

Oil & Gas Drone Inspection Solutions



About us

Drone-Enhanced Emission Management and Operational Excellence

Committed to innovation, we deliver technology-driven solutions to the oil, gas, and natural gas sectors. With access to Canada's largest network of pilots, we ensure nationwide coverage and excellence on every job.

Our partnership ensures clients receive the best comprehensive data and analytics to support making informed decisions in their operations.

Leading Expertise in Drone Technology and Industry Insights

Born from industry demand, merging in-depth oil and gas knowledge with advanced drone technology.

- **Expert Team:** Experienced pilots with specialized understanding of the oil and gas sector's unique needs.
- **Strategic Insights:** Converting complex aerial data into pivotal insights for robust oil and gas infrastructure management.
- **Established Expertise:** A decade of leadership in spatial data services with a focus on surveying, mapping, and advanced GIS/Remote Sensing technologies.
- **Diverse Services:** Expertise in comprehensive aerial and ground surveying, ROW inspections, leak detection, laser scanning, and complex GIS/CAD data modeling.
- **Industry Success:** Committed to the success of the industry, with a strong track record in environmental and geomatics projects.
- **Quality and Safety:** Holds top safety certifications and a record of over 15,000 missions, showcasing a commitment to innovative and eco-friendly solutions.

Pipeline ROW Inspections

Delivering Quality and Assurance from the Skies



Enhance Pipeline Integrity with Precision Aerial Inspections . Our UAV-inspections are tailored to meet and exceed the standards of the industry, providing an unmatched level data analytics.

Pipeline ROW Inspections

Elevating pipeline safety and risk mitigation



Evidence of Leaks

Identification of visual leak indicators. Advanced leak detection services through OPLS, thermal, methane, and fugitive emission detection sensors.



Missing Signage

Identification of water crossings, road crossings & power lines referenced against signage list and geolocation.



Watercourse Crossings

Visual identification of bank erosion, slumping, ice jams & dredging operations.



Potential Geohazards

Observe and identify potential geohazards on or near the ROW.



Encroachments

Visual identification of structures in the vicinity to right-of-way.



Construction Activity

Visual identification of construction activity or third-party activity along the ROW.



Cover Compliance

Identifying and inspecting unintentionally exposed pipelines.



Vegetation Management

Vegetation cannot be at a state where the ROW is not visible from the air.



Slope Stability Monitoring

Assessing slopes near pipelines for signs of potential landslides.



Thermal Imaging

Optimize oil & gas operations, pinpoint leaks, equipment issues, and ground anomalies swiftly.

Hydrotechnical Inspections

Advanced Monitoring of Water Crossings

Active Drones inspections enhance oil and gas pipeline maintenance with efficient water crossing monitoring, detailed analysis, and rapid engineering responses, ensuring superior pipeline safety and operational reliability.

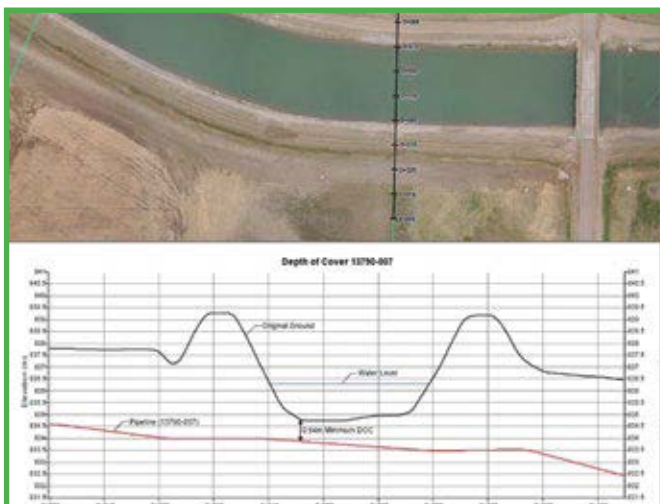
Watercourse Crossings & Line Location

An integrated survey approach marries GPS surveying with UAV imagery, creating a comprehensive monitoring system for water crossings and pipeline locations. This method utilizes traditional survey methods and line locating with drone acquired topographic data for a thorough examination of the hydrotechnical environment around pipelines.



Insightful Reporting

Drones revolutionize reporting in hydrotechnical inspections of pipeline river crossings by synthesizing GPS, imagery, and topographic data to quickly highlight critical issues. This streamlined approach offers clear, actionable insights for enhanced decision-making and pipeline integrity.



Engineering Support

On-demand engineering support turns drone inspection data into actionable solutions for pipeline safety and compliance, offering expert problem-solving for river crossings.

