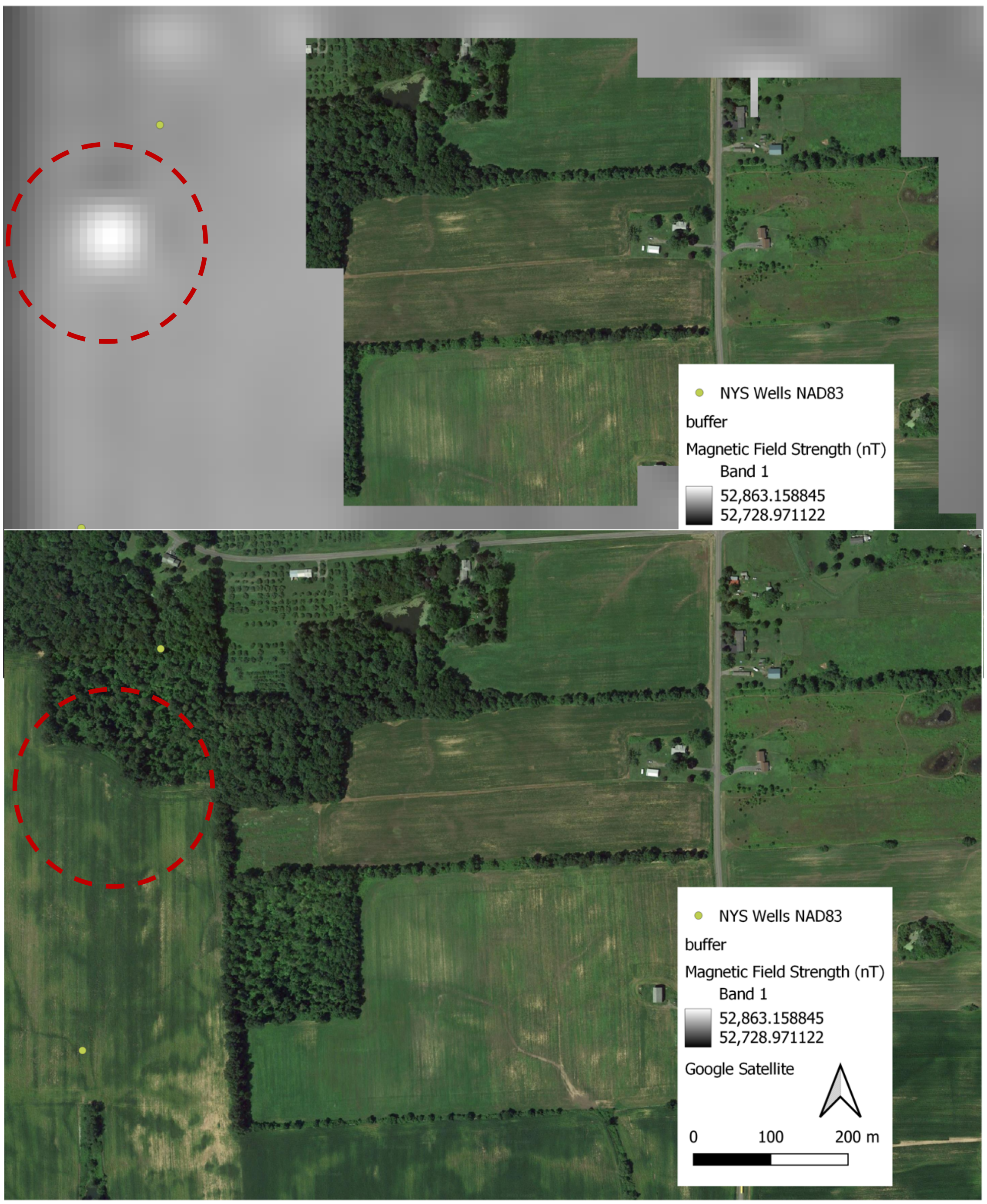
Adams 1

Well location does not directly correlate to an organized magnetic anomaly; however, a large organized magnetic anomaly is present ~155 m to the southwest of the currently reported location, likely correlating to the true location of the wellsite. A follow-up visual survey was not able to locate a surface expression of the wellhead, indicating that this site may have been impacted by agricultural development and a surface expression of the casing may have been buried. A follow-up terrestrial survey effort was successful in further constraining the location of the magnetic anomaly, the details of this effort are outlined in the next section of this report.

(Red dashed circle outlines focus area and carries no geophysical interpretation significance.)



FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY OF ADAMS-1 ANOMALY - PLANNING

The terrestrial survey area was determined from detailed analysis of aeromagnetic datasets collected in the summer of 2023. Upon close inspection of aeromagnetic transects, two large magnetic spikes on adjacent surveys lines indicate that the anomaly is positioned between two North-South transects in Figure A1 / A2. There is a much less pronounced anomaly on the third line to the west indicating a clear dissipation of that magnetic signal, gives us confidence in terms of its location between the two lines where the anomaly appears strongest.

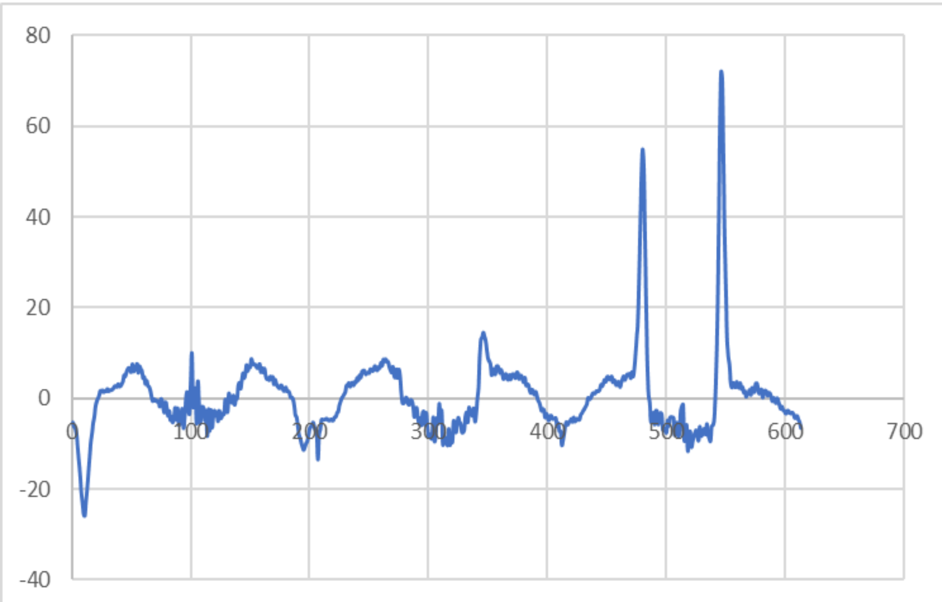


Figure A1 (left): Magnetic anomaly graph associated with mission over area in question. Two spikes are present on the first and second North-South line from the east, with a smaller spike present on the third transect line.

Figure A2 (below): Map of anomaly with flight lines plotted in red dotted line.

FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY - ACQUISITION

Based on the approximate survey requirements and scope we assessed the area constrained initially by the UAV magnetic dataset using a Geometrics G- 864 cesium vapor magnetometer with continuous acquisition at **10 Hz at a line (transect) spacing of 2.5 m in 100 x 100 grid, targeting a lateral resolution of 1.25 meters for the survey.** The sensor was positioned 1.0 m off the ground surface for raw dataset acquisition, followed by a processing, visualization, and interpretation effort as detailed below. The proposed geometry of the survey area can be seen in Figure A3.

Challenge: During survey acquisition, our effort was impacted by thick crop coverage of the area (corn) which constrained survey geometries to the orientation of corn rows, introducing acquisition artifacts into the datasets, however the intensity of the identified subsurface anomaly and data processing steps generally muted most acquisition artifacts..

FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY – DATA PROCESSING

In magnetic surveys both the equipment and operator introduce random and coherent noise into a dataset. The initial point data set has a number of errors that must be processed out before accurate interpretations can be made, namely spikes/dropouts, stagger, and header errors that appear as striping. Before any data processing initial file reconnaissance is necessary to control for field errors and field notes are heavily consulted during this phase of data analysis. First bad lines are removed and then the fiducial markers are used to rubber band the data along a line to their accurate spatial location. Dropouts and spikes can easily be seen as high amplitude erratic contrasts. If an individual reading varies by > 100 nT from the 5 points collected before or after it on a line it is deleted and replaced with the average of the adjacent points. The stagger errors associated with the gait of the operator can be seen as saw-toothed or herringbone pattern associated with linear features. In order to remove this error every other line is spatially shifted along the y-axis approximately 0.25-0.5 m in northing. Heading errors are removed with a minimum- maximum correction where the minimum and maximum values of each line are computed and compared to adjacent parallel lines and the values of the lines are shifted to minimize the variance between lines and thus de-stripe the data. In order to correct for magnetic interference errors associated with power lines and high other sources of high-frequency EM noise, we deployed a band pass filter to remove the associated magnetic field. Because the heading error correction is an inherent spatial high pass filter we use a low pass smoothing filter to bring the data set back as close to its true form as possible using an unweighted 3 x 3 moving average kernel convolution filter. The filter recalculates the value of a central point by multiplying the point itself and each of the neighboring cells (kernels) in a 3x3 square window by 1/9 and summing the result (convolution).

