libya.

"During the oil production process starting from exploration and drilling, production, separation at GOSP (Gas Oil Separation Plant) until the storage stage, all steel structures require protection against corrosion and environmental deterioration." he added.

Ibrahim points out that the oil production process is divided into three phases which require a high degree of chemical work running from extraction at the wellhead through to

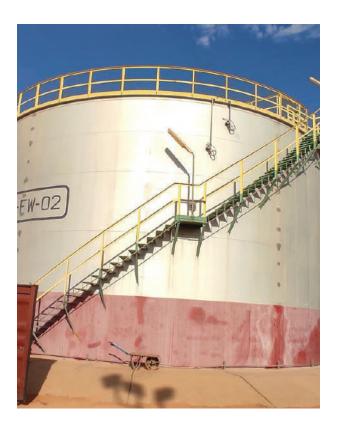


storage at the terminal. In the initial phase, crude oil undergoes preliminary processing to remove water, natural gas, salts and other impurities. Then comes the transportation of the crude oil via pipelines followed by the final phase which sees the oil delivered to a terminal.

"The floors of the huge oil storage tanks at terminals are exposed over the time to corrosion when water gathers underneath crude oil. Regarding this, planning and quality control departments at the oil companies usually put plans to conduct maintenance of these tanks, including painting of their floors", he explains. "This doesn't occur regularly because emptying the tanks of oil requires a lot of crucial procedures such as reducing or sometimes shutting down of production."

### Painting Types used in the Oil industry.

Many painting companies, including Jotun, have developed a range of innovative protective coating products, especially designed to address the complex needs of industrial and energy sector assets, such as offshore platforms, refineries, pipelines and storage tanks.



One such product is Jotachar, which is specifically designed to shield steel structures in the event of a fire. This kind of painting provides effective protection in hydrocarbon fires and jet fires. It increases the safety and integrity of critical infrastructure in the oil and gas sector. This painting is lightweight and easy to apply, cutting down installation time and cost.

Another coating is Tankguard Special Ultra that offers long-term protection for storage tanks in aggressive chemical environments. This coating is specifically formulated to handle a wide range of chemicals, including many aggressive and corrosive substances used in the energy sector. It gives chemical resistance, especially in environments involving crude oil, refined products and other harsh chemicals. On top of this, it meets strict industry standards for chemical storage, making it a trusted solution for chemical and fuel storage tanks.

There is another painting type called Baltoflake. It is a glass-flake reinforced polyester coating, which provides exceptional abrasion resistance and anti-corrosion protection. It enjoys a very high resistance to mechanical damage, is ideal for splash zones and subsea structures and is excellent for offshore structures and other assets exposed to harsh marine environments.

### **Environmental responsibilities**

There are several organisations that help promote sustainable practices and reduce environmental impact in the protective coatings industry. These include Leadership in Energy and Environmental Design (LEED) which encourages sustainable building practices, promoting coatings with minimal environmental impact, the Environmental Protection Agency (EPA) which sets regulations for VOC (Volatile Organic Compounds) emissions in coatings to protect air quality and the European Chemicals Agency (ECHA) which manages REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulations in the EU, which restrict harmful chemicals in coatings.

It is probably true that the most important of these organisations is LEED because it applies the international standard and codes of practice to protect the environment.

LEED is a globally-recognised certification programme developed by the US Green Building Council (USGBC). It focuses on promoting environmentally-responsible, efficient and sustainable building practices.

However, all these organisations are working on reducing hazardous emissions of Volatile Organic Compounds which impact air quality. They also focus on coatings that use ecofriendly, non-toxic raw materials or water-based formulas, which reduce their environmental footprint.



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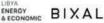








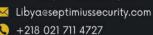








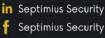














## TREE PLANTING: NOC'S PLANS FOR A BETTER ENVIRONMENT

By Zaineb Sharrada and Michel Cousins

One Thursday morning in early November, children from two schools near the oil town of Marsa El-Brega were to be seen joining staff from Sirte Oil in planting saplings in the sandy scrub land nearby.



ccasional tree-planting by schoolchildren is not completely unknown in Libya nor anywhere else in the country for that matter. But it is not something usually associated with oil and gas companies, other than perhaps some landscaping around main offices or at field camps. It has certainly not been case in Libya which, apart from the relatively fertile areas in the north west and north east, is almost entirely desert.

This was not always the case, as the prehistoric rock paintings of giraffes, elephants and the many other now disappeared animals in the Akakus mountains of southern Libya demonstrate.

Stopping desertification in the country, rolling back the sands and making the desert bloom again has long been an unfulfilled vision of successive Libyan governments.

Given the dominant economic role that the oil and gas industry plays in Libya, it has already been accepted that the sector has a social role in production areas, such as bringing in medical specialists for mass consultations or providing medical equipment, even taking over the funding and running of a local hospital, as has been the case in Obari. Indeed, even before the 2011 revolution, foreign oil companies operating in Libya were expected to allocate funds for the development of local areas such as the establishment of schools or clinics, or the paving of roads.

But in view of the growing debate worldwide about the environment, sustainable development and the use of hydrocarbons, it was perhaps just a matter of time before the industry in Libya as a whole accepted that it collectively has a significant role to play in protecting and improving the country's environment.