Bathymetric Surveys

Our drone inspections include on-demand bathymetric survey options, allowing for detailed underwater asset and terrain assessments to enhance monitoring and safety of pipeline river crossings.

Geotechnical Inspections

Monitoring Slope Stability & Other Geohazards

Drones revolutionize geotechnical inspections by providing mapping, terrain modeling, and precision monitoring of slope stability and geohazards, enabling enhanced risk management and reporting.

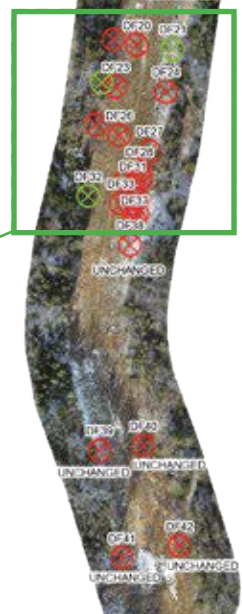
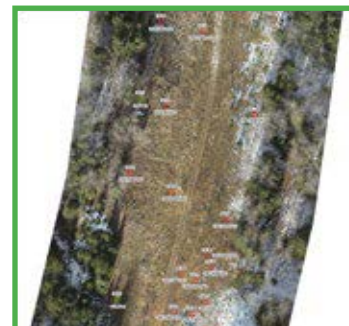
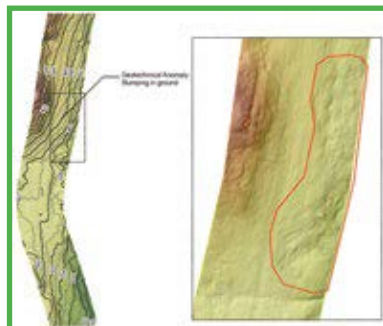
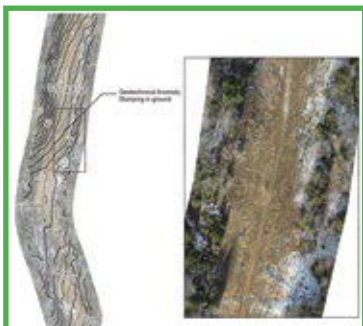
Identification of Geohazards

Deploy our advanced drone technology to uncover and address geohazards with unparalleled accuracy, from erosion patterns to ground instability, safeguarding your oil and gas operations against nature's unpredictability.

- **Erosion and Channel Movement:** Drones capture detailed imagery, pinpointing erosion and channel shifts along rights-of-way (ROW), crucial for maintenance and preemptive action.
- **Flooding:** Aerial surveillance monitors water flows, identifying flood risks and areas of concern to prevent damage.
- **Unstable Banks:** UAVs assess slope integrity, identifying unstable banks that could jeopardize ROW safety.
- **Ground Movement & Landslides:** Drones detect ground shifts, providing early warnings of potential landslides.
- **Frost Heave & Sinkholes:** Regular drone flights reveal frost heaves and sinkholes, tracking subterranean changes that may impact pipeline integrity.

Slope Stability Monitoring

Our integrated Slope Stability Monitoring approach includes targeted pinning and precise GPS measurements, combined with UAV survey to diligently monitor slope stability and identify potential geohazards. The data captured is detailed and dynamic, providing comprehensive reports that are pivotal for tracking geomorphic change over time, ensuring proactive risk management and infrastructure safety.



Revolutionizing Leak Detection

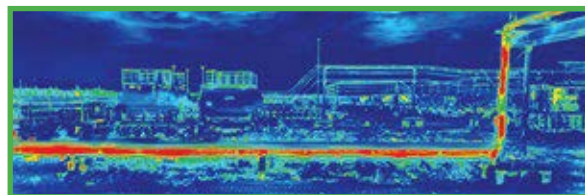
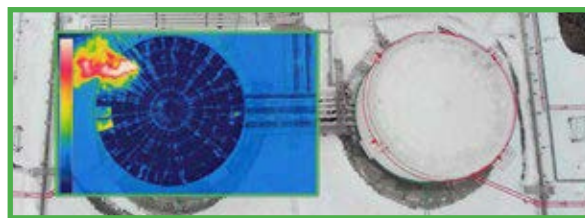
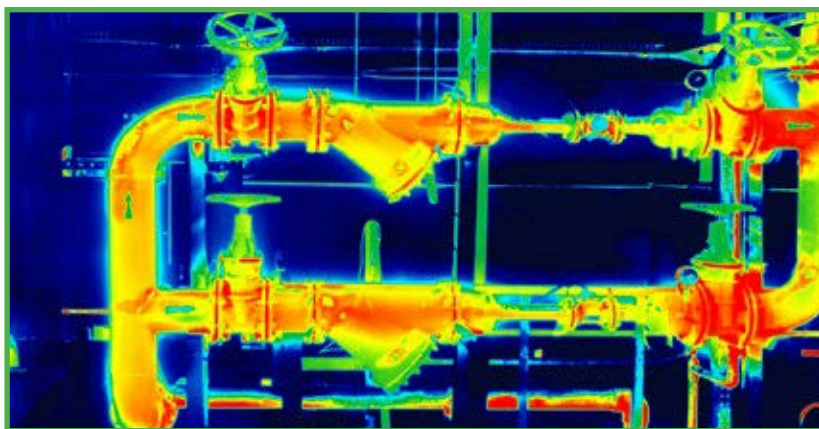
Advanced Leak Detection Technologies for Improved Operational Efficiency

