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ENVIRONMENTAL EQUIPMENT, INC.

Leptron Unmanned Aircraft Systems, Inc.
is a division of Geotech Environmental Equipment, Inc.

Environmental Applications for Unmanned Aircraft Systems

Presented By:

Jeff Popiel

CEO

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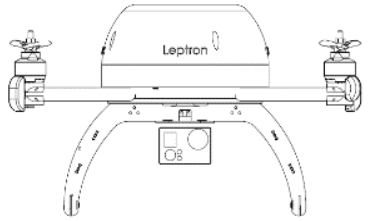
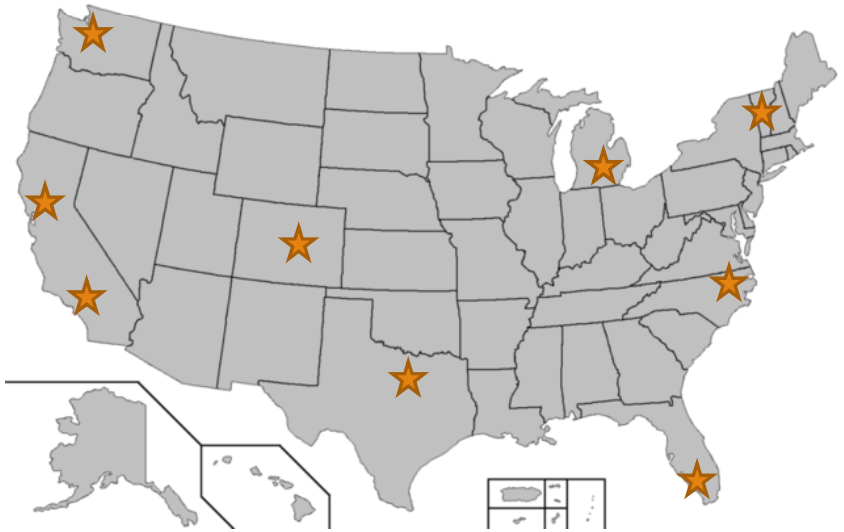


Geotech Environmental Equipment, Inc.

Corporate History

- Founded in 1978
- Specializing in the design and manufacturing of environmental sampling and remediation equipment technology
- Based in Denver, Colorado
- 9001:2008 ISO Certification Standard



Certifications and Platforms

2015 –

- Acquired Leptron Unmanned Aircraft Systems, Inc.
- Received our Section 333 Exemption and COA from FAA

2016 –

- September 30, Received Part 107 Certification
  - Employ 9 Certified Remote Pilots

Overall Cost to Clients for Topographic Mapping

VS.

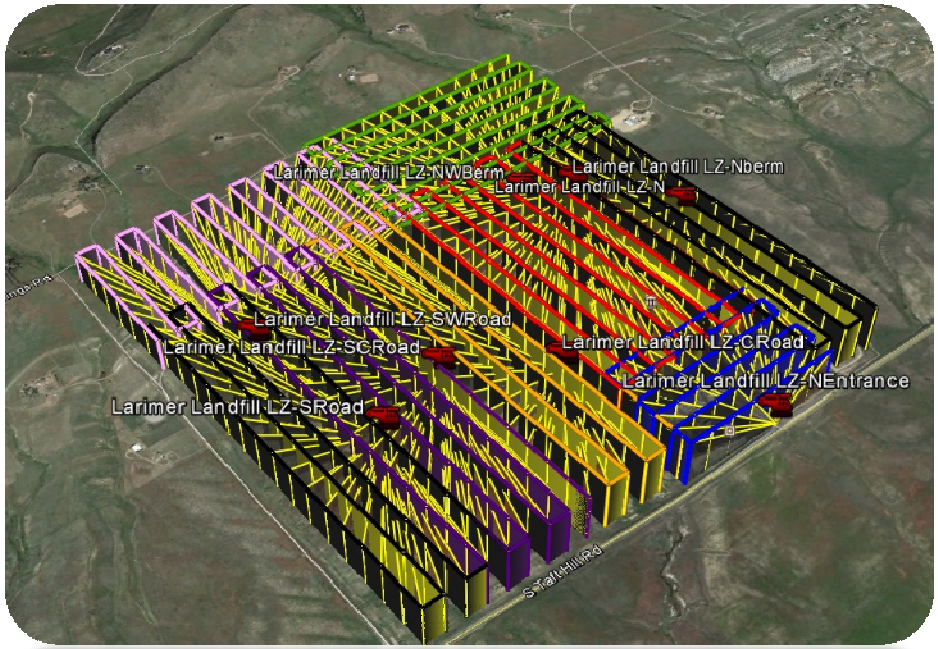
*U.S. Dollars

Planned Focus

- Remote UAS Aerial Dataset Collect
- Process Data/ Data Outputs
  - Orthomosaic
  - Photogrammetry
  - Digital Surface Model
  - Volumetric Survey(s)
  - Evaluate Data Accuracy

