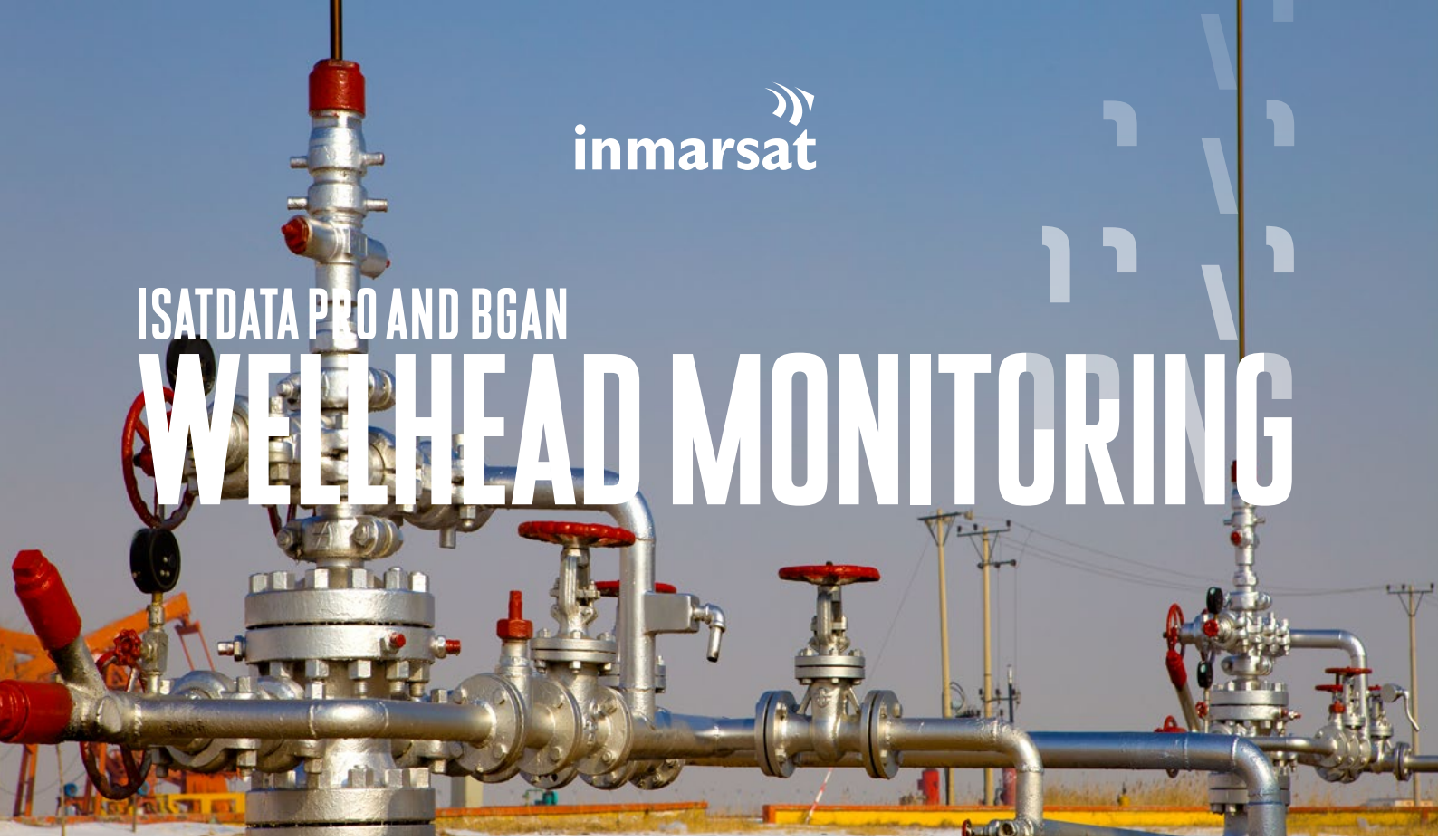


inmarsat

ISATDATA PRO AND BGAN WELLHEAD MONITORING

ENSURE OPTIMUM WELLHEAD EFFICIENCY AND AVOID DOWNTIME WITH SATELLITE CONNECTIVITY

YOUR CHALLENGE

With oil and gas companies under increasing pressure to reduce costs and improve efficiency, wellhead monitoring has become vital for the industry. Wellheads provide the structural and pressure-containing interface for drilling and production equipment and therefore must run optimally to ensure maximum production over the life of a well. Wellhead performance data can also help predict maintenance requirements, which allows producers to plan downtime and avoid unnecessary revenue loss.

Ensuring that equipment works optimally also helps prevent accidents such as explosions and leaks. In turn, accident prevention mitigates health and safety risks, as well as the significant environmental damage such incidents can cause in the form of water and air contamination. Being able to prevent pollution, not only protects the environment, but it also saves operators from having to pay hefty fines for environmental damage.

However, sending engineers out to travel long distances to visit sites and physically assess conditions and performance at wellheads is time consuming, inefficient, and potentially puts at people at risk. Automated monitoring has clear advantages here, but due to the often-remote locations of reservoirs, cellular service can be limited, meaning that costly infrastructure would need to be installed to provide the necessary connectivity for it to work. That is, unless oil and gas companies turn to satellite connectivity to plug the gaps.