Spot the unseen with our drone-based thermal and optical gas imaging – your vigilant eye for precise leak detection and environmental protection.

Introducing cutting-edge drone technology for precise gas leak detection and quantification. Employing sensors tailored to oil and gas projects, we set new standards in operational safety and risk mitigation.

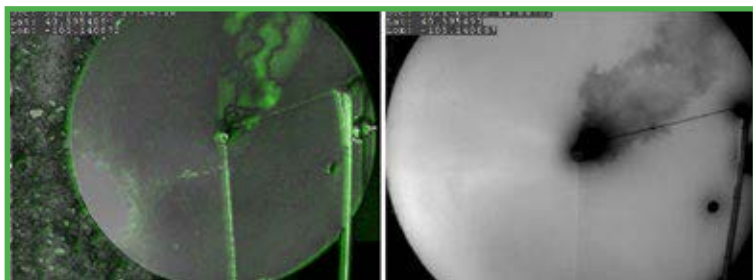
Thermal Leak Detection

Thermal imaging technology is instrumental in the oil and gas industry for detecting leaks, ground disturbances, and other anomalies by capturing infrared radiation emitted by objects. Its ability to visualize temperature differences allows for early detection of potential hazards, enhancing safety protocols and minimizing environmental risks in oil and gas operations.



Optical Gas Imaging

Optical Gas Imaging (OGI) technology, identifies potential hydrocarbon leaks in real-time. This method is especially effective for facility inspections, offering an immediate view of assets, facilitating faster decision-making, and ensuring comprehensive safety and efficiency in operations. Our detailed reporting system delivers all findings to clients, supporting effective leak management and maintenance strategies.



Advanced Methane Gas Detection

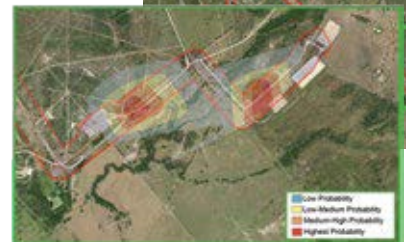
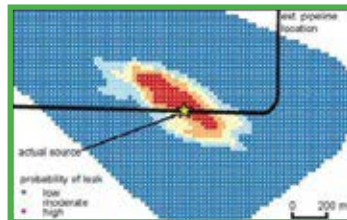
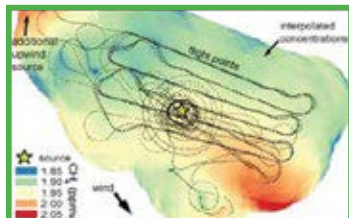
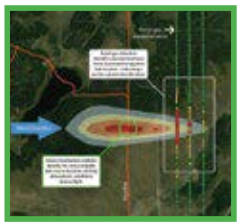
Detecting Methane Leaks along the Pipeline ROW

Detect and quantify methane with laser precision – our drone-mounted sensors and sniffers offer a high-tech shield for leak detection and environmental compliance.

Our drones utilize advanced sensor technology for precise methane detection and quantification, not only reducing operational costs and mitigating risks but also enabling savings through methane benchmarking and carbon footprint credits, helping set the new standard for methane leak detection, mitigation, and management.

Laser-Based Methane Detection

Our drones are equipped with advanced laser-based sensors capable of measuring methane concentrations with unparalleled accuracy. This technology allows for precise source localization and comprehensive reporting, offering clear documentation of methane levels and leak locations. Integrated video inspections provide visual confirmation, enhancing the detection process.



Methane Leak Detection and Quantification

Drones have a significant advantage in facility methane detection and quantification as they provide flexibility and precision in positioning, allowing the sensors to closely approach the source of emissions. Using the drone for close-range, high-resolution measurements offers detailed data that can quantify the leak. When combined with our atmospheric models and leak profiles they can also be used to estimate flow rates.