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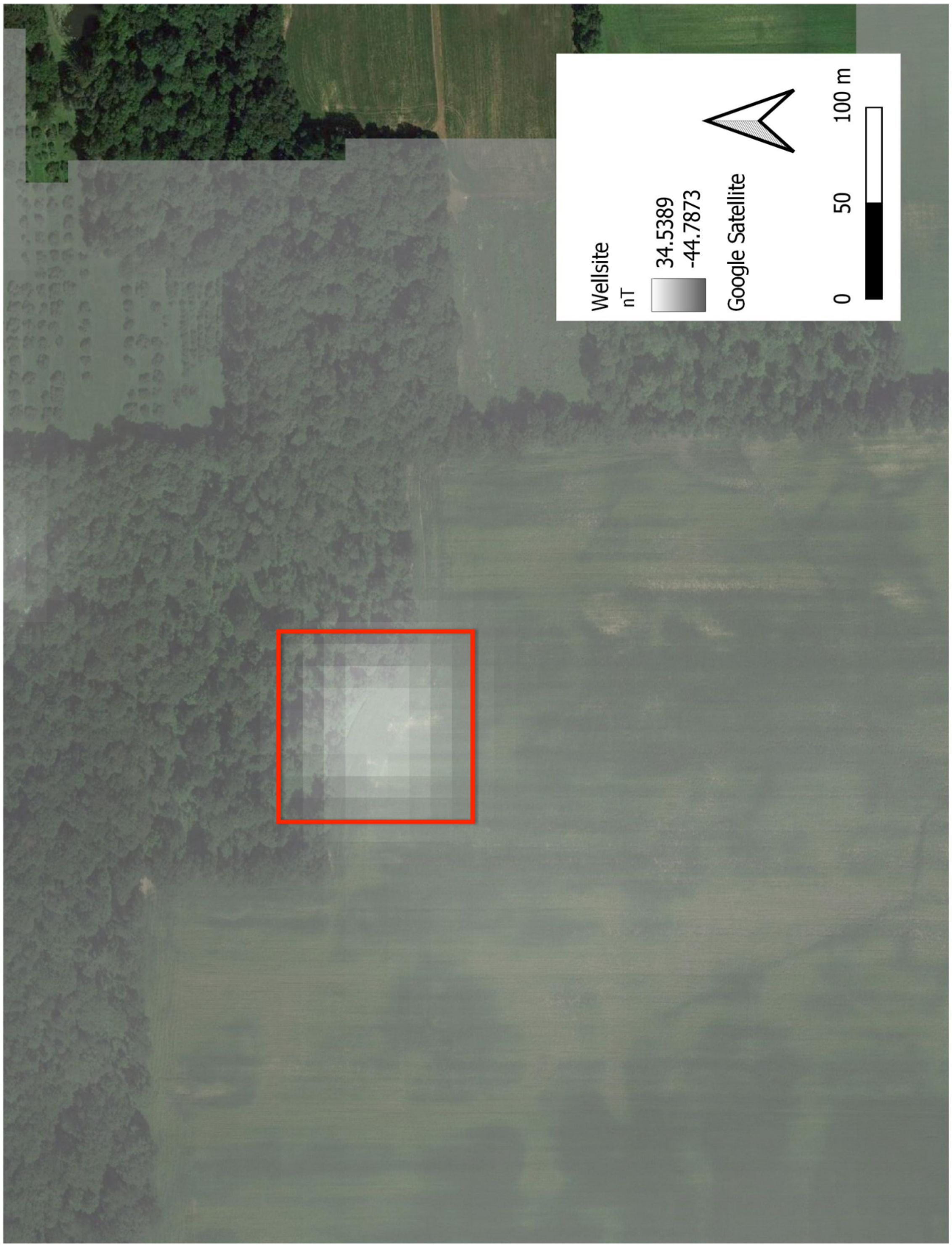


FIGURE A3 – Wellsite 375991001: Identified area of interest identified for terrestrial survey as part of the proposed follow-up survey effort. Grey overlay indicates results of previously collected aeromagnetic dataset with white color indicating peak positive magnetic intensity values.

FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY – OVERVIEW AND RESULTS

Upon arriving at the area of interest, Aletair terrestrial survey crew conducted a preliminary visual survey of two areas of interest for evidence of past drilling activity:

A) the site of the mapped wellsite of the Adams 1 well from the DEC database

B) the site of high-intensity magnetic signal identified by the UAV aeromagnetic area.

Site A is located in the forested area northeast of the magnetic anomaly identified by in the UAV survey. A visual site inspection did not reveal evidence of any past drilling activity, typically marked with metallic debris, such as casing, drill pipe, cables, or mechanical equipment.

Site B, as identified by the UAV survey is located at the edge of the active field and the forest. The site is littered with multiple metallic debris objects, including most notably a ~1.5 m length of metallic well pipe which has shear marks on one side, indicating a forced removal from original site of placement, as can be seen in the photographs below Figure A4. The located pipe is approximately 22 cm in diameter, correlating to 8 5/8-inch diameter, a size regularly used as oil and gas well casing.

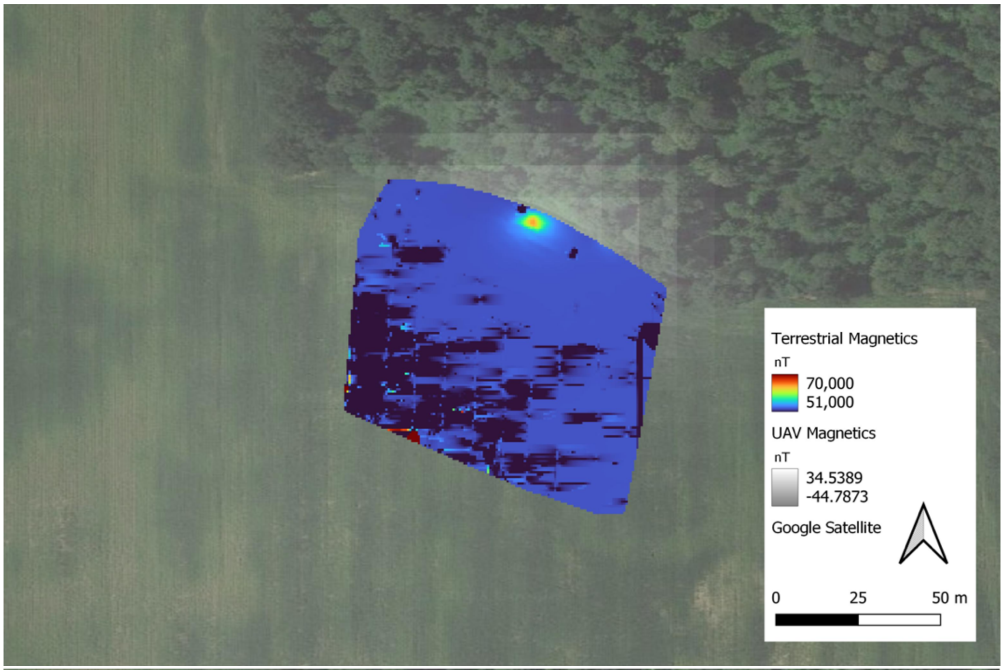
A follow-up high resolution terrestrial magnetic survey was conducted to constrain the location of the source of the high-intensity magnetic signal. The terrestrial survey identified a large magnetic anomaly was identified in the field, at an approximate **lat- 42.9362216, lon -76.9333037 with 0.5 m resolution of the survey (1 m transect spacing).** This location is northeast of the highest intensity magnetic anomaly identified from the UAV survey l**at 42.9361159 lon -76.93332771 with 12.5 m resolution (25 m transect spacing). Full survey results are presented on the next pages of this report.**

Note: The geometric center of the UAV-derived magnetic anomaly raster pixel is 12 m southwest from the geometrical center of the anomaly identified in the terrestrial survey. It is important to note that the two datasets have dramatically different resolutions (0.5 m resolution in terrestrial dataset and 12.5 m in UAV-driven dataset) and relying on the geometric center and subsequent point-to-point vector distance measurement ignores differences in raster resolution. Using edge to edge distance measurement the distance between the anomaly identified in the high-resolution focused terrestrial survey and the anomaly identified in the lower-resolution wide-area UAV-derived dataset is ~6 m.

Figure A4 – Identified casing pipe at Site B.

FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY – 100 x 100 survey. 2.5 m transect spacing

Below are the visualized results of the 100 x 100 m survey over Site B – the survey covers the area from the edge of the forest and extends south to the farm field – the survey was designed to cover accessible areas with highest-amplitude magnetic anomalies retrieved from the UAV datasets. The survey was centered on the location of the casing pipe at the edge of the forest and extended south as a priority area from where the casing could have originated. A high intensity anomaly can readily be observed in the northern section of the survey, roughly 3-5 m south of the edge of the forest boundary.



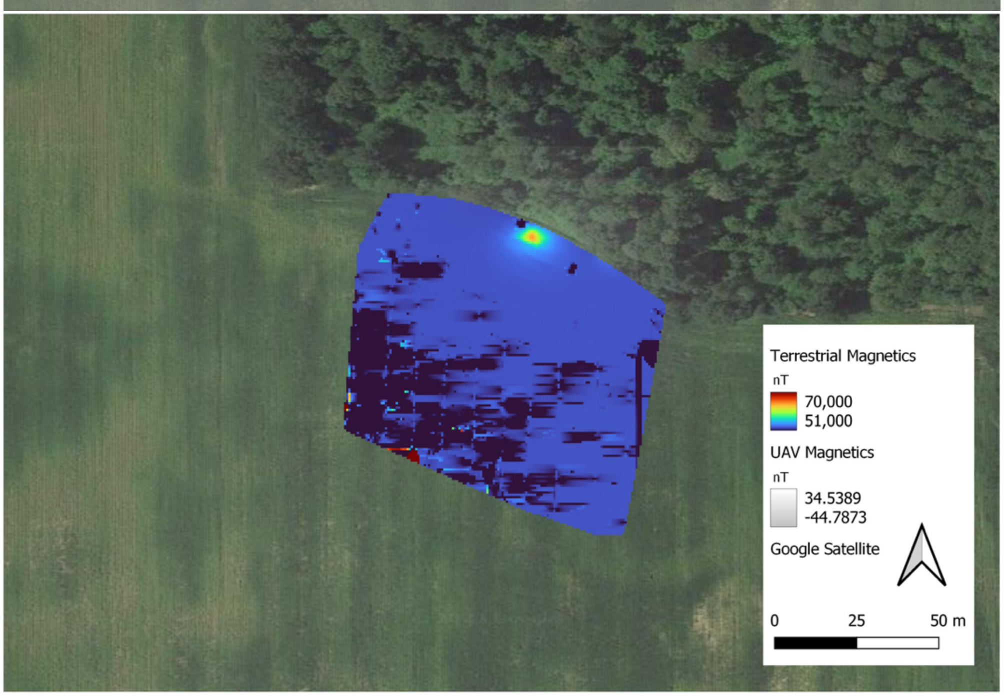


FIGURE A5 – 100 x 100 survey results with superimposed UAV magnetic intensities (grayscale)

FOLLOW-UP TERRESTRIAL MAGNETIC SURVEY – 20 x 20 survey. 1 m spacing

Below are the visualized results of an additional high-resolution 1 m transect spacing 20 x 20 m survey over Site B – the survey covers the area directly adjacent to the identified high-intensity anomaly in an effort to constrain its maximum intensity location l**at- 42.9362216, lon -76.9333037.**

