



IRIDIUM CERTUS® ENABLES REMOTE MONITORING OF SUB-SEA SYSTEMS

Iridium®, Applied Satellite Technology (AST) and Thales have partnered to provide a critical, end-to-end satellite communications solution for one of the largest oil and gas companies in the world. This solution enables remote monitoring and control of subsea systems aboard a floating production storage and offloading (FPSO) vessel without a traditional, expensive wired connection.

THE CHALLENGE

One of the world's largest oil and gas service companies approached Iridium partner AST to develop a tailored solution that would allow their engineers to remotely operate an oil rig. The company required a communications connection between its Master Control Station (MCS) on the oil rig and the floating production storage and offloading (FPSO) vessel, which resides approximately 25 kilometers away off the coast of West Africa.

Traditionally, data communications between an offshore rig and an FPSO vessel uses a subsea wired connection in which a cable attached to both vessels is placed on the seabed to enable communications between the two. Because of the vast distance between this rig and the FPSO vessel, laying a subsea cable was not financially feasible.

COMPANIES	CHALLENGES	BENEFITS
<ul style="list-style-type: none"> ■ AST is a trusted global satellite communications provider of remote communication solutions. ■ Thales is an internationally recognized manufacturer of satcom equipment. ■ Iridium is a satellite communications company that offers truly global voice and data connectivity. 	<ul style="list-style-type: none"> ■ The oil rig and FPSO vessel are too far apart to communicate or connect in a traditional way. ■ Laying a wired connection between the rig and vessel is not economically feasible. ■ Offshore oil rig workers require a reliable communications system for their critical operations. 	<ul style="list-style-type: none"> ■ Iridium Certus allows for over-the-air management of critical oil assets. ■ AST's Iridium Connected® solution is adaptable with auto-failover for a smooth resilient connection. ■ Iridium Certus enables quicker transition to production therefore saving time and money.

THE SOLUTION

Using Iridium Certus broadband service, AST developed a customized satellite solution that provides a secure IP connection to the engineers aboard the oil rig and the FPSO vessel. This solution allows the team to remotely retrieve data, control the subsea equipment, and execute valve commands and safety tasks in real-time from the control center on the FPSO.

The two Thales VesseLINKs on Iridium Certus, aboard the oil rig and the FPSO, are both housed in robust customized units to protect the equipment as they provide a secure, high-performance connection between the two locations.

This reliable Iridium Certus solution provides redundant, secure connectivity and failover to the MCS. Additionally, AST integrated the technology directly into the Iridium® gateway to enable efficient, optimized connections. This allows the solution to operate independently of any other network or communications system on either the FPSO or rig, meaning it continues to provide connectivity even when other onboard systems cannot.

THE IMPACT

Iridium Certus was quickly installed and activated on the oil rig to provide reliable remote monitoring and control services, maximizing operational time for the crew. This solution played an essential role in this fast-moving project, breaking records as the producer went from field discovery to start-up in just nine months.

The Iridium Certus broadband service utilizes encrypted data channels to protect the data in transit. With no

internet breakout, this encrypted data never leaves the Iridium network, providing additional security, as well as minimizing latency and improving overall system performance.

In bringing this solution to life, AST engineers installed market-leading technology to ensure the safety-critical nature of the application. Given its independence from other onboard systems, this solution does not experience outages or interruptions when other networks are unavailable, and its auto-failover ensures the best possible connection at all times.

In addition, the Thales VesseLINK and AST's custom protective hardware require minimal annual maintenance, bringing the total cost of ownership of this solution far below that of installing a wired subsea connection.

"The AST team worked with our Energy Technology partner and Iridium to design this unique solution from proof of concept through to the fully deployed system in record time. Our bespoke solution enables remote operations and allows us to be an integral part of the energy transition." said Gregory Darling, Group Managing Director at AST.

TAKE AWAY

The AST team worked with Iridium and several other technology partners to create a scalable and adaptable communications solution for critical, remote operations.

Thanks to the Iridium network, AST delivered a global first for the use of the Iridium Certus technology in the oil and gas industry.



Thales VesseLINK Being Installed on the Oil Rig

Service Provider: Applied Satellite Technology
Enabling Product: Thales VesseLINK & AST Hardware
Embedded Iridium Product: Iridium Certus® 9810
Enabling Service: Iridium Certus®



THALES