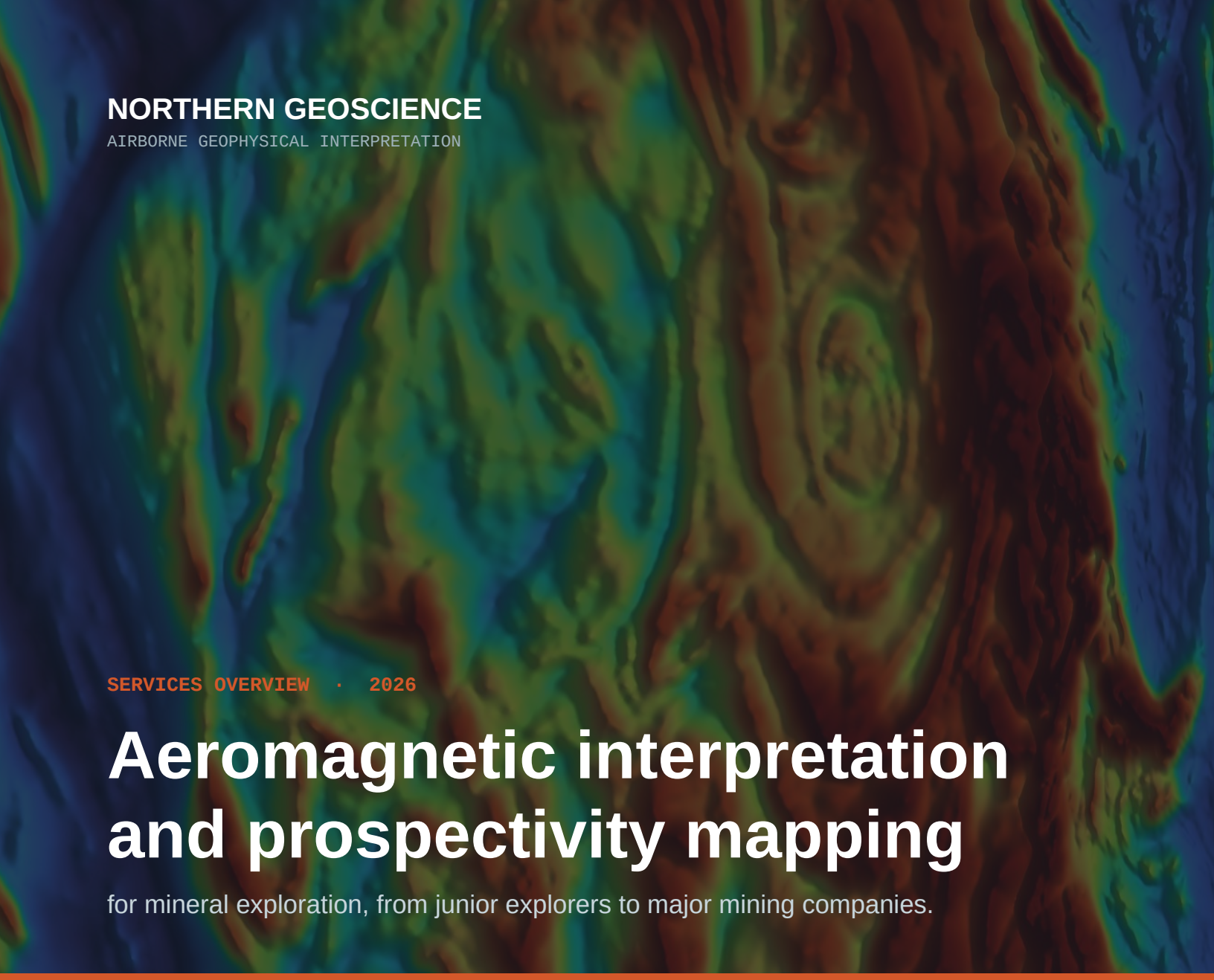


NORTHERN GEOSCIENCE

AIRBORNE GEOPHYSICAL INTERPRETATION

SERVICES OVERVIEW · 2026

Aeromagnetic interpretation and prospectivity mapping

for mineral exploration, from junior explorers to major mining companies.

We put the geology into geophysics data.

Exploration geophysics & economic geology

Burlington, Vermont · working worldwide

northerngeoscience.com · info@northerngeoscience.com · 720-705-2524

ABOUT NORTHERN GEