OSPERITY

CLIENT SUCCESS STORY

INJECTION WELL LEAK DETECTION

> With Osperity's solution we are immediately alerted when a leak is detected and can take action the second a notification is received.
>
> Maintenance Planner

COMPANY
Publicly traded junior oil and gas company

SECTOR
Upstream Oil & Gas and Energy

OPERATIONS
Northern alberta

INDUSTRY
Oil & Gas

CHALLENGE

Osperity's client has several remote high-pressure water injection wells in northern Alberta. Some of these assets are located close to freshwater lakes and creeks.

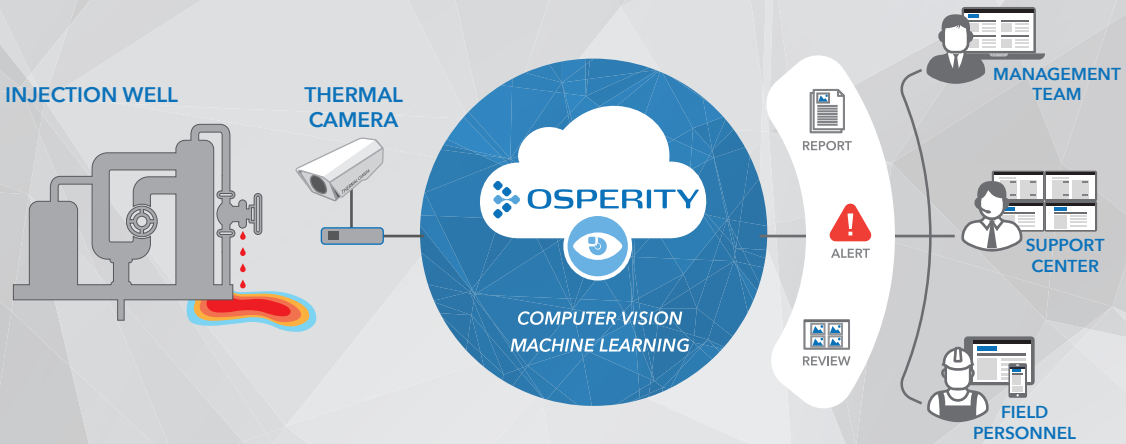
They needed a solution that could notify them immediately in the event of a leak. They approached Osperity to build a system that would not only detect leaks in real-time, day or night, snow or rain, but also to automatically alert stakeholders when a leak is detected, eliminating the need to inspect or monitor wells manually.

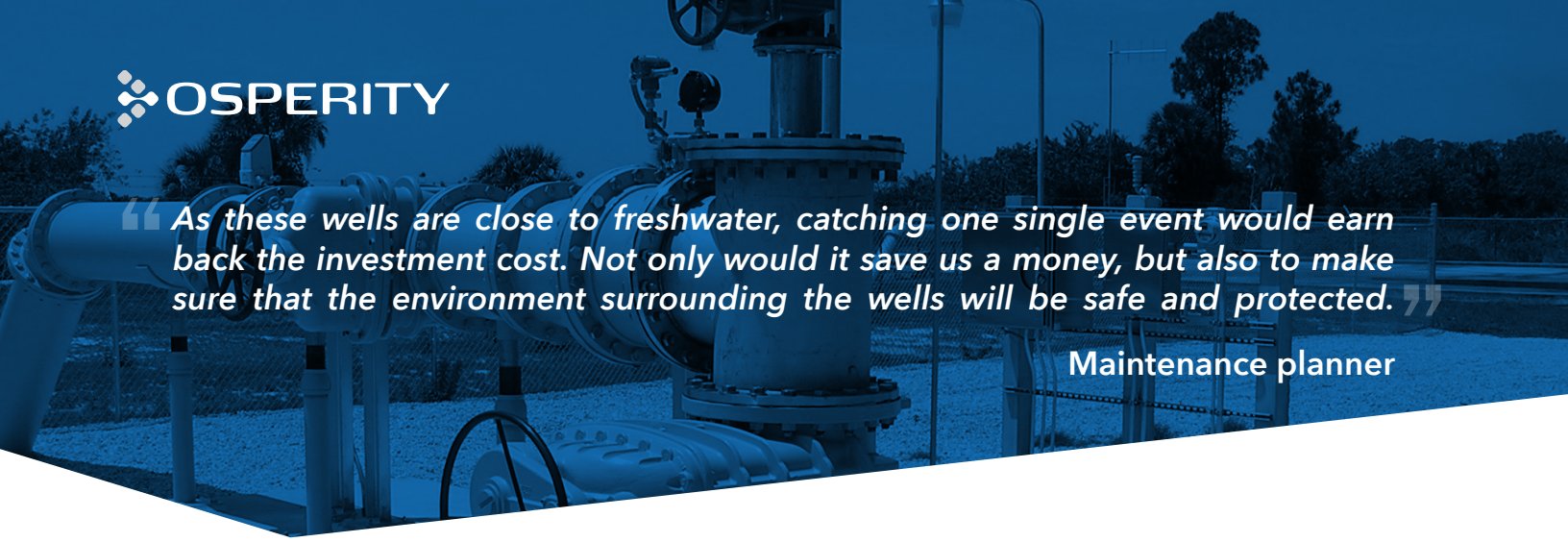
While the company has a SCADA monitoring system in place to monitor the pressure of the wells, they felt the system isn't 100% reliable, as the sensor can only detect a major drop in pressure. The risk is a smaller leak could go undetected for a long period of time, possibly contaminating the environment close to the wells.

