

Improved efficiencies boost margins when prices are down

When oil prices are down, as they are now, reliability issues around production begin to eat into margins, making maintenance optimisation a priority for operators right now, Michael Purkiss, Vice-President, Services, Proserv Controls, tells *OGN*

THE oil and gas industry has always ridden something of a price rollercoaster through the decades, from the shocks of the 1970s, where the cost of a barrel of Brent quadrupled in just six months, between 1973-74, to a 1980s glut that saw a 300 per cent reduction in 1986 alone.

Many firms were still building resilience and momentum fresh from the latest 2015 downturn when a viral outbreak in Wuhan, China, in late 2019 brought challenges to the sector not seen before. By the spring of 2020, the dramatic slowdown in economic activity across the globe, alongside an ill-timed plunge in prices, represented one of the biggest crises the industry in the Arabian Peninsula had seen in its seven decades of operation.

Michael Purkiss, Vice-President, Services at global controls technology firm Proserv, has seen sites right across the world, including in Saudi Arabia and the UAE, readjust daily routines as life has transformed.

He says: "The bottom line is that these past few months have been uncharted territory for everyone, be they operators or their service providers. At Proserv, our number one focus has always been the safety of our colleagues and their families. Day-to-day, we have had to deftly balance governmental regulations, around work practices and curfews, alongside meeting our contractual agreements.

"But this industry also has a distinct history of needing to be nimble and adaptable, whether that's embracing new disruptive technologies to improve margins, or adjusting strategies according to sudden global events – such as this current pandemic."

Purkiss points to the fact the Middle East's leading producers are nevertheless pumping millions of barrels every day, despite the worldwide slowdown, and this is likely to lift further from August onwards as the Organisation of the Petroleum Exporting Countries (Opec+) eases its stringent cuts in anticipation of increasing industrial activity around the globe.

The region's national oil companies (NOCs) are also executing proactive operational strategies as they forward plan increasing their production capacity in the coming years, with the UAE's Abu Dhabi National Oil Company (Adnoc) recently shutting down its 370,000 barrels per day (bpd) Bab field in order to conduct essential planned maintenance. Purkiss suggests this makes perfect sense.

OPTIMISING MAINTENANCE

Purkiss comments: "The cost of producing oil in this region is very competitive and that can insulate operators when prices are subdued, but both Saudi Aramco and Adnoc naturally want to



Inside a Proserv facility in the Middle East



Purkiss ... extending the life of assets



A Proserv technician conducts maintenance check

maximise their returns from each barrel they pump and they recognise optimising their maintenance strategies is a fundamental part of that.

"If the prices are down, as they are now, then reliability issues around production begin to eat into margins. You could have a tower in a hard-to-reach desert location that has been working smoothly for years but, as it ages, issues will naturally occur, and if those haven't been monitored, or the tower isn't regularly checked, these could lead to a bigger problem, such as reduced efficiency levels or even downtime, causing potentially millions of dollars of lost revenue."

Purkiss believes when oil prices are under downward pressure, seeing wells suffer failures due to inadequate maintenance support is a real red flag, and while a number of operators could still do more to enhance their maintenance strategies, the leading NOCs in the Gulf understand the critical role maintenance plays, not only day-to-day but for their future expansion plans.

"Both Adnoc and Aramco recognise that their future production capacity targets will be met, not only by bringing new wells on-stream, but just as crucially, by making sure their existing legacy wells are producing to their maximum capability," he says.

Proserv's service team advocates what it describes as a holistic approach to maintenance, where an operator moves away from the out-moded 'break/fix' dynamic.

Purkiss explains that when an operator adopts a 'reactive' rather than a 'proactive' attitude, it is always on the back foot, susceptible to more breakdowns and not well-placed to move fast to rectify a problem.

"In this currently challenging climate, operators want to extend the life of their assets and avoid major capital expenditure. By devising a comprehensive maintenance model, focused on their core equipment and with realistic monitoring schedules built in, they will effectively reduce their failure rates and be right on top of any that do occur," he says.

"From a service provider's perspective, we know whether it's Saudi Arabia, the UAE or elsewhere, first of all operators want a speed of response from us when issues arise. So being local and able to mobilise fast is crucial, so that downtime is minimised. But beyond that, another vital requirement for NOCs is wanting solutions ahead of time. Therefore, seeking predictive maintenance expertise from their provider to almost eradicate unexpected failures."

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HALO barriers protect critical assets close to coast

HALO says its marine barrier systems are ideal for protecting vital oil and gas facilities in the GCC region, and can be equally effective to safeguard other commercial water facilities such as marinas against theft or vandalism

PROTECTING critical infrastructure is a challenge, especially when it is offshore. You not only have to deter intruders but also combat choppy waters.

Although floating fences that act as barriers are available in the market, these are usually unstable and tend to flip over.

However, US-based HALO Maritime Defense Systems fills that gap. Its sophisticated systems can avert acts of terror against critical infrastructure from the seaside, a front that is either overlooked or not fortified enough.

Speaking to *OGN*, Brendan Gray, HALO's COO and President and a former US Navy officer, says: "We want to protect critical infrastructure. And that's why we're here, because we feel we can make a difference and help our future partners protect their infrastructure. We wish to be a force multiplier for the various entities, whether they are commercial or navies or government."

HALO has chosen Bahrain as its regional headquarters. It opened an office in the kingdom last year to be headed by Luke Ritter, HALO Vice-President of Business Development, and a seasoned maritime security professional.

According to Ritter: "The region's oil and gas industry is the most important critical infrastructure it has and, therefore, it's an absolute necessity that all this must be protected."