Oil & Gas Facility Inspection Services

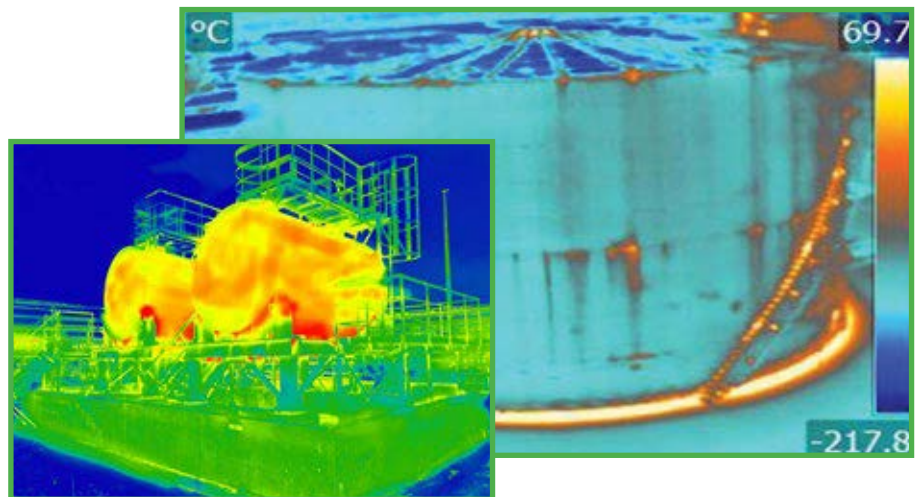
Streamlining Inspections with Drone Technology

Active Drone Solutions leverages the latest in drone technology to provide unparalleled inspection services. By enhancing asset integrity and safety, we help clients maintain operational excellence and save money.

Drones revolutionize facility inspections by conducting efficient and comprehensive assessments, particularly in tank inspections, where they offer unparalleled access to remote or hazardous areas, ensuring thorough examination with minimal risk. From internal tank inspections, where drones navigate confined spaces and capture high-resolution imagery, to live asset inspections, where real-time data collection aids in proactive maintenance, drones streamline operations, enhance safety, and optimize asset management in the oil and gas industry.

Tank Inspections

Thermal-equipped drones streamline tank inspections by identifying heat loss, leaks, leaks, and corrosion under insulation with precision. By performing these inspections in advance, drones equipped with thermal imaging drastically cut maintenance time, identifying problem areas and enabling precise, preemptive repairs.



Internal Tank Inspections

Caged UAVs allow for detailed inspections in complex enclosed environments, eliminating the need to put inspection teams at risk or spend money on costly scaffolding. Our internal tanks inspection drone ensures safety and comprehensive inspections with thermal imaging, visual sensors, and spotlight.

Live Asset Inspections

Performing pre-turnaround asset inspections using drones on live assets significantly reduces shutdown periods, accelerates repair times, and saves clients hundreds of thousands of dollars by minimizing downtime and expediting return to operation.

Flare Stack Inspections

Inspect Hard to Reach Assets

Drone-based flare stack inspections allow for the safe assessment of temperature, pressure, flow rate, and emissions, while identifying damage or malfunctions without exposing employees to risk. Cuts costs by enabling inspections on live assets, keeping the process efficient and non-intrusive.

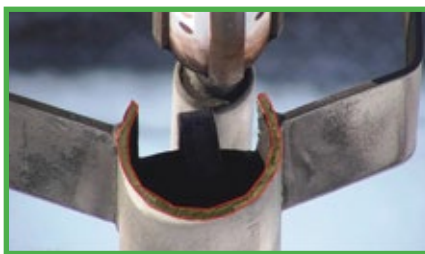
High-Risk Asset Inspections

Focusing on high-risk areas, our drones inspect assets with zoom lenses and thermal imaging to identify leaks and integrity issues, enhancing preventative maintenance and reducing manual inspection needs.



Save Costs by Reducing Downtimes from Maintenance

Drones facilitate early detection of issues, enabling focused maintenance that reduces downtime and costs by allowing efficient repairs and extended operational periods for critical systems.



Flare Stack Mapping

Drone-based flare stack mapping accurately identifies nearby at-risk vegetation and structural issues, enabling targeted maintenance and repair planning. This approach enhances safety, minimizes downtime, and ensures compliance by prioritizing proactive measures for flare stack and environmental protection.



