SURVEILLANCE

AIRBORNE
ENERGY SOLUTIONS

Pipeline Surveillance is the cornerstone of AES's core offering.
Many of the technologies used within the industry were pioneered by Airborne.
We use both Rotary Wing and Fixed Wing aircraft coupled with various added leak detection offerings to best suit your integrity or operational needs.

All surveillance flight reports include the basis of a visual inspection.

Added sensory items can include:
Thermal Imagery, Boreal Gas Leak Detection, Georeferenced Imagery (360 Camera), LiDAR & Analytics and Bridger Photonics Gas Leak Detection

FIXED WING PIPELINE INSPECTIONS

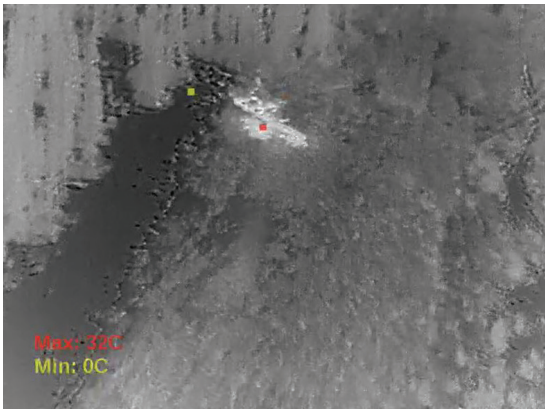
- Anomaly Reporting
- Pipeline Leaks - Reported Immediately
- Exposed Pipe - Reported Immediately
- Erosion - Reported Immediately
- Third Party Activity
- Vegetation
- Signage (when visible from the airplane)
- ROW Encroachments
- GPS Flight tracking
- In house GIS / Reporting Software

ROTARY VISUAL PIPELINE INSPECTION

- ***Anomaly Reporting at lower and slower flight path
- Pipeline Leaks - Reported Immediately
- Exposed Pipe - Reported Immediately
- Erosion - Reported Immediately
- Third Party Activity
- Vegetation
- ***Signage (when visible)
- ROW Encroachments
- GPS Flight tracking
- In house GIS / Reporting Software

ROTARY - INFRARED/VIDEO LEAK DETECTION

- Anomaly Reporting
- Pipeline Leaks - Reported Immediately
- Exposed Pipe - Reported Immediately
- Erosion - Reported Immediately
- Third Party Activity
- Vegetation
- Signage (when visible)
- ROW Encroachments
- GPS Flight tracking
- In house GIS / Reporting Software
- ***Leak Detection Hotspot



