

# Improving Operational Efficiency with Oil and Gas Asset Monitoring

A WellAware Case Study



About the Operator: Burk Royalty is a family-owned, fully integrated oil and gas company based in Texas that develops legacy and greenfield assets. Since 1929, Burk Royalty has helped thousands of asset owners create value and ensure safety by delivering quality engineering solutions in the field that support frontline workers, including pumpers, foremen, and superintendents.

## Table of Contents:

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Introduction	3
The Challenge: : Large New System, Limited Visibility	3
The Solution: Remote Pressure Monitoring with WellAware	4
The Result: Lower Downtime and Efficiency Gains	5

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# Introduction

After acquiring acreage in Houston County and Madison County, Texas, Burk Royalty began the task of building infrastructure to gather natural gas and water for processing, enhanced recovery, and disposal, as well as distribute natural gas at high pressure for gas lift and sales. To support their producing assets, Burk Royalty laid hundreds of miles of new pipeline over a short period beginning in 2011. The company's small, yet experienced team had trouble managing all of this new infrastructure effectively with legacy tools and manual processes. WellAware worked closely with Burk Royalty to deliver a full-stack asset management solution consisting of dozens of reliable remote pressure monitoring systems capable of collecting high-resolution pressure data from pipeline risers distributed throughout the gathering and distribution system.



## TOPICS

**The Challenge:**  
Large new system,  
Limited visibility

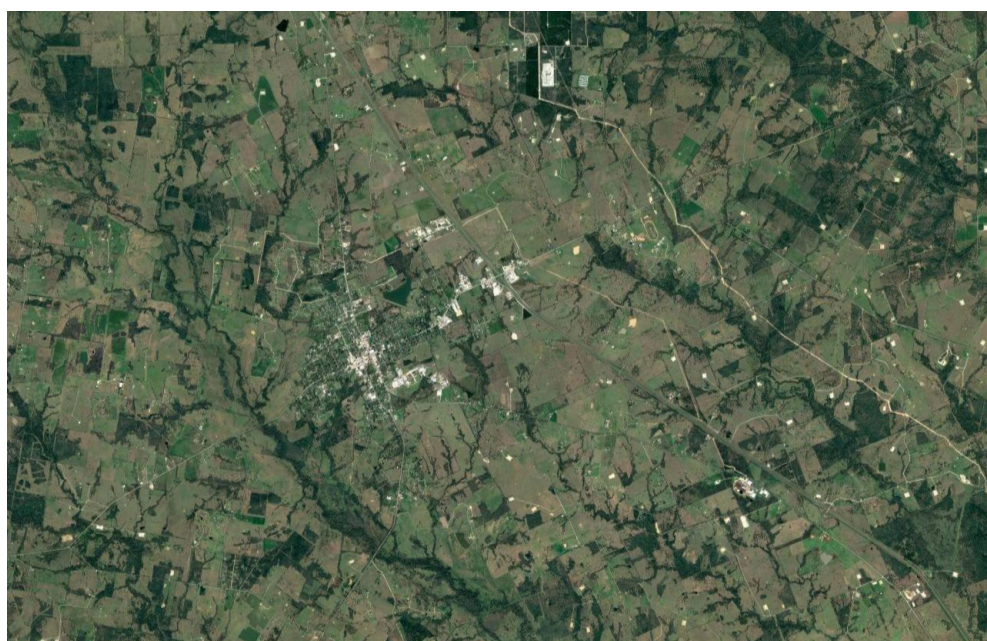
**The Solution:**  
Remote Pressure  
Monitoring with  
WellAware, built  
on AWS

**The Result:**  
Lower Downtime and  
Efficiency Gains



*By 2013, "the system had grown to be so large that it was completely impractical to manually go through the field, check pressures, and look for issues,"*

## The Challenge: Large New System, Limited Visibility



Burk Royalty made a substantial investment north of Houston in Madison County, Texas, in 2011. The company laid over 200 miles of low-pressure gathering, high-pressure gas distribution, and water gathering lines in just a few short years.

By 2013, "the system had grown to be so large that it was completely impractical to manually go through the field, check pressures, and look for issues," recalls Rob Hyde, Burk Royalty's Vice President of Operations. Workers in the field had trouble finding operational problems before they had a negative impact on bottom-line performance - causing things like downtime, asset failures, and a loss of compression efficiency.