He says the industry can be a leader in proving the value proposition that's associated with building walls and fences in the water.

Established in 2008, HALO makes barriers designed to work with the water waves and not against them.

The company takes pride in the fact that it's the only barrier company whose systems have been independently tested.

Its systems have been bought by the US Navy and the US Department of Defense after putting them to the test. At the Aberdeen Proving Ground, HALO systems stopped a 3-tonne boat at 43 knots in 3 m, exceeding all expectations.

HALO also tested its systems in 58 m of water for six months off the coast of Maine, northeast of the US in Sea State 6.

With an active R&D division, HALO is always ahead of the game developing products to meet the market's need, he says.

Its products portfolio includes the following systems:



A HALO marine barrier

- **Guardian:** When HALO first started, it made a wall like product. And although everybody wanted the stopping power of a wall, they wanted a gate. So HALO developed the Guardian system. This is a military-grade maritime retractable defensive barrier. The system was subjected to rigorous testing by the US Navy—a 3 tonne boat at 43 knots. It exceeded all requirements.
- **Orca 1:** To serve the low-end market, where clients don't need a high level of protection, HALO developed the versatile Orca 1. This system is highly customisable and allows end users to adapt a line of demarcation solution to their specific needs. It can be integrated with lights, nets, and signage can be added to prevent unauthorised access from the waterside.
- **Orca 2/3:** This system is designed to stop small craft, jet skis, zodiac boats, etc. This system has been approved by Saudi Aramco and is currently being used by it. HALO systems have a minimum lifecycle of 15 years making it significantly cheaper than other systems in the market.
- **Deployer:** There was a lot of demand for a portable system that could be moved and

prepositioned for visiting ships or just put it where and when you really need it. That led to the development of Deployer. This barrier is transported fully assembled in a standard ISO shipping container, and can be rapidly deployed using a small boat and wrapped around the vessel being protected.

- **Triton:** HALO is the only barrier company in the world that has developed an offshore barrier system that can go around and protect oil rigs. Triton is a high-visibility, heavy-duty maritime barrier has been designed, tested, and proven to operate in Sea State 7 (up to 11-m waves).

"The Triton system is ideal for the Saudi Arabia oil and gas industry," says Gray.

Amongst HALO's major clients is a power plant in the UAE, and another one in the Mediterranean, where a very strategic port is being protected.

Gray hopes to engage navies in the region who have just recently realised the threat of drone boats.

Although ideal for protecting vital oil and gas facilities in the GCC region, HALO's marine barrier systems can be equally effective to safe-

guard other commercial water facilities.

"Think about marinas and the threat of theft or vandalism. We can protect these places with smaller systems that can be automatically opened. So a yacht owner can come in and using a key can open the gate, brings in his boat in and close the gate behind," says Gray.

Ritter says HALO systems can be applied to a broad customer base with different requirements and levels of protection.

Some, he says, even have different requirements with regard to how the barrier looks.

"So you may want a very intimidating structure for a military site. But if you're using a barrier like this at a hotel, or to close a waterway like Bahrain Bay, you don't want it to look like a fortress or a military base. For such requirements, we can work with the customers to place facades or change the colors of the plastics."

Besides the Bahrain office, HALO has an office in Abu Dhabi, UAE. It also has plans to open an office in Dammam, Saudi Arabia, in the next few months.

The company currently has a manufacturing facility in the UAE, where it fabricates the Orca systems. Its business model is to fabricate in the host nation provided there is enough material.

Gray says: "We would prefer to manufacture in the GCC, for orders with the GCC customers, and are looking for the right place to manufacture different components."

HALO was at Bahrain's premier international defence show, BIDECE, last year where it showcased its product portfolio.

Ritter says Bahrain offered numerous opportunities through its business-friendly environment, close proximity to neighbouring states and notably for being home to the US Naval Forces Central Command (Centcom) and its 5th Fleet.

"Bahrain is an island nation, so there is lot of water-based critical infrastructure to protect and entities like BAPCO. An example also is the Diyaar Al Muharraq development, which is surrounded on all sides by water. We absolutely want to focus on those while we have a regional focus."

Ritter says HALO has had extensive interaction and discussions with the Bahrain Defence Forces, the Ministry of Interior (MOI) and other commercial interests.

... Improved efficiencies boost margins

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INTELLIGENT SOLUTIONS

Purkiss reveals that this latter component is built on two key criteria: partnerships and technology solutions.

He says: "A close working partnership between operators and service providers has so many upsides for both parties. For operators, it enables them to build trust in their maintenance supplier, so that when they have a need, they know who to turn to right away, saving valuable time. As the relationship evolves, operators will also gain increasing confidence in backing the decisions and judgement calls that the provider might suggest regarding future expenditure needs.

"For providers, greater and greater exposure to an operator's ways of working means they can always hit the ground running when called upon and can become accustomed to certain tendencies and patterns within an asset



A Proserv technician inspects core equipment

and its equipment."

Armed with this close knowledge of, and regular exposure to, an asset, a service partner can then utilise intelligence solutions (Proserv's own in-house maintenance optimisation platform is known as AEGIS) to collate data on specific fields or wells and start to predict future maintenance needs."

Purkiss thinks adopting such an approach to maintenance and service support is the only option as the industry seeks to kickstart its activity levels in the second half of 2020.

"When prices are so volatile and global sentiment across all business sectors is fragile as we try and move forwards from the pandemic, reducing overheads through improving efficiencies is the logical approach for operators. That means a joined-up maintenance plan, which will deliver effective monitoring of assets, ever alert to possible failures and downtime," he concludes.