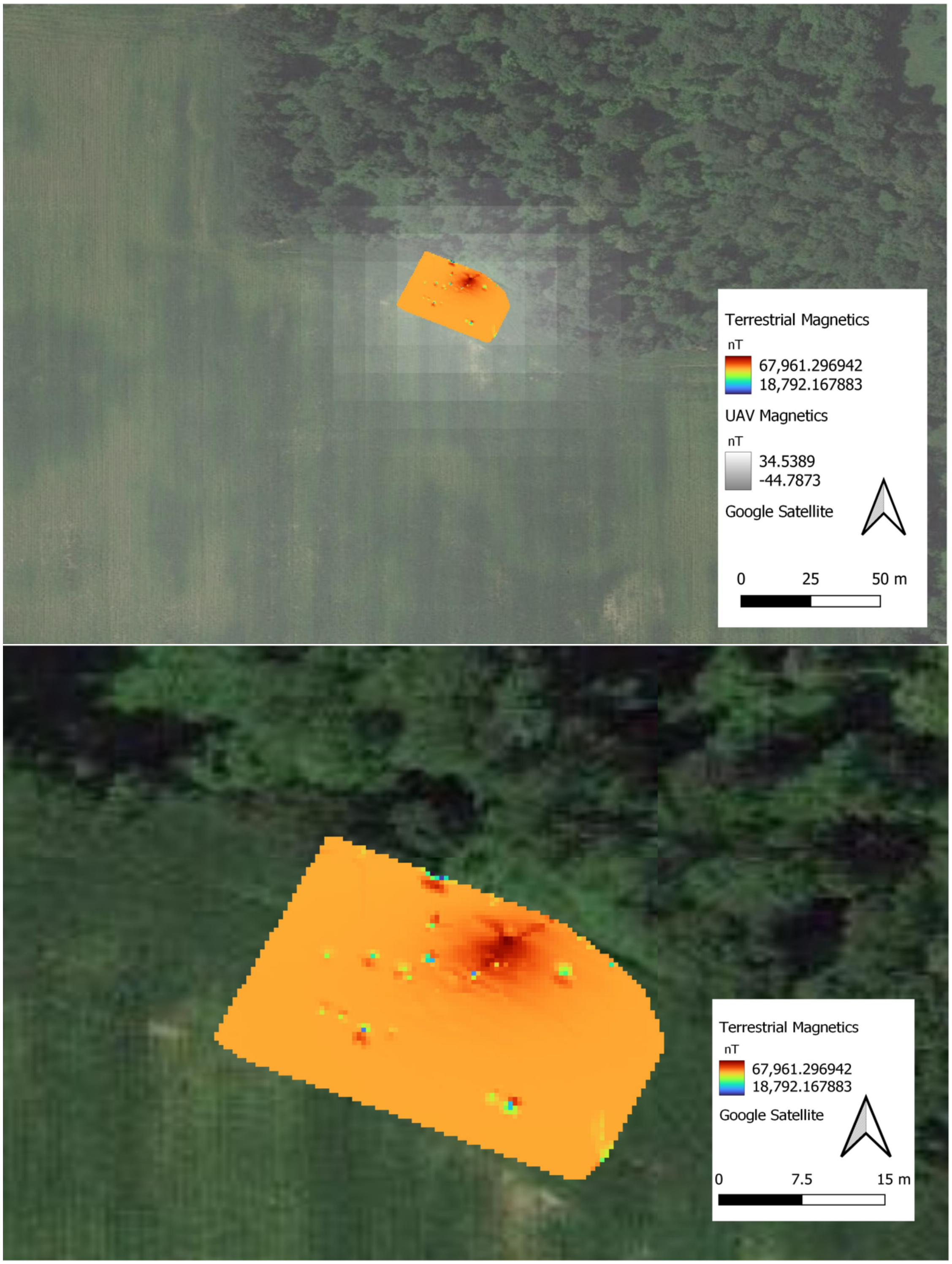


FIGURE A5 – 20 x 20 survey results with superimposed UAV magnetic intensities (grayscale).

CONCLUSIONS

A high-resolution UAV aeromagnetic survey such as the one carried out in the area of interest is largely capable of identifying anthropogenic features present in the subsurface associated with past drilling and hydrocarbon production activity, namely vertical metal well casing. The area surveyed in this effort is characterized by anthropogenic features related to both existing housing units and existing infrastructure development – namely electric and pipeline transition lines, as well as large agricultural installations and housing units. The survey revealed evidence of previously unlocated wells in close proximity to NYS-DEC reported well sites, two of these sites were successfully investigated to update and correct current location information.

Based on the collected aeromagnetic datasets, there is no compelling geophysical evidence indicating presence of additional orphaned wells pre-dating the use of this parcel for agricultural activity and infrastructure development. There remains a very low, but non-zero possibility that undocumented orphaned wells in the areas were stripped out of their metal casing during abandonment or for metal harvesting purposes or that these were drilled as open hole uncased wells. In this scenario their presence would not be picked up by the survey. Similarly, there exists a very low, but non-zero possibility that the magnetic anomalies of drilled wells could be masked by presence of magnetic anomalies associated with other anthropogenic features (agricultural, power, housing, and pipeline infrastructure); however, these wells would have more than likely been identified during pre-construction surveys prior to erection of these features.

While geophysical techniques allow for a high degree of confidence in subsurface interpretation, as is the case with this survey effort, all geophysical methods have technical and physical limitation due to both environmental conditions and non-uniqueness of geophysical solutions. A follow-up survey effort utilizing invasive methods of inquiry may be deployed in any areas of interest, as well as additional geophysical surveys to complement the results of this effort to target areas currently inaccessible by a UAV surveys.

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