Mission Planning

- Site Risk Assessment
  - Airspace
  - Geology
  - Utility Obstructions
- Build Autonomous Flight Plans
  - Visual Line of Site
- Select Aircraft
- Select Sensor/Camera



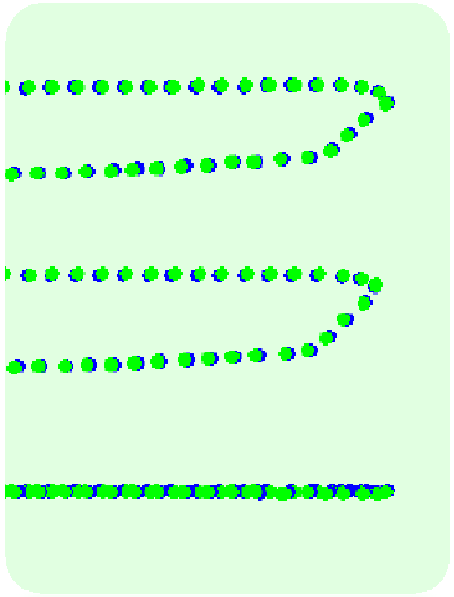
Larimer County Landfill

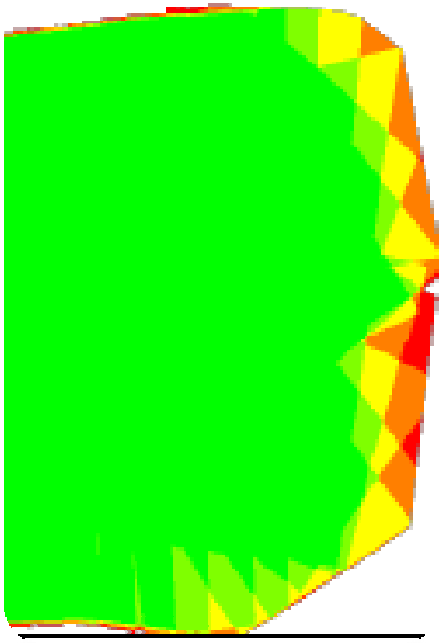
Data Processing

Camera Optimization: 97% = Accuracy between aircraft geotags (blue) vs. calibrated points (green).

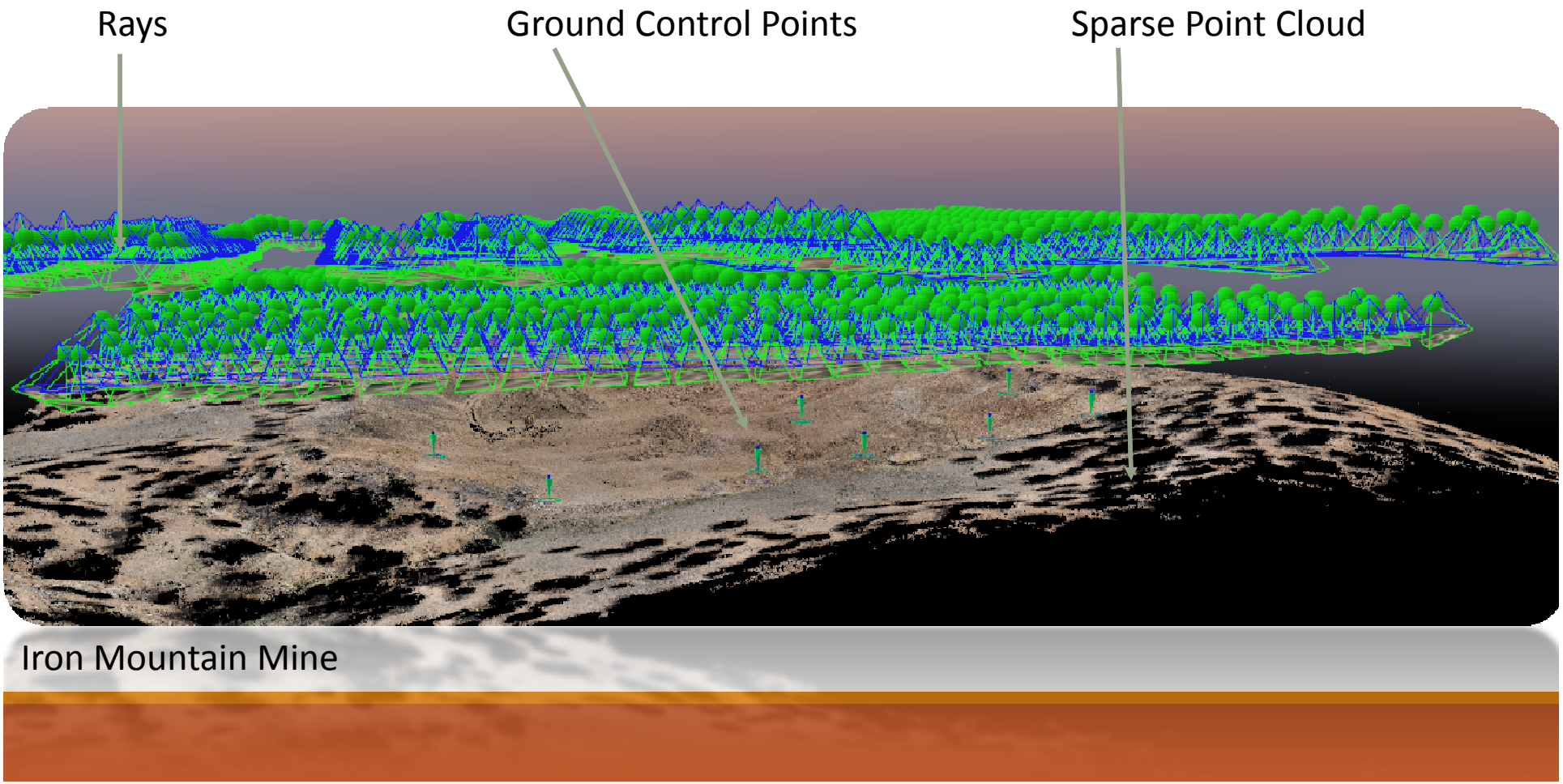
Data Overlap: 1 2 3 4 5+

Image Quality and Resolution





Data Processing Point Cloud



Data Processing Orthomosaic

