AERIAL METHANE DETECTION SYSTEM

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This simple, easy-to-use methane detection system was built to drastically lower the cost of leak surveys for pipeline owners. Designed for both fixed-wing aircraft and helicopters, the technology can be operated for a fraction of the cost of traditional helicopter systems.

The methane detection can be implemented as part of a pipeline integrity management program to comply with latest leak detection requirements of the new DOT and EPA regulations. This system allows existing pipeline patrol aircraft to find gas leaks while on routine patrols.

FAA APPROVED

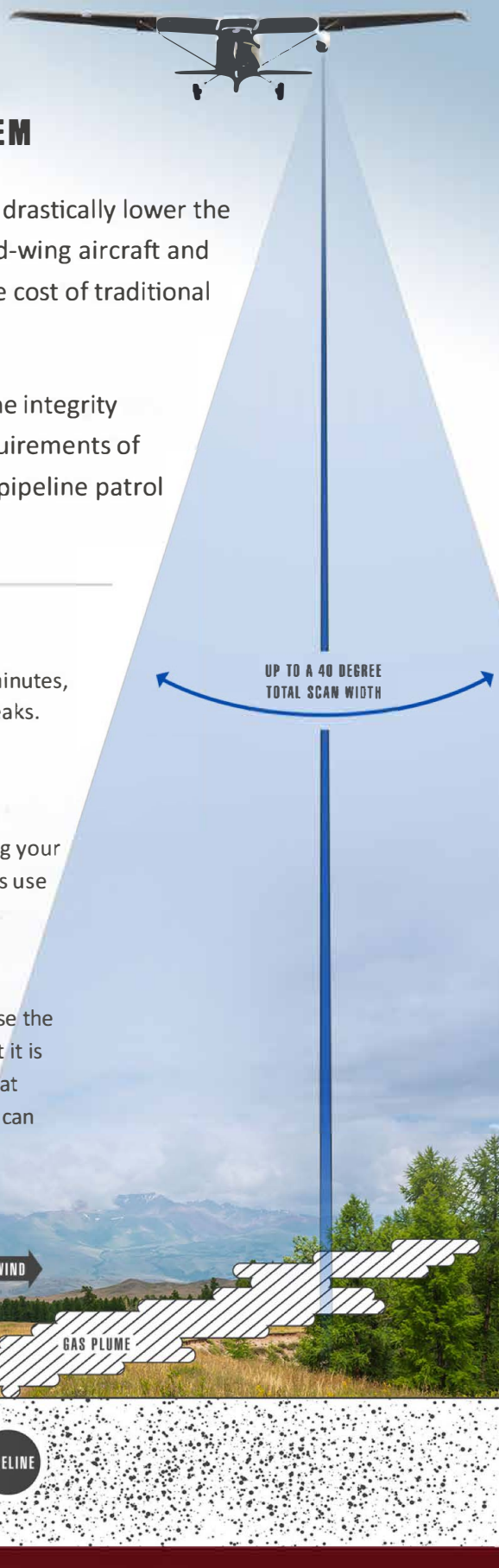
Certified for Cessna 172's, Cessna 182's and Cessna 206's and installs in minutes, requiring no modifications to the aircraft. Simply install and go find gas leaks.

EASE OF OPERATION

Unlike other technology, it requires no complex post-flight analysis and is designed to instantly alert the pilot if a methane gas leak is found. Training your pilots is simple and can be accomplished in a single short flight. Operators use an iPad app to monitor and control the system in flight.

HOW IT WORKS

The Aerial Methane Detection uses a safe, low-powered infrared laser to sense the amount of methane over the pipeline. The laser's wavelength is tuned so that it is attenuated by methane molecules. By measuring the amount of laser light that reflects from the ground after passing through a methane plume, the system can locate a gas leak and estimate the leak rate.



INCREASE SAFETY

FINDS LEAKS
PROTECTS THE ENVIRONMENT
SAFEGUARDS PROPERTY

PIPELINE TRACKING

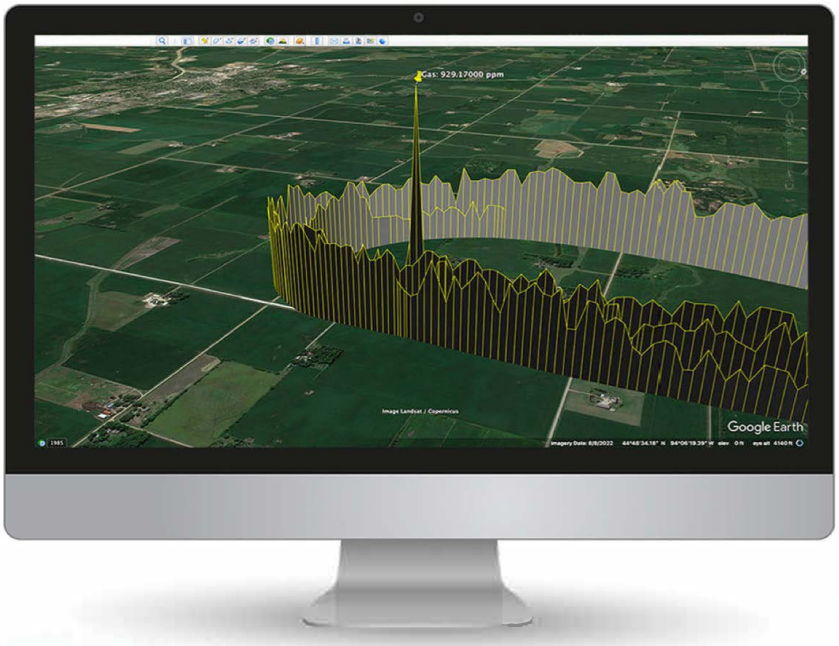
Our technology has two modes of operation:

Rapid Scan Mode: The laser beam quickly oscillates 40˚ left to right for a wide area of methane detection coverage.

Pipeline Tracking Mode: The laser beam is stabilized and directed to follow a pipeline.

SIMPLE POST-FLIGHT ANALYSIS

Post flight analysis is easy. Using a laptop or desktop computer the pilot may open the methane readings in Google Earth (or other GIS software) via a KML file. The methane parts per million meter (PPM-M) is graphically displayed.



CONFIDENTIALITY

If the detector senses a gas leak, the data is completely confidential. The software gives users full control over who sees the location of the gas leaks. The data is safely stored on the app and is never uploaded to the cloud. Only the pilot knows about any gas leaks. If desired, after the flight, the pilot can then email the sensor readings to the pipeline owner.

SPECIFICATIONS

Gas Detected:	Methane (CH_4)
Volumetric Detection Threshold:	50 parts per million meter @ 600' AGL
Flow Rate Detection Threshold:	Under 1-5 kg/hr
Maximum Airspeed:	130 Knots
Optimum Detection Altitude:	600' AGL
Maximum Detection Altitude:	1000' AGL
Power Requirements:	12 Volts (33 Watts)
Power Source:	Battery Pack (supplied with kit)
Temperature Limitations:	+120 to -20 degrees F
Pod Weight:	49 lbs
Pod Frontal Area:	142 square inches
System Control:	iPad and handheld remote control
Environmental Conditions:	Works day or night, cloudy or sunny *(Note: snow cover greatly reduces the system's sensitivity)*
Laser Classification:	Class 1 Laser (Safe and hon-harmful)
Respond Time:	0.2 seconds
Laser Swath:	Adjustable up to 20 degrees left or right of radar. At 600' AGL this is a swath of 440'