SURVEILLANCE

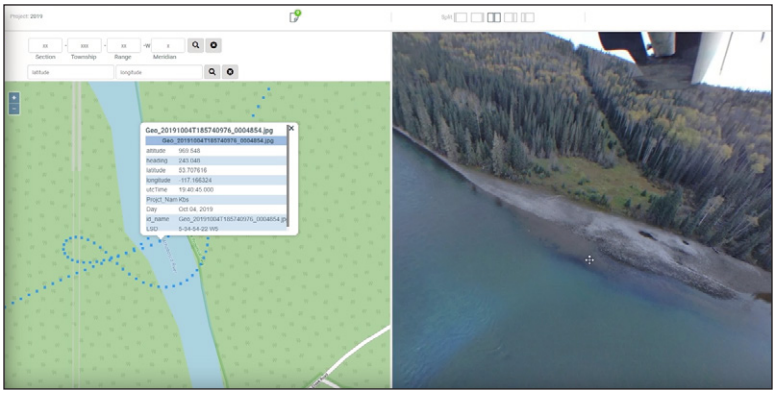
ROTARY - GAS LEAK DETECTION

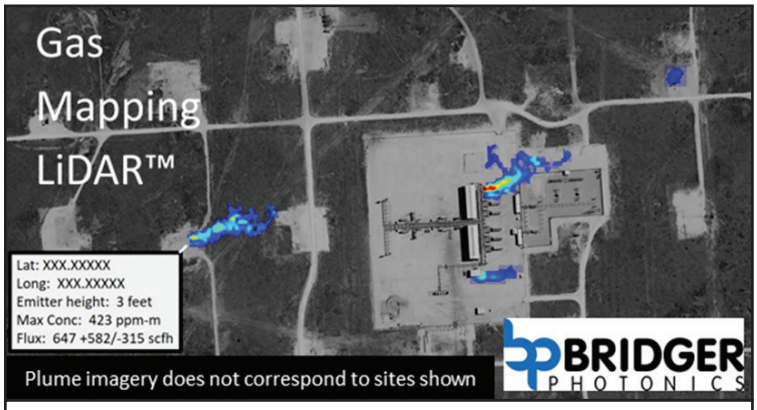
- Anomaly Reporting
- Pipeline Leaks - Reported Immediately
- Exposed Pipe - Reported Immediately
- Erosion - Reported Immediately
- Third Party Activity
- Vegetation
- Signage (when visible)
- ROW Encroachments
- GPS Flight tracking
- In house GIS / Reporting Software
- **Additional peace of mind for leak detection of hydrocarbons
- **Detailed Anomaly Reporting with gas leak spikes
- **Methane Spikes labelled and geolocated

BOREAL
www.boreal-laser.com

ROTARY - GEO REFERENCED IMAGING (GRI) 360 CAMERA

- Anomaly Reporting
- Pipeline Leaks - Reported Immediately
- Exposed Pipe - Reported Immediately
- Erosion - Reported Immediately
- Third Party Activity
- Vegetation
- Signage (when visible)
- ROW Encroachments
- GPS Flight tracking
- In house GIS / Reporting Software
- **360 camera with interactive cloud based mapping platform





GML is able to provide not only the location, concentration and flux of an emission but also the height of the plume making locating easy for ground crews to perform repairs.

GAS MAPPING METHANE DETECTION

Airborne Energy Solutions Inc.
works in partnership with
Bridger Photonics
to provide
Gas Mapping Methane Detection

This leading edge technology can be applied with Fixed Wing or Helicopter. It monitors and detects leaks 20 to 100 times more sensitively than most airborne IR cameras and can quantify leak rates with industry leading accuracy. This is typically flown with our Fixed Wing aircraft at a higher level! This is a methane leak detection service only.

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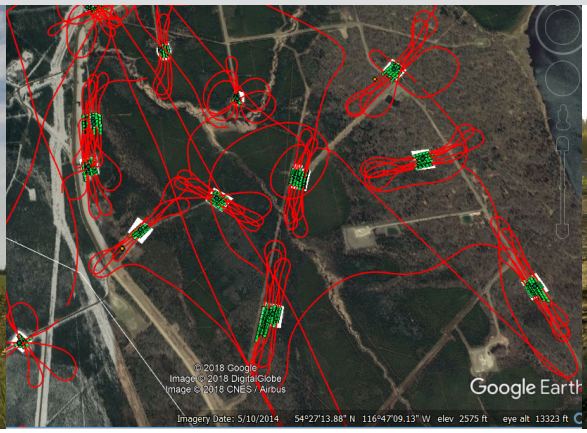
INNOVATIVE SOLUTIONS WITHOUT LEAVING A FOOTPRINT

780-778-3080

www.airborneenergysolutions.com

AERIAL SPRAY

Industrial Vegetation Management



Have you considered an aerial approach rather than traditional ground methods for spraying lease sites and right-of-ways for noxious weed management?

We can typically spray 8-10 lease sites PER HOUR for general gathering systems.

