

## Case Study



### PETROLEUM

#### User

Whiting Petroleum Corporation

#### Challenge

Improve the process for accurately identifying and maintaining underground assets

#### Partner

Argis Solutions, LLC

#### Solution

- ArcGIS® Enterprise
- ArcGIS™ Online
- The Argis® Framework
- The Argis Lens

#### Results

Enabled Whiting's One Call department to visualize risk areas on-site, reducing analysis time and saving money while also providing critical quality assurance

# Mitigating Risk by Visualizing Hidden Assets with Augmented Reality

Whiting Petroleum Corporation is a major independent exploration and production company in the United States, controlling one of the largest acreage positions in the Bakken/Three Forks resources play in the Williston Basin of North Dakota and Montana. Whiting's One Call department is responsible for identifying and protecting underground assets at thousands of well sites and field locations. Accuracy in identifying hidden assets is critical to the company's success, ensuring that excavators are drilling in the correct site to prevent costly errors and safety hazards.

## The Challenge

Before implementing Esri's ArcGIS and the Argis Framework, the Whiting field crew had to rely on static maps and a time-consuming, fault-ridden process for locating and maintaining the company's assets. The on-site field crews would first use an electromagnetic locator, or ground-penetrating radar, to identify precisely where the assets were buried, marking these assets on the static map. The locators would then compile a report that would be given to their One Call organization. In turn, the One Call department would create the documentation for the excavation crew. The process was not only inefficient, but it also left too much room for error, as there was no way to confirm the asset locations.

Using ArcGIS and the Argis Lens software, Whiting is able to view its underground facilities in the real world to more accurately match the actual projected underground facilities with the aboveground landmarks, so it can better assess risk and communicate more clearly with excavation contractors.



“Location data has always been critical to our industry, but we can now take that data even further by visualizing our underground facilities in the real world. We don’t ever want to see our data any other way!”

**Brent Pingel**

One Call Coordinator  
Whiting Petroleum Corporation



## The Partner

Argis Solutions’ cloud-based augmented reality (AR) visualization engine, the Argis Framework, easily interprets data from ArcGIS. Real-time, real-world rendering of locational, geospatial, or other data, such as building schematics and component diagrams, can be seen instantly through a mobile device. Argis Solutions’ mobile AR viewer, the Argis Lens, provides a user-friendly interface that puts the power of geographic information system (GIS) data in the hands of field crews and industry technicians.

## The Solution

Working with ArcGIS and the Argis Framework and Lens, Whiting staff were able to not only streamline their asset management process but also improve the accuracy of their data. Now, the locators enter the field, turn on the Argis Lens, and immediately see their data in the field around them as if they were stepping into their map. They get an instant understanding of the location of their underground assets—no interpretation or analysis needed. Now, once each asset is flagged, the locators can look at the site using the Argis Lens to confirm immediately that every asset is marked accurately. With the Argis Framework, the One Call report simply requires taking a picture with a mobile device using the Argis Lens view, thereby eliminating manual, error-ridden work.

## The Results

Coupling Esri® GIS with Argis in Whiting’s One Call department has enabled the company to save an average of 30 minutes locating each asset. For Whiting, a company that locates thousands of assets a year, this saves a huge amount of time, resources, and money. The new process reduces paperwork, eliminates time-consuming analysis, and provides a higher level of quality assurance. Whiting field staff can now perform their operations more efficiently and effectively while maximizing the company’s return on investment.



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