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Technical Note on Mineral Exploration for the MagArrow

Total field magnetic maps over large areas can be created using the MagArrow. Special survey considerations need to be made to do this as best as possible.

The general scientific consensus to flight height with the MagArrow is “as low as possible while remaining safe.” This allows for the highest quality data, while still managing risk.

A conservative place to start is with the MagArrow 20m above ground level (AGL). Line spacing typically is the same as AGL height. AGL height depends on the severity of the terrain and vegetation, 10 – 50 meters is the typical range.

As far as weighting measurements based on AGL differences within the survey, for mineral exploration it is not needed. That consideration would only be useful for locating specific small objects. If you wanted to pursue it, we would suggest using Oasis Montaj to either upward or downward continue the data in certain parts. This will be difficult unless you have PPK/RTK GPS measurements. The built-in GPS on the MagArrow is not accurate enough to sense the minor AGL changes of the drone or sensor.

Juniper Unmanned is a Geometrics partner company and has successfully used the MagArrow Magnetometer for mineral exploration projects.