

HARMONIZATION IN A DRONE SURVEY

When a Survey is Perfectly Executed from Start to Finish

The goal for every Geophysics company is to collect high-resolution data as efficiently and effectively as possible, which means zero delays for acquisition and processing. That is almost never the case, as most surveys encounter issues in some issues are usually outside of the field crew's control (severe weather, geomagnetic activity), or some issues can

be mechanical (drone issues, magnetometer malfunctions). Once in a blue moon, you have a survey where everything goes according to plan with zero delays or issues from pre-mobilization to acquisition to processing. The 2025 Abitibi Lake survey was the survey for Rosor that sets the benchmark for what happens when everything is in place.

Project

Abitibi Lake Project

Methods

Drone-borne Magnetics

Location

Abitibi Lake, Ontario, Canada

Anomaly Type

Subsurface gold deposits

BACKGROUND

Located about 50 km northeast of Matheson, Ontario is the Abitibi Lake Project, a small-scale prospective area owned by International Explorers & Prospectors Inc. (IEP). The area has intense deformation, with E-W oriented faults on the southern end of the property which shows displacement of the ultramafic metavolcanic bands. The Abitibi Lake Project resides over a portion of Abitibi Lake, which means that geophysical and drilling are heavily relied upon to further the understanding of the underlying geology in the area.

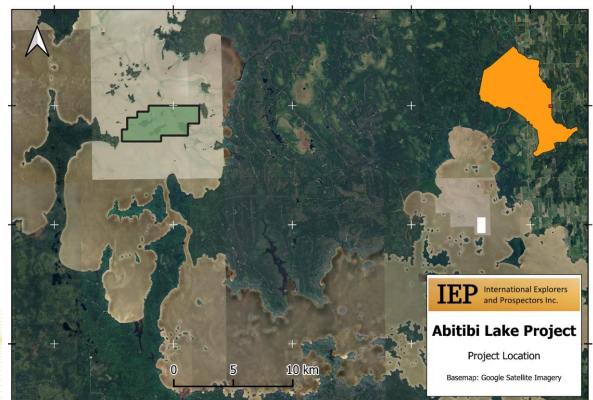


Figure 1: Location and flight plan of the Abitibi Lake survey.

THE ROSOR SOLUTION

The Abitibi Lake Project covers 16.7 km² over a series of mining claims. Rosor typically deploys LiDAR with magnetic data due to sufficient drone compatibility; however, due to the lack of topographic relief, only magnetics was deployed. Rosor planned a high-resolution survey consisting of 360 line-km at 50 m spacing (Figure 2).

Calibration flights occurred the day after arrival to site and mobilization, with acquisition starting in the northeast corner later that day. Acquisition of all lines was completed within the following three days with minimal delays and no mechanical issues (Figure 2).

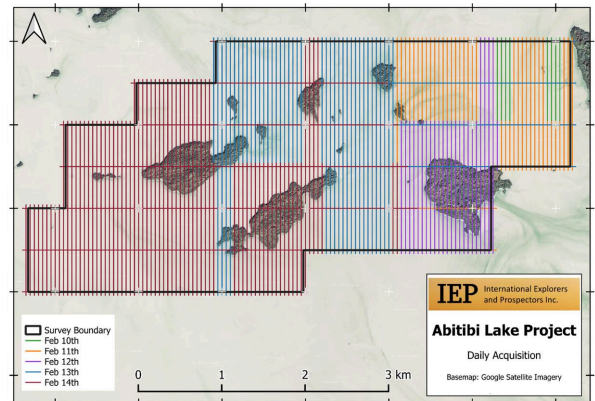


Figure 2: Flight plan including overlaps and extended tie lines.

This was the last project where magnetic data was processed by Paterson, Grant & Watson (PGW) before bringing magnetic processing in-house. The acquired data was transferred to PGW the day after acquisition and demobilization was completed, showing how Rosor's in-house techniques allow quick turnover for processing. Due to the quality of the raw dataset (Figure 3A) as well as a refined workflow stemming from Rosor and PGW's two-year relationship, processing from raw data to final deliverables was completed within two days (Figure 3F, Figure 4). In total, it took ten days from the day Rosor arrived at site to deliver final products to IEP.