High Resolution- Ground Sampling Distance (GSD) 1.92 cm / pixel

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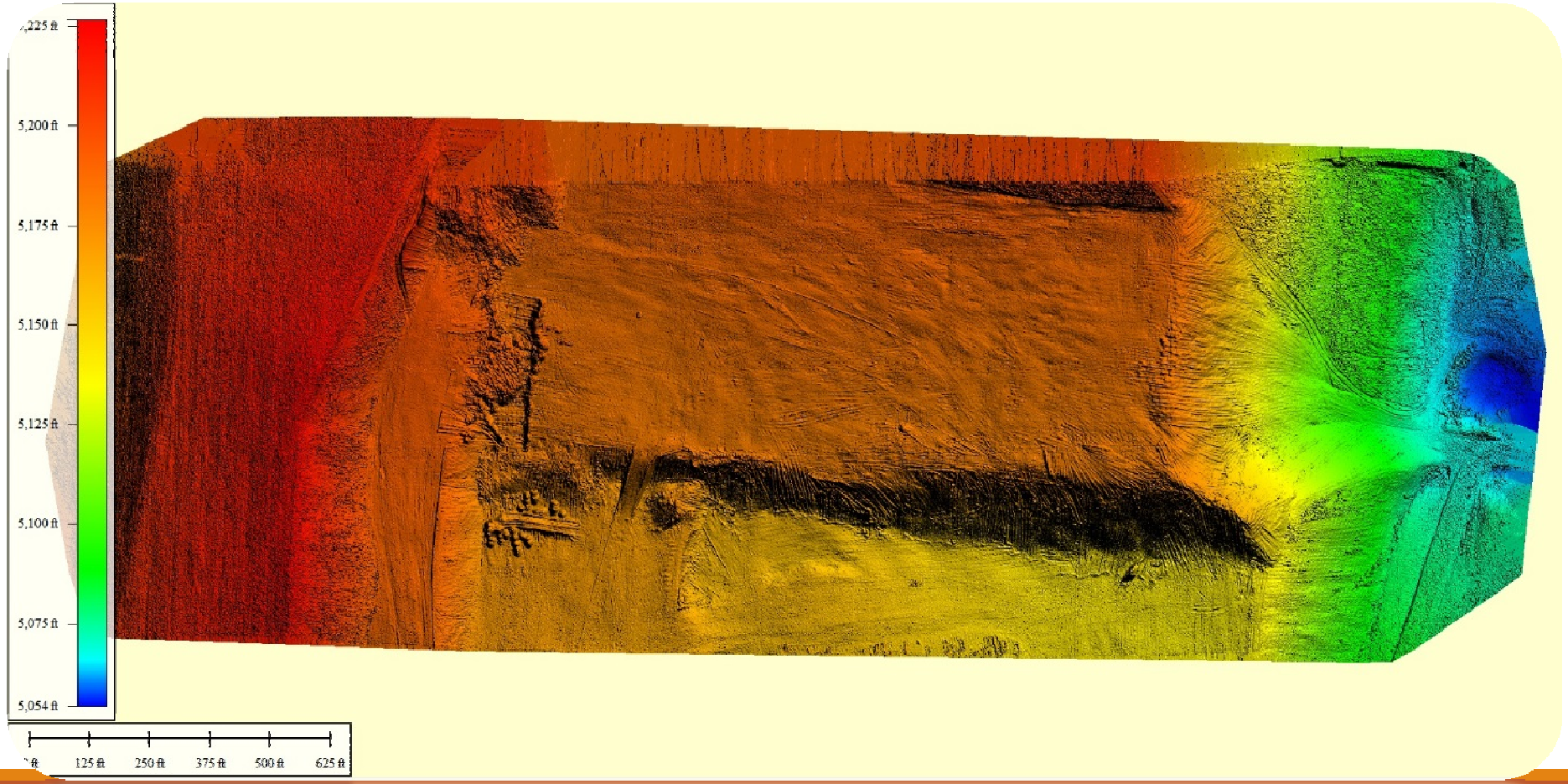
Contours

2’ Elevation Contour

