

Case Study

Mapping Assets for Energy

Summit Utilities



BENEFITS

- Timeliness
- Accuracy
- Customer Service
- Leveraged the utility's existing investment in Esri ArcGIS®

Utility Deliverables

- Delivered mapping on approximately 90 miles of pipeline
- Identified approximately 2,000 gas utility meters, with multiple geo-tagged photos per meter, showing relationship to the residence and serial numbers.

Summit Utilities, Inc., is a growing Natural Gas business serving Colorado and Missouri.

In 2011, the firm acquired several existing natural gas pipelines in rural mountainous counties and needed to incorporate those lines into the firm's GIS data set. The previous owners of these utility services did not have up-to-date, accurate maps of the pipelines nor the exact locations of the gas meters for each property.

The newly acquired systems included approximately 90 linear miles of buried pipeline installed at some of the highest elevation in the United States. In this rural area, residences are widely spread apart and pipelines to homes can range from 200 – 1500 feet in length from the main line.

Gilpin County, Colorado, where much of the project was located, had recently gone through an annexation which included name changes on roads. To make matters even more complicated, the physical numbers on local houses were hard to spot due to dense tree coverage and sharp elevation changes.

Summit Utilities maintains a GIS data set showing its assets at accuracies of one foot. The challenge they faced with this project was not only collecting the data on the ground, it included post-processing the data so that it could be ingested into their GIS data base and available for use across the company – so that meters could be easily located and serviced, any pipeline problems could be found and fixed immediately, and billing and other office programs related to location data could be made efficient.

“During the project, they sent me regular updates on the progress, as well as sample data, for me to review, to make sure everything was on track, that the data being collected was what we needed.” said Brad Torgerson, Summit Utilities GIS Manager.

First Challenge: Field Data Collection

Brad Torgerson, Summit Utilities GIS Manager, is a longtime customer of CompassTools, which provides sales and service on GPS/GIS hardware and software. Because the challenge of such a large project was outside the scope of his current employee base, he asked CompassData, a sister company of CompassTools, if they could perform the data collection.

In fact, CompassData was able to locate and map the project for Summit Utilities in weeks, rather than the months it would have taken in-house staff to do; and they guaranteed accuracy. CompassData planned, organized and completed the data collection

The Right Equipment

In order to collect reliable, accurate data from the field, CompassData field crews used Trimble MGIS hardware and software designed specifically for the task. Trimble also provides a complete suite of software designed for utilities, allowing them to coordinate all the tasks involved in managing their distributed assets, leveraging their GIS investment in the smartest way. For more information about these products, contact www.CompassToolsInc.com.

Utilities Need GIS

- It's not uncommon that utilities are still relying on inaccurate paper maps, hand-drawn notes or worker recollection as to where assets are, even ones as crucial as water or gas mains, valves, and hydrants.
- With today's GPS/GIS technology, responding to outages, managing maintenance and repair, and meeting compliance requirements can be made simpler, faster and more efficient.

Unique Need

With accurate information on the elevation of their pipelines and meters, Summit Utilities can more efficiently bill its customers. In the mountains, delivering the gas is different than in the eastern plains. It costs more to deliver the gas to the top of the mountain. So instead of charging everyone the same flat rate, Summit Utilities can now bill including elevation in the equation.

project ahead of schedule, using sets of two-person teams: one located and flagged the underground pipeline using pipe locators while the second used GPS equipment to verify latitude, longitude and elevation.

Every meter was identified by location, with photographs showing serial numbers and the condition of the equipment. Every address receiving gas was verified and mapped.

Summit Utilities didn't have to manage an employee or coordinate this project: CompassData took on the entire collection challenge and provided the information to Torgerson before the deadline.

Second Challenge: Post Processing for the GIS data set

"They handed me the finished product. I didn't have to worry about taking that data and doing any further quality assurance on it to make it usable," Torgerson explained. "I could load it directly into our database and use it right away."

CompassData's experience with post-processing data includes bringing raw data from the field into a customized geospatial data set so that the information can be included in Esri® mapping software or in any other digital map program.

"Two things were of paramount importance for us in this project: timeliness and accuracy," said Torgerson. "CompassData delivered on both to such a degree that I have complete confidence in bringing them on for any other projects going forward."

Ongoing Return On Investment

While many utility companies use in-house staff outfitted with GPS hardware to map their distributed assets, Summit Utilities has found that out-sourcing mapping to CompassData provides a solid Return on Investment that continues to add up.

"In this business, there's a time ROI. Having accurate information for our field personnel means they don't need to spend extra time looking around to do their jobs. That saves time and money," Torgerson said.

Regulatory requirements for reporting to governmental and oversight agencies about distributed assets, such as the performance of meters and, the condition of pipes is another area of ROI. "It saves us a lot of time to be able to run a report on our GIS database rather than run around to different departments, and confidence in the accuracy of this data is not something you can quantify but it's very important to us," Torgerson said.

"It's very convenient to be able to call one number with any of my equipment or GPS needs and know it's kind of a one-stop shop, with both CompassTools and CompassData. For equipment as well as any other GPS needs, I can go to one place and access expert help and excellent customer service," said Torgerson.