OUR SOLUTION

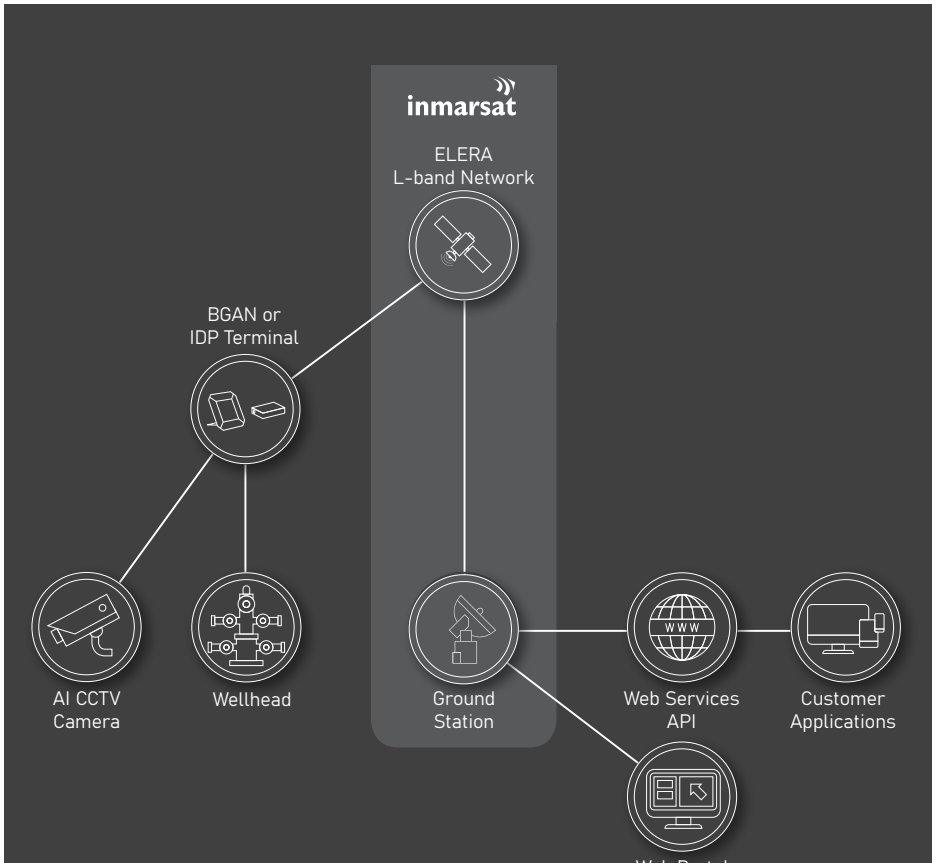
This solution, comprised of market leading wireless wellhead sensors from Inmarsat's partners and backhauled by Inmarsat's IsatData Pro or BGAN M2M, is applicable to a range of different wellhead scenarios. However, a typical situation would be an oilfield service company operating over a large land area and requiring constant multipoint monitoring and real-time data to improve production and significantly reduce downtime.

Typical benefits to a service company using this solution to optimise wellhead decisions would include:

Reducing unplanned downtime: Aging assets are more prone to expensive downtime due to wear and tear and local environmental conditions, with 18% of wellheads experiencing integrity failure or other issues. Unplanned downtime can cost, on average, more than US $250,000/hour, with some companies reporting an average cost of more than US $25,000/minute in lost revenue.[1]

Reduced time and cost of monitoring wellheads: Remote wellhead monitoring reduces the need for a lone worker (or team) to visit a field to monitor conditions. In a typical scenario, this could easily amount to savings of between US $500 and US $40,000 depending on the well location, crew size and type of trip[2].

Reducing environmental impact and the resulting fines: Fines for environmental offences imposed by regulators cost the industry significant sums. For instance, the average fine for an environmental breach in the United States in 2021 was US $1,157,006 million. So, using satellite IoT to monitor and predictively maintain wellheads, not only protects the environment, it can also save over a million dollars on average for each accident averted.[3]



SOLUTION FEATURES

- Access wellhead data to diagnose performance issues in real-time
- Overcome the Middle East's connectivity divide: sensors can be deployed to wellheads with unreliable or non-existent terrestrial connectivity
- Fully optimised gateway for use with satellite and wellhead monitoring sensors keeps system costs low
- Quick and easy to deploy, with compact form factor
- Self-powered: solar panels ensure no dependency on mains power when selecting an installation
- Built to withstand the toughest natural environments, with a proven track record of deployment in extreme conditions

[1] Unplanned downtime in numbers: How bad is it? – INTECH Process Automation https://www.intechww.com/some-interesting-statistics-about-unplanned-downtime/

[2] Well Monitoring by Satellite - https://hiber.global/well-monitoring/

[3] In 2021, 118 fines for environmental violations were issued in the United States, totaling US $136,526,764. Therefore the average fine that year was US $1,157,006 https://violationtracker.goodjobsfirst.org/prog.php?major_industry=oil%20and%20gas&page=1

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