Digital Surface Model



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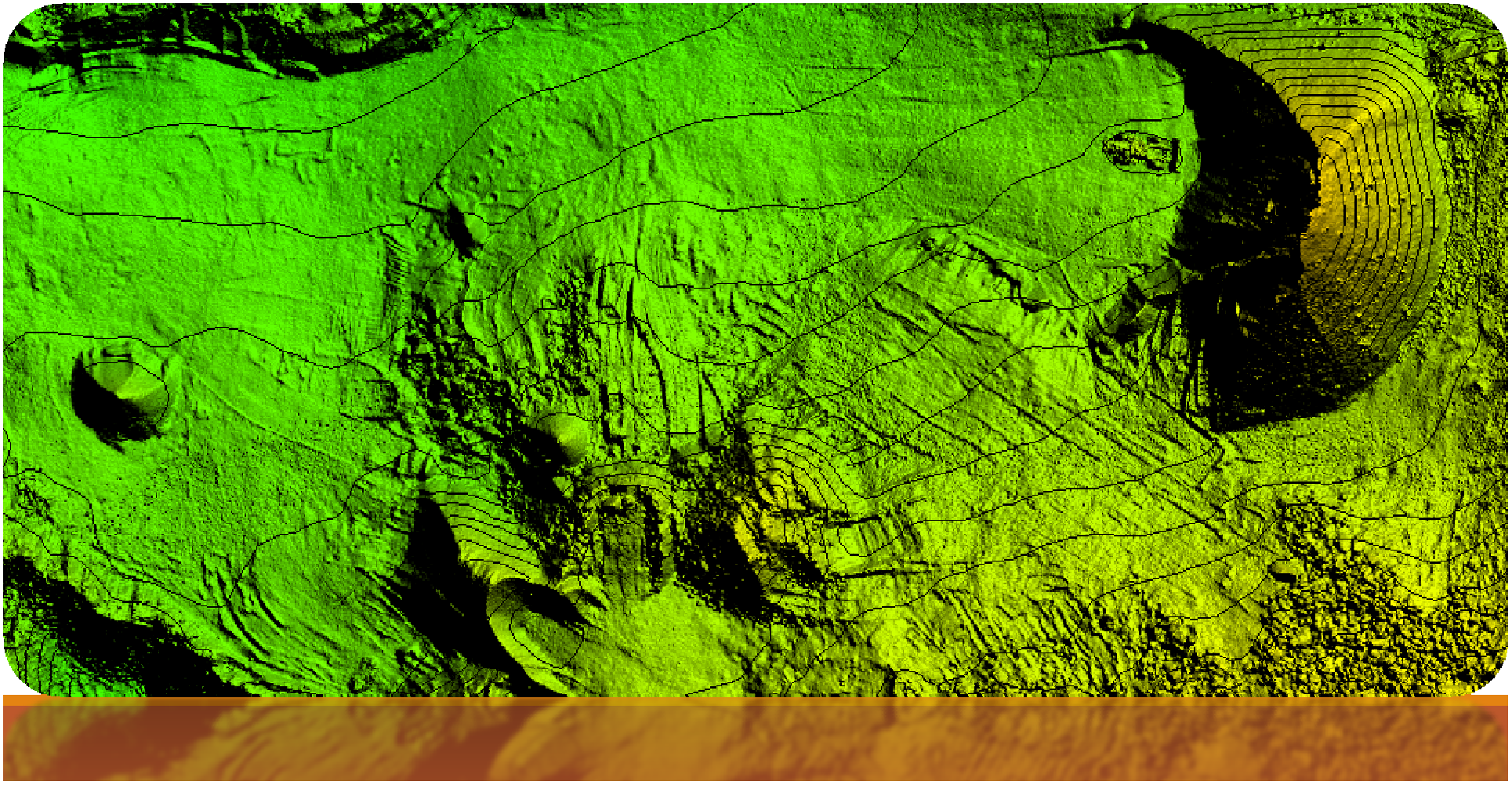
Digital Surface Model with 2’ Contour



