

WE'RE THERE FOR WILLIAMS

MOBILTEX

INTRODUCTION

Reducing cathodic protection testing costs and associated downtime in hard to access field sites while increasing data volume and accuracy with Mobiltex® technology.

Located in the rugged terrain of the Rocky Mountains and the Pacific Northwest, Williams northwest natural gas pipeline assets (NWP) require constant cathodic protection testing to ensure asset longevity and reliability. Without the assurance of cathodic protection, the lifespan of natural gas pipelines can be cut by many decades. Faced with costly and time-consuming field testing of cathodic protection rectifiers, Williams mandated that Larry Andersen and his colleagues in the NWP asset integrity division install and operate remote cathodic protection monitoring in this hard to access region.

CHALLENGE: REDUCING FIELD-TESTING COSTS, INCREASE DATA USABILITY

Field testing is required 6 times per year by law, in addition to one longer annual asset survey that can take two weeks in the field. To say that some parts of the NWP are hard to access is a gross understatement.

"There have been times where we've had to take snowcats, snowmobiles, helicopters out for the day to check cathodic readings," Andersen says. "You figure \$800 an hour for helicopter rentals and at least an 8 hour day, and those costs add up quickly,"

Manual rectifier testing is not only time consuming and can lead to unnecessary and costly pipeline downtime, it can often end up not being helpful in the first place. Field crews could be using different testing methods and different equipment, at different times of year.

"It leads to very poor data quality; there weren't many data points being acquired and the quality of the data points were not necessarily great," Mobiltex VP of Engineering Tony da Costa says. "Now their data sets are

"Typically what a lot of companies will do is a bimonthly inspection and for years we did a bimonthly inspection... we've since set it up with remote monitoring systems, we now can do it instantly over a website, so we do it monthly"

— LARRY ANDERSEN, WILLIAMS NWP, ASSET INTEGRITY (IDAHO, PACIFIC NORTHWEST)

more accurate and the readings frequency is increased, so they are able to capture transient events and deal with faults that pop up in a more timely manner"

SOLUTION: GOOD DATA, GOOD CUSTOMER PARTNERSHIPS

Andersen tried Mobiltex after trials with other remote monitoring companies.

"I've had Mobiltex running in my system for over a year, and I've had zero failures," Andersen says. "As a matter of fact, our company did choose a different vendor at first. We did install those units on our entire system and we have had very, very poor results with them and we've since discarded their systems and went to the Mobiltex system."

Mobiltex can do required rectifier voltage and amperage testing with its RMU units, and since Williams opted to use satellite-linked RMU units, data is sent via a link to Andersen's computer through the web portal.

"There are two different methods to get the data, go to Mobiltex website and do a pull or do a reading every 7 days," Andersen says. "We have a bridge system, where Mobiltex sends our data guys a spreadsheet with all our of CPS numbers and their readings and that will automatically populate into what we call our cathodic protection database management, or CPDM system, which is what we use as storage for all of our critical data."

This seamless, automatic testing ability goes beyond ongoing rectifier testing. Periodically, natural gas pipelines need to do interruption tests to ensure true cathodic protection. These interruption tests are historically taken by the synchronized activation of separate interruption devices that have to be hand installed and calibrated along the length of the pipeline. Williams can now initiate interruption tests minutes using the Mobiltex RMU units.

“In the past it would take us literally weeks to set up those portable units, so you could put a dollar value to that process,” Andersen says “It’s 10 to 15 minutes to set up an interruption as opposed to weeks to go out and manually hang all of these plus traveling to your right of way to do it.”

RESULTS: CONSTANT CONTACT, PREDICT BEFORE FAILURE

With successful remote installations that can send clean data reliably through cellular or satellite transmission as needed, field techs can cut their windshield time to reduce fuel costs and fleet sizes, and be redeployed to higher value tasks like data analysis and other maintenance tasks.

The underlying technology of remote cathodic protection testing has been around since the 1990s. Mobiltex uses tech that has been validated over the past 10 years by numerous customers in a number of different field locations.

Mobiltex is in constant communication with its customers to put that tech to use, and improve it.

“When people call us for help, they get a live person, not an automated attendant, and they don’t have to enter a credit card to get somebody to help them,” da Costa says.



CorTalk® RMU2 Remote Monitoring Unit



That attention to customer support carries over to product development, where some of Mobiltex’s most useful features have come from informal talks with customers about what features they would like to see.

The latest customer-driven innovation is not physical, but something invaluable nonetheless. Data experts at Mobiltex are actively working on making the data they gather for Williams and other clients work harder for the customer. da Costa predicts that in a year or two, he can give Larry Andersen another tool to help him do his job better. As Andersen’s team gathers more and more data, Mobiltex can use AI technology to signal to Andersen when a cathodic protection asset will likely fail with plenty of time to repair or replace the equipment.

“Machine learning and analytics, that’s definitely the next step in the evolution of this technology; what’s been limiting it is that only recently have cloud services arrived at a commercially viable option with the algorithms needed to help in this next step,” da Costa says. “Once we combine the remote monitoring data with secondary data sets from the field surveys, I think it’s set to create a major shift in the predictive analysis of those pipelines failing.”