BENEFITS

- Early Morning flights that are often finished before operations need to access their sites
- Only 3-4 people , ultimately reducing risk or safety hazards
- Able to finish large projects fast and efficiently, even with rain delays
- Less fire hazards in dry conditions, no quads or ATV's used
- Only a few sites are used for staging. No need to access every site!
- Less work permits, less managing of people in your field
- Fixed cost per site with all expenses including herbicide for budget certainty

HERBICIDE OVERVIEW

GENERAL

Environmentally friendly herbicide used to specifically target noxious broad leaf plants. Leaves grass to assist in erosion stability if required. In higher concentrations can eliminate sapling trees. Access on site 30 minutes after application.

SPECIALIZED

A variety of combined herbicides used to meet your needs for complete eradication of vegetation or "brown out" results. Elimination of all bushes, grass and any vegetation on site. Access onsite 48 hours after application.

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HELICOPTER CHARTER

FORESTRY / WILDFIRE SUPPORT

- Fire Suppression
- Infrared Hot Spot Scanning
- Tree Planting
- Wildlife Services
- Crew Moves

OIL & GAS SUPPORT

- Pipeline Surveillance Specialists
- Pipeline Construction / Support
- Seismic Support
- Precise Long Line Capabilities
- Crew Moves

ENVIRONMENTAL SERVICES

- Water Quality Surveys
- Water and Soil Erosion Assessments
- Invasive Species
- Timber Salvage
- LiDAR & Analytics
- Vegetation Assessments
- Crew Moves

SPECIALTY WORK

- Aerial Photography
- Long Line Specialty Lifts
- Mining Support
- Aerial Seeding
- Search and Rescue
- Medevac
- Sightseeing Flights
- Mountain Flying

Airborne Energy Solutions Inc. can supply the aircraft to do the job efficiently and safely. We are an aviation charter company that provides helicopter transportation services and solutions for oil and gas, mining and forestry industries in Canada and the Arctic.

Quality results save you time and money. We specialize in combining our services for value added results.

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AIRBORNE METER READING

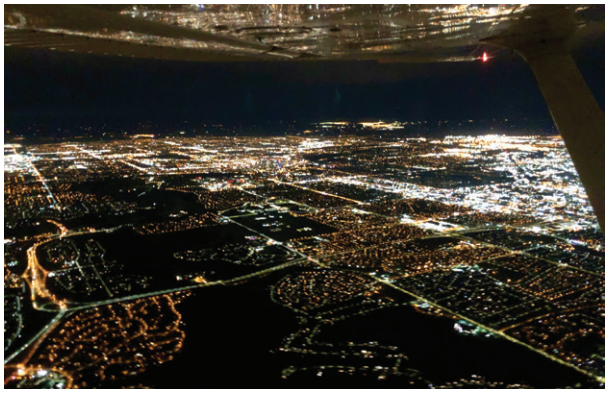
AERIAL AMR

Airborne Energy Solutions provides automated meter reading solutions (AMR) for natural gas, water and electrical utilities. AMR is a system that allows utility companies to remotely capture meter reading data. Our aircraft is equipped with specialized equipment which are able to read meters unobtrusively in specialized areas at flight levels up to 9000 ft.

NATURAL GAS • WATER • ELECTRICAL UTILITIES

ERT INSTALLS

Our partnering companies install Encoder Receiver Transmitters (ERT's) required to obtain the automated meter reading data remotely. An ERT is a computerized recording and encoding device with a built in radio transmitter. These devices record gas and water reading by encoding the information, and transmitting the reading to a remote data collector. Once installed, aerial AMR is then available to that meter.



FEATURES

- Minimal Radio Signal Obstructions
- Reduced Missed or Estimated Reads
- 99.6% Read Capture Rates
- Large Geographic Capabilities
- Data Security
- Reduced Greenhouse Gas Emissions
- Read Cycles based on Geographical Zones

BENEFITS

- Lower reading costs
- Sustainable
- Scalable
- Low Environmental Footprint
- Risk Reduction
- Increased Customer Satisfaction
- Reading Data Accuracy
- Safety
- Time and Cost Savings

Airborne Meter Reading has the ability to read in 5 minutes what would take several hours to complete while driving.

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