Iron Mountain Mine

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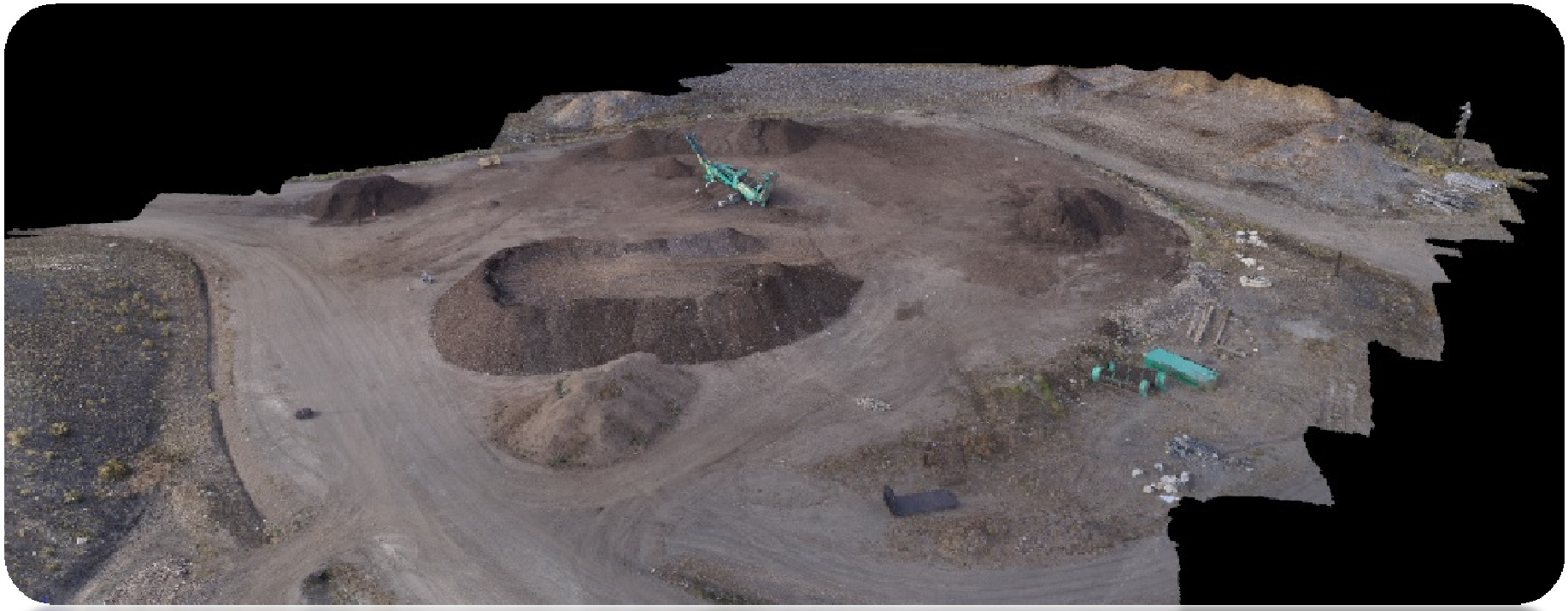
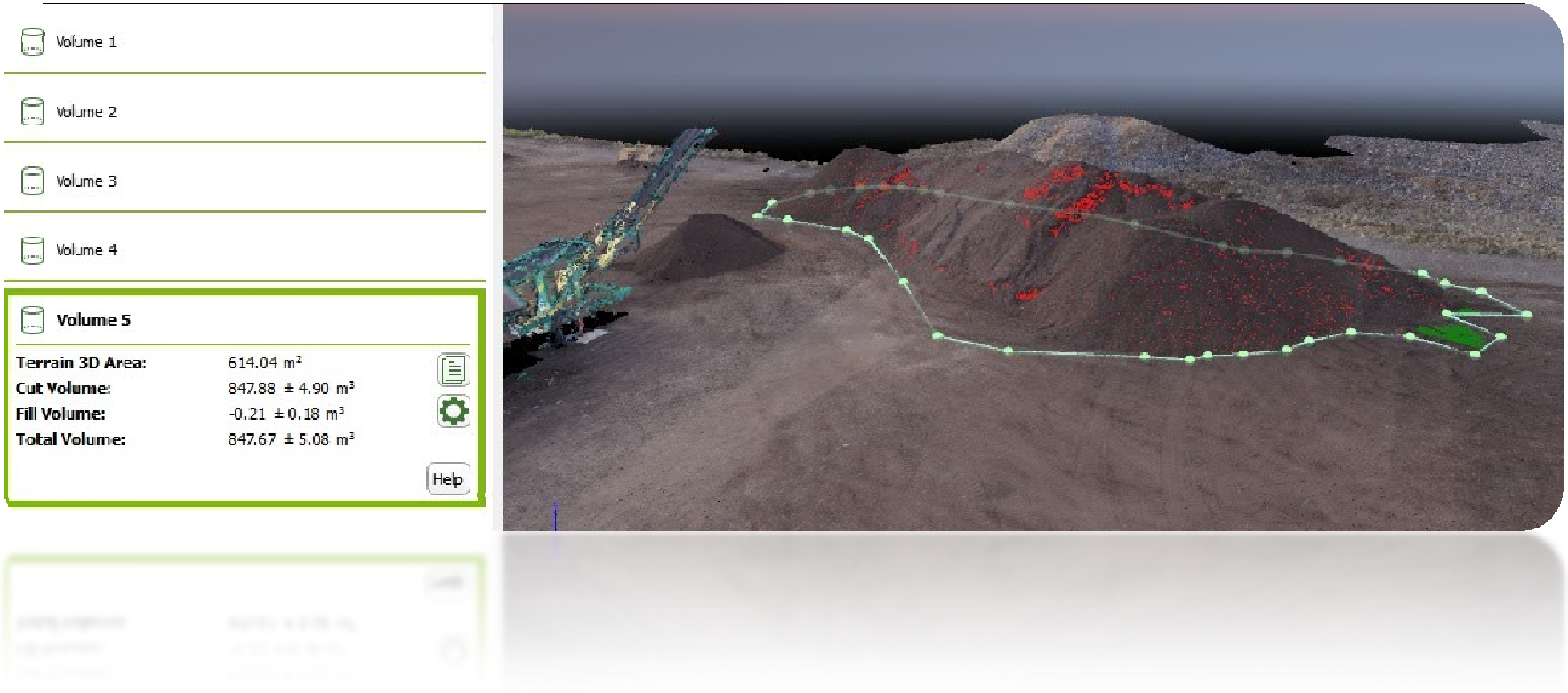
Photogrammetry