The Abitibi Lake survey now serves as the benchmark survey where all parties were in complete harmony. Since Abitibi Lake, turnover of processed magnetic data has averaged less than a week once acquisition was completed. Rosor strives to deliver for every client: a survey where mechanical issues are non-existent, data acquisition is smooth, and a quick turnover of high-quality products that help lead to the next major discovery.

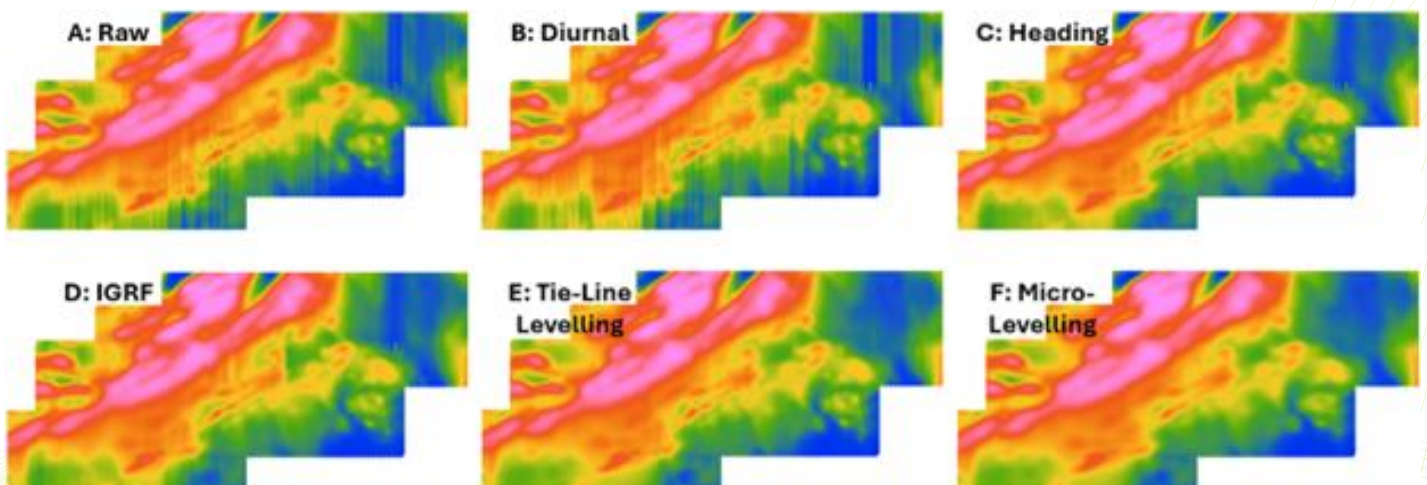


Figure 3: Processing flow from raw magnetic intensity to microlevelled residual magnetic intensity.

