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MAINTENANCE OPTIMISATION: THE ONLY OPTION

Michael Purkiss, general manager – Abu Dhabi, Proserv, says looking after ageing assets fits the current cost-conscious climate

Failure on the part of an operator to employ an effective solution for monitoring the performance and condition of assets seems incongruous in the age of the internet of things and supervisory control and data acquisition (SCADA). Yet, around the

globe, there are thousands of wells where the only monitoring protection might simply be two men in a van.

It is also easy to forget that the oil and gas sector in the Middle East is a mature industry, comprising a number of significantly ageing assets, bearing in mind how the financial

benefits accruing from it continue to drive the cutting edge advancements in core infrastructure across the region.

But a large number of fields have been operating for several decades and it is more than 85 years since the first well in the Arabian Peninsula was spudded. So the need for firms to adhere to a rigorous maintenance optimisation strategy is acute.

Inadequate maintenance procedures can have all manner of consequences. The one that operators fear the most is downtime. In an age of increasing cost management, to suffer an expensive outage is just short of unforgivable.

The Arabian Gulf is dotted with ageing unmanned towers located in remote parts of the desert, or offshore, that are not yet hooked up to a SCADA system, and when a series of neglected failures combine to prevent production at one, it might take several days or weeks for those proverbial two men in a van to get around to fixing it.

When the tower is generating 3,000 barrels per day, at current prices, that amounts to a daily loss of almost \$200,000.

In reality, however, downtime could be the least damaging outcome for an operator. Oil and gas is a hazardous industry and a poorly maintained ageing asset could effectively become a time bomb, where a violent malfunction could jeopardise the safety of the workforce or lead to a major environmental incident.

Changing attitudes

The oil price downturn has had a gradual impact on the outlook of the major operators. Before the oil price plummeted, the general philosophy was to roll out another greenfield site and use spanking new equipment to develop it. If anything broke down, the operator would buy a replacement.

But the oil price crash brought panic and a jolting halt to unfettered spending. Operators are now recognising that an effective maintenance regime is a vital part of a well thought-out strategy – but this remains a work in progress for some.

The Arabian Gulf's leading national oil companies, however, have had the perceptiveness to acknowledge their ambitious plans for ramping up production won't come from bringing new wells online alone but will also need existing assets to become more efficient.

Here, both older wells dating back to the 20th century and newer towers too, are increasingly being subject to regular checks, and so the number of remote, unmanned towers, vulnerable to chronic shutdowns and rudimentary repairs, is steadily diminishing.

Operational excellence

The downturn also led to operators and their service providers recognising that the improvement of margins during periods when the oil price is weak revolves around running a more efficient and less wasteful enterprise.

Operational excellence (OE) in the oil and gas industry converges around core issues such as safety, reliability and efficiency. Maintenance optimisation fits sweetly into these criteria and an increasing number of firms are incorporating OE into their strategies.

The days of break/fix are disappearing as operators look to adopt a more holistic approach to maintenance and not simply repair equipment when it malfunctions. By analysing what their needs are, what their critical components are and how often they want to have them checked, operators are more focused on devising effective plans to escape the inefficient loop of reactive repairs following an outage. Maintenance should become a tenet of any capable OE strategy.

The move across the upstream sector towards cautious capital expenditure and maximising returns has meant oilfield services



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companies such as Proserv have been able to target their efforts on helping clients to extend the life of their existing assets.

The landscape has changed over the past few years and any switched-on operator will, first and foremost, look to upgrade and maintain assets, as that is both cheaper and quicker to achieve, than commit to buying new equipment. Oilfield service providers that haven't accordingly looked to adapt their own business model to encourage operators to save money, rather than spend it, are behind the curve.

Maintenance template

The starting point for developing a successful maintenance programme is talking to the operator, learning what it wants, what it needs and building from there. Our own Asset Enhancement Global Intelligence Solution (AEGIS) developed via our collaboration and discussions with a leading regional national oil company and recognising that the provision of detailed, real-time asset information and monitoring would save our clients both time and money.

But when an outage occurs, the sophistication of a cutting edge intelligence system becomes secondary to the urgency of addressing the immediate problem. A crucial part of a well-planned maintenance policy is

mobilisation. If an operator has committed to a specific solution, with the aim of extending the life of its assets, to have a service provider booking flights to arrange for the arrival of its specialist team undermines the entire rationale behind the arrangement.

A service provider seeking to offer genuine support to the maintenance requirements of its client needs a dedicated team, on-hand, locally, that can respond in hours so that any unplanned downtime is minimised.

Over time, as a relationship and trust builds, the most logical means of ensuring effective maintenance is for an operator and a service provider to form a strategic partnership, as opposed to individual contractors often conducting siloed repair work piecemeal across a site.

A partnership enables practices to become standardised and for more variables to be fed into the intelligence solution, thus enabling more accurate maintenance scheduling predictions. As a consequence, any repairs are carried out rapidly and smoothly, while ageing equipment becomes more reliable and downtime is reduced.

The combination of a local support team, allied to a sophisticated maintenance solution, will banish those remaining poorly monitored and poorly supported unmanned towers of the Middle East to history.

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