It is now doing so. Almost every oil company currently has a sustainable development programme, largely at the behest of the NOC and its chairman, Fathi Bengdara. At the United Nations Climate Change Conference (COP28) in Dubai in December 2023, he unveiled the

plan to plant a million trees as part of the NOC's 'Thinking for Tomorrow' programme, aimed at creating an environmentally better Libya.

Turning that vision into a reality started in February this year with the NOC's first phase, the planting of young trees in a wide spread of locations including at Al-Assa, near the Tunisian border, at Aziziya, and at Jufra in the centre.

The campaign was also being extended to Al-Shgega, to Kufra in the far south east and to Ghat in the far south west. The plan is that by the end of 2025, under the supervision of the NOC's Sustainable Development Department headed by Hamed Abdul Salam, saplings will be planted by the various oil companies in 40 locations across the country. The aim is to create forests, with the trees being chosen for their suitability to each area's particular environment.

Over the summer, Abdul Salam visited a number of oil companies and oilfields to assess their plans and potential planting sites ahead of the second phase of the project.

Therewere talks with Mellitah and Total Energies about their support, including the supply of the saplings. In mid-October, the NOC announced that it had installed an irrigation system for a 100-hectare forest site in the Wahat area and that work was beginning on a second 100-hectare site in the region. It added that tree planting would also take place elsewhere in the Oil Crescent as well as in Ubari, Bint Beya, Tragan and Sebha in the south and near both Beida and Benghazi in the east.

The tree-planting in the Marsa Al-Brega area, undertaken with the support of Sirte Oil, formally launched the second phase, but it was just the first of a number of similar events. Locally, the plan is to extend the tree-planting. Future plans include expanding the campaign to nearby locations such as Al-Agila and Bishr.

At almost the same time that schoolchildren were helping plant trees in Marsa Al-Brega under the watchful gaze of the NOC's sustainability director, AGOCO was organising the planting of 35,000 saplings in a 60-hectare site in the Nafoura field, near its airport.

Some oil companies are still assessing their contribution to the tree-planting plans. The ultimate aim is to absorb three million tons of carbon emissions, but that will require significantly more than a million extra trees. In any event, it is not just oil companies involving



themselves in the tree-planting. In May, the Tripoli General Services Company received the first batch of saplings for bedding out.

Oilinvest has also pledged to support the Tripoli project. In its case it is looking to "green" 1,450 hectares. Initially, it involves installing an irrigation system on 450 hectares for the saplings.

However, the NOC's 'Thinking for Tomorrow' programme is about far more than just tree planting. The other 1,000 hectares that Oilinvest intends to support will be used for agriculture, and the entire NOC programme is being coordinated with the ministry of agriculture and livestock resources and its affiliated organisations and well as with civil society groups and municipalities.

The NOC project, according to officials, is about the energy industry's commitment, not only to reduce desertification and promote awareness of the importance of afforestation, but also to addressing climate change and improving air quality.

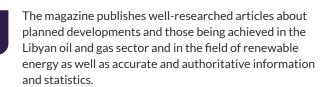
Certainly, the associated project in Tripoli is expected to have a profound positive impact on the capital's environment. By increasing green spaces and absorbing carbon dioxide, it will help improve the quality of the air in the capital, mitigate climate change and create a more sustainable and liveable city for its residents.



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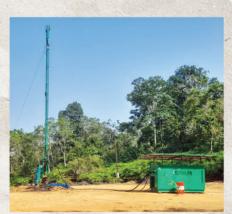
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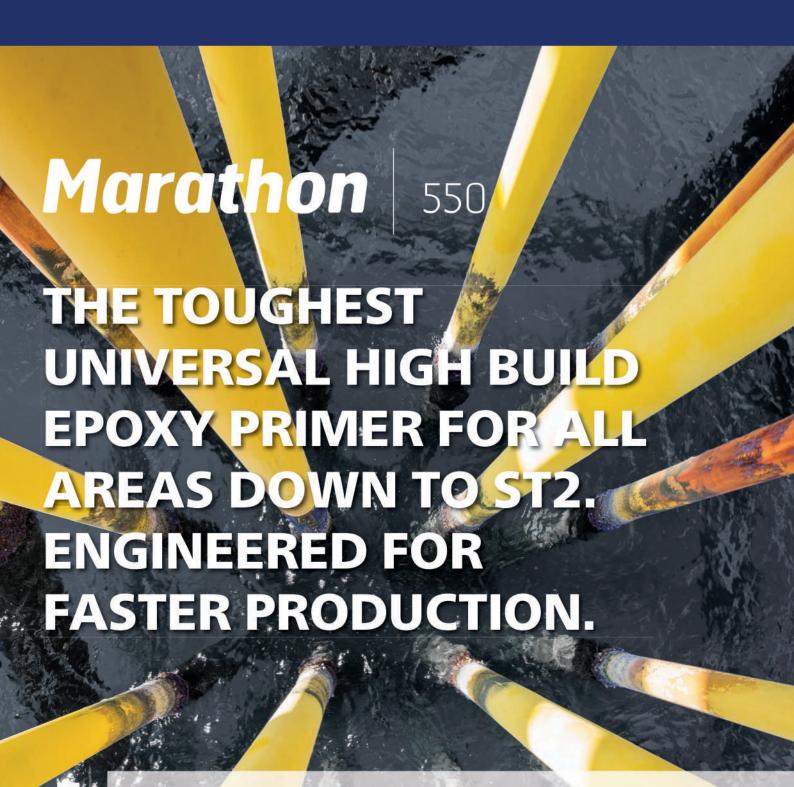


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