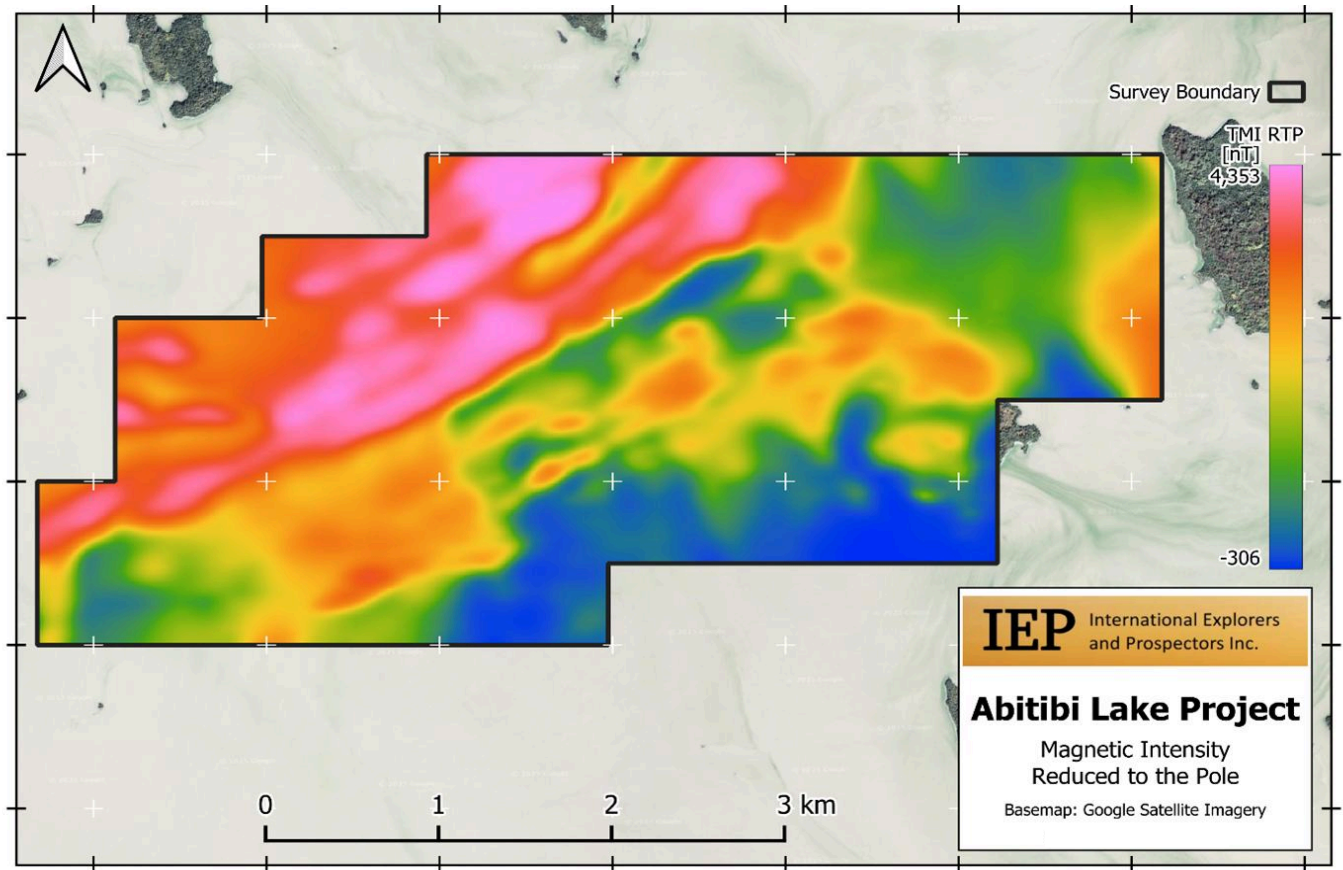


Figure 4: One of the product deliverables. The refined workflow led to a quick turnover of high-quality data.

CONCLUSIONS

The Abitibi Lake survey set the benchmark for what a perfectly executed program looks like. From mobilization to final deliverable, the entire program was completed in ten days with zero mechanical issues, minimal delays, and no disruptions to the acquisition schedule.

All 360 line-kilometers were acquired within three days of arriving on site. Raw data was transferred to processing the day acquisition was completed, and final deliverables were in the client's hands two days later. The quality of the dataset and the efficiency of the processing workflow demonstrated what Rosor's in-house capability delivers when every element of a program is properly in place.

The Abitibi Lake survey now serves as Rosor's internal benchmark. Since this program, processed magnetic data has averaged less than one week from acquisition completion to final delivery. It is the standard every Rosor program is measured against.

Throughout the duration of the project, Rosor maintained clear and efficient communication with our team. They demonstrated a strong commitment to meeting deadlines by processing the collected data within a very tight time-frame, ensuring that our exploration schedule remained on track. We found our collaboration with the Rosor team to be highly enjoyable and productive. Based on this positive experience, we are eager to continue working with them in the future.

- Peter Colbert, Chief Financial Officer