In particular, plugs in low-pressure lines were limiting the efficiency of the natural gas gathering system, creating an overall drag on productivity, especially since Burk Royalty relied on a centralized gas lift system for the new Madison County system. Burk Royalty ended up having to spend more money to compensate for productivity losses by adding additional horsepower to their compression systems.



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*I wanted something that looked a lot like what people were used to using on their phones and iPads...I knew that if the system wasn't immediately accessible, the people who were using it in the field were not going to adopt it.*

Rob decided to look for a solution that would help his team catch issues in the field sooner without adding operational complexity. The solution had to be both intuitive and easy-to-use. Otherwise, his busy team wouldn't invest the time to integrate it successfully into daily processes.

On top of giving his field team better tools, Rob wanted to understand the economic impact of the inefficiencies embedded in the Madison County system. He needed trustworthy operational data that could inform decision-making and tie interventions directly to outcomes.

Given how much remote monitoring technology had improved in recent years, Rob knew there had to be something out there that would solve his team's challenges easily.

## The Solution: Remote Pressure Monitoring with WellAware



The answer to Burk Royalty's challenges came in the form of an oil and gas asset management platform designed by WellAware and built on Amazon Web Services (AWS). WellAware worked with the Burk Royalty team to design, install, and configure a distributed low-power pressure monitoring system on dozens of hard-to-reach pipeline risers across Burk Royalty's vast Madison County system.

Relying on a team of WellAware Certified Automation Partners, Burk Royalty established real-time connectivity and managed connections capable of gathering high-resolution pressure readings every 15 minutes. These readings continuously feed dashboards, reports, and alarming features powered by WellAware's LIFT software applications, giving real-time visibility that both office-based and field-based workers can access through an easy-to-use mobile and web app. The solution is built on AWS.

Furthermore, WellAware's monitoring infrastructure creates data connectors that lets Burk Royalty to conduct analyses on large volumes of data within external applications. Rob and his team use this information to optimize compressor efficiency and mitigate plugs that were previously bringing down the performance of the entire system.



## The Result: Lower Downtime and Efficiency Gains

WellAware's remote monitoring platform gave Burk Royalty's nimble team everything needed to maximize the performance of the Madison County system.

Shortly after installing WellAware's solution, Burk Royalty saw an immediate reduction in how long it took frontline field workers to identify and mitigate operational issues. As a direct result of the added visibility and analysis offered by WellAware, Burk Royalty **reduced pipeline downtime by over 75%** in the first winter after installation, because the team could clearly see when infrastructure started to freeze based on pressure sensor readings.

"I really just wanted to give [our staff] better tools with which they could do more with less and ultimately understand their problem better and make better decisions."

In addition, Rob now had the information he needed to assess the economic value of implementing a remote monitoring solution. He and his team could pull massive volumes of data out of the WellAware platform and model the cost of inefficiencies that had stacked up over several years.

"For every dollar we were spending on compression, we were really only getting about \$0.57 worth of useful compression out of that."

Overall, Burk Royalty saw a **90% increase in compression efficiency**, engineering teams were able to work closely with field teams in real time to optimize compression systems based on models developed on WellAware data. Rob was so pleased with how well the monitoring solution worked for his team that he expanded Burk Royalty's WellAware monitoring footprint beyond the existing Madison county field, installing additional monitoring and control systems on compressor stations, salt water disposals, and LACT units in both East and West Texas.

Outside of setting up an accurate, reliable, and simple asset management platform for Burk Royalty, WellAware also stepped in after a major flood destroyed much of the Madison County remote monitoring system. WellAware engineers got everything back up and running quickly, preventing Burk Royalty from losing valuable data.

Many years later, WellAware is still empowering Burk Royalty field and engineering teams with quality data and insights that enhance operational performance and drive bottom-line profitability. The oil and gas company has a partner it can trust over the long term to support day-to-day needs and step in when necessary to address bigger problems.

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## *Trying to minimize downtime and optimize asset efficiency?*

Check out our oil and gas asset management platform by clicking the button below.

**GET STARTED**



210-816-4600  
1-855-WELLWARE  
[info@wellaware.us](mailto:info@wellaware.us)

3424 Paesanos Parkway  
Suite 200  
San Antonio, TX 78231