LiDAR Maps & Survey

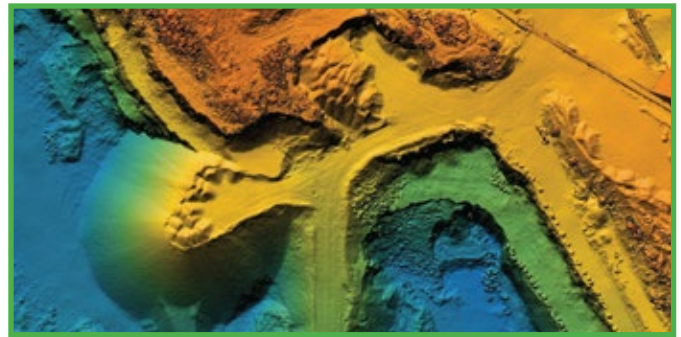
Next Generation Technology for Advanced Operations

Our LiDAR Mapping and Survey Solutions offer unparalleled accuracy, empowering oil and gas companies with detailed terrain insights for optimal asset management, streamlined operations, and enhanced safety. Generate detailed 3D maps of your pipeline assets and corridors, detecting anomalies in ground movements, terrain, and nearby ROW vegetation. Remove the guesswork and embrace data-driven solutions.

We provide innovative inspections and mapping capabilities using LiDAR, this advanced approach delivers precision data, reducing costs mitigating risks.

Digital Terrain Models

Digital Terrain Models (DTMs) are crucial for slope stability modeling, exploration, route planning, and conducting bathymetric surveys. These models offer the tools for proactive hazard identification and site analysis, streamlining project timelines with rapid data collection.

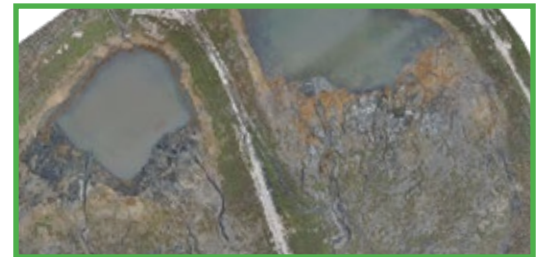


Dam Inspections

Drones in the oil and gas industry enable frequent, precise, and safe monitoring of dams, providing advanced 3D terrain modeling and immediate detection of erosion or water seepage, all while enhancing access to risky areas and reducing costs.

Bathymetric Survey

Our bathymetric surveys assess both the underwater depth of ponds and the stability of surrounding slopes through integrated aerial and sonar drone technology, providing a thorough evaluation of environmental and structural conditions.



Tailings Ponds

Drones facilitate enhanced surveillance and management of tailings ponds through providing safe, precise and detailed inspection. Inspections have the ability to capture quantities of material deposited, erosion and potential seepage occurring from the tailings area. Methane detection can also be implemented in order to identify emission profiles of the tailings areas as well to provide a comprehensive understanding on the state of the area as well.

Project Planning & Construction

Streamlining Oil & Gas Operations with Advanced Drone Technologies

Revolutionize construction planning, drainage analysis, and ERP integration. With unparalleled precision, streamline workflows, mitigate risks, and optimize resource allocation like never before.

Drones streamline construction with laser scans for accuracy, detailed as-built records, and efficient drainage modeling. They also aid in spill mapping and emergency response planning, enhancing overall project efficiency and safety.

Construction Laser Scans

Generate 3D models of construction sites - invaluable for planning, as they can be used to simulate construction phases, identify potential issues before they arise, and guide the efficient deployment of resources.



As-Built Records

Maintaining accurate as-built records is essential for documenting the exact specifications and locations of constructed elements. Providing a verifiable record that can help in maintenance, future modifications, or dispute resolution.

Drainage Modelling

Map terrain and existing drainage patterns in high resolution, aiding engineers in designing drainage systems that effectively manage water flow, preventing potential site issues.

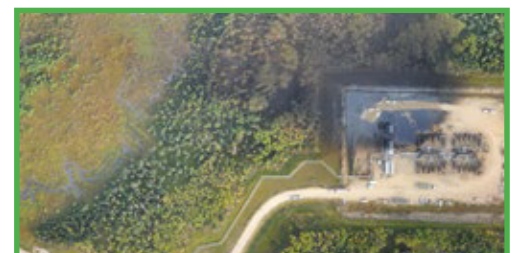


Spill Mapping

A crucial preventative measure, allowing for detailed planning against potential disasters, enabling targeted strategies to safeguard critical environments and infrastructure.

Emergency Response Planning

Enhance emergency response planning through site condition risk assessments, evacuation planning, and spill mapping. Determine where spills likely occur, and the best muster point locations for your team, providing essential data for swift and informed decision-making in emergencies.






Let us take
your business
to new heights!



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