Volumetric Survey



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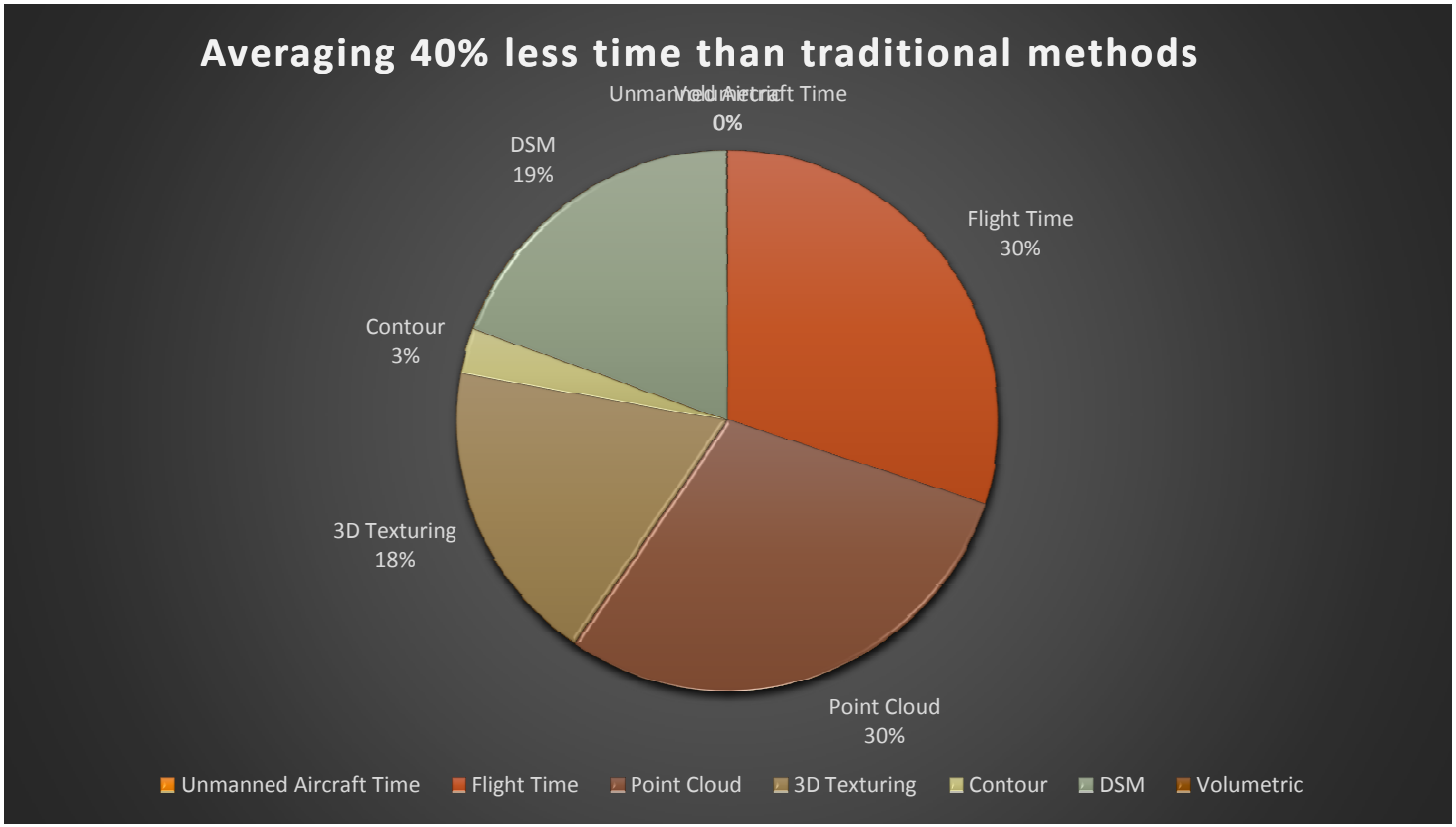
Planimetric

Average Project Work Flow



Presentation Summary

Unmanned Aircraft Systems (UAS) technology provides an unique perspective to traditional methods of surveying, inspection, and site design.

UAS systems provide a cost, safety, and time benefit.

Data collection offers high resolution imagery providing site details often overlooked.

Data processing provides a unique perspective through multiple visualization tools

Volumetric measurement improve material asset management

Available camera and sensor payloads can also be used for gas leak detection, temperature variation detection, infrastructure inspection, vegetation management and restoration, and much more.

How can UAS technology work for you?

Thank you

Jeff Popiel

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