

SATELLITE TECHNOLOGY FOR AUTOMATED AND CRITICAL DATA MONITORING IN CANADA'S OIL AND GAS INDUSTRIES

How will the oil sector recover from the dizzying drop of crude oil prices to the new normal of around \$50 a barrel? This is the issue Calgary-based Mobiltex Data Ltd., a leading manufacturer of industrial mobile data systems, is helping oil and gas companies address with its satellite supported remote monitoring solutions. The result: Mobiltex is in growth mode as it streamlines operations and drives cost savings for clients.

Mobiltex' RMU1 is the world's first remote monitoring unit small enough to integrate with existing oil and gas pipeline infrastructure, driving operational efficiencies and cost savings as well as improved visibility into the status and condition of oil and gas pipelines. It is also the first such product to be based on Globalstar's STX3 satellite transmitter. Three years since its launch, the technology is proving to be a transformative innovation for the pipeline industry in Canada and the U.S.

"Our competitors' products are bulkier and consume more power which results in complex and higher cost field installations. Globalstar's STX3 transmitter is so compact it allows us to integrate the complete remote monitor. Part of the sensor elements are on the actual pipeline and the RMU1 measures the signals from the sensor and transmits them, so

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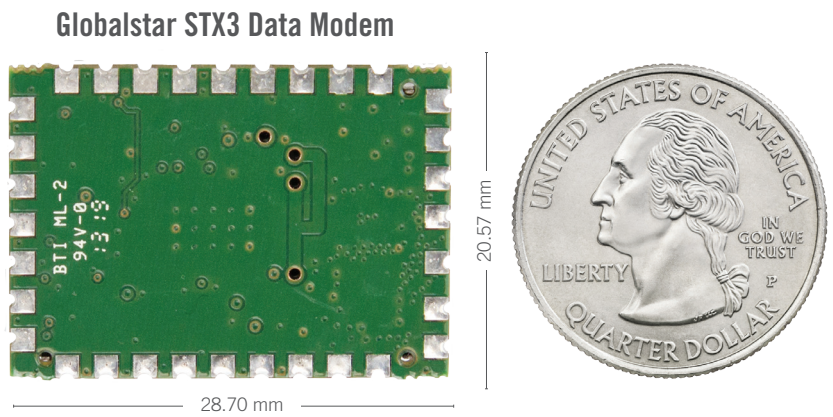
technically the RMU1 is more of a remote monitor of signals rather than a true integrated sensor. These signals measure the effectiveness of the external corrosion protection systems so we are not directly measuring the actual amount of external corrosion," says Jerry Chilibecki, Engineering Director at Mobiltex. "It's powered by a field replaceable, primary battery that has a lifespan of 10 years or more, eliminating the need for external power systems such as solar panels, which are costly in terms of deployment and maintenance."

The innovation comes at a time when oil and gas companies recognize and are seeking the benefits that come with automated monitoring of remote assets, including reduced field manpower and more reliable and accurate access to information. "We are seeing more demand from the market and from a wider range of clients under pressure because of lower oil prices and increased federal and jurisdictional regulatory requirements," says Chilibecki. "The technology allows our clients to reduce operating costs, streamline operations and more accurately track the health of oil and gas pipelines."



The RMU1 remote monitoring unit from Mobiltex, powered by the Globalstar STX3, shown with test station cover removed monitoring external corrosion protection on an underground pipeline.

Traditionally, multiple technicians, each with their own instrumentation, would drive hundreds of km or helicopter out to remote sites with limited or no access to terrestrial communications to take measurements from many test stations. Even though there are tens of thousands of test stations on pipelines in North America, a tech would typically be responsible for only a few hundred, taking readings a few dozen at a time. This procedure would take place between once a month and once every twelve months based on reporting requirements. Depending on the pipeline condition and company practices, most test stations are manually measured at least once a year. In critical areas the test points might be manually measured every month or two. Manual readings could be inconsistent and subject to variations because of the different calibrations and instruments used by the technicians. There is also the risk for human error in the form of misread values. While most of the time the manual readings are fine, occasionally there might be inconsistent readings as indicated above.



The Mobiltex RMU1 device, powered by Globalstar’s satellite technology, continuously monitors the remote pipeline sites using fixed instrumentation and delivers its readings automatically via an Internet Cloud-based service supported by satellite networks and IoT applications. In addition to improved quality, reliability and compliance, the solution enhances worker safety and bottom lines results.

According to Chilibecki, a leading Canadian oil and gas pipeline company has recently completed the installation of thousands of remote RMU1 satellite remote monitors to monitor external corrosion protection of its pipelines across the country. “One of the drivers was that the costs of satellite airtime and equipment is going down, while there is ongoing pressure for cost savings. They deployed the solution initially strategically, but expanded it to drive operational costs savings. They’ve also adapted their systems and processes to rely on the automated gathering of data in order to more accurately model what’s happening,” says Chilibecki. The solution is also being deployed by other significant players in the oil and gas industry to monitor external corrosion protection of pipelines. “Our clients are gathering info, in some cases along every km of pipeline, using thousands of remote monitors to gather the data and feed it back to the cloud,” says Chilibecki.

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Next for Mobiltex: Continued expansion with a focus on opportunities in the western United States. Monitoring of oil and gas pipelines is particularly challenging in this mountainous, low population density region with limited or no access to terrestrial cellular coverage. “Aside from expensive, private terrestrial radio systems, satellite is the only solution for remote monitoring in these challenging installation areas,” says Chilibecki. “Globalstar’s Low Earth Orbit constellation coupled with the STX3 satellite transmitter has been a competitive advantage for us.”

For more information on Mobiltex and its RMU1, visit <http://www.mobiltex.com/products/rmu1/index.html>

Globalstar helps organizations work better, faster and smarter with satellite IoT data solutions that monitor and assist in management of remote assets. For more information on Globalstar Satellite IoT, visit Globalstar.com.

For more information on **Globalstar** devices, visit: **Globalstar.com**