SOLUTION

Working with the client, Osperity designed a solution using our intelligent visual monitoring platform and FLIR thermal cameras.

The shelters where the wells are located have no floor and hot liquid will leak directly on to the ground. Osprey set up analytics bounding boxes on the outside of the building to measure high temperatures that would indicate a leak. Thermal alerts have been calibrated to trigger on temperatures above 30, 35 or 40 degrees, depending on the site.





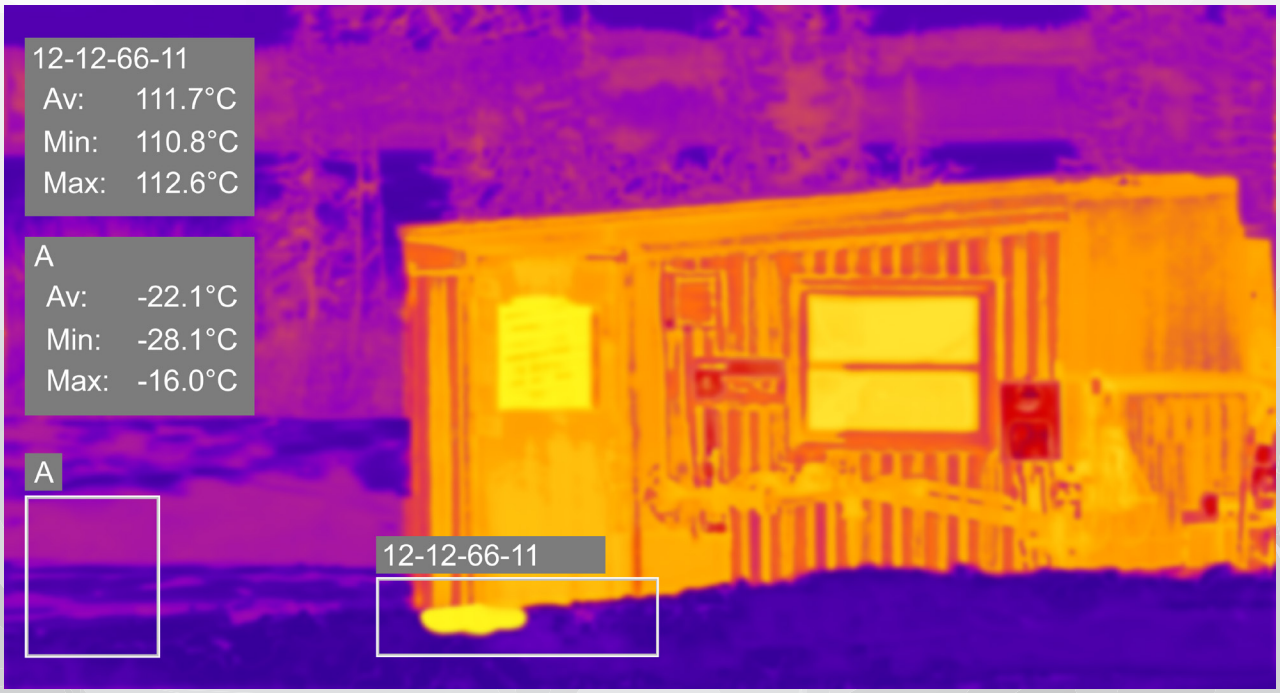
As these wells are close to freshwater, catching one single event would earn back the investment cost. Not only would it save us a money, but also to make sure that the environment surrounding the wells will be safe and protected.

Maintenance planner

RESULT

After a four-week optimization and testing period, the exception-based alerts showed to be 100% accurate with no false positives. The system can detect as little as 2 liters of hot fluid leaking from the well, making it very reliable.

All of the field operators are set to receive 24/7 exception-based alerts for their respective sites. Management and the support center are receiving alerts for all sites.



Small leak detected, triggering an alert.

ABOUT OSPERITY

Osperity's intelligent visual monitoring platform empowers oil and gas companies to reduce operational costs, while mitigating environmental and safety risks. Osperity cost-effectively manages cameras at scale, analyzes visual data with computer vision (AI) and input from other sensors and systems, and distributes personalized, actionable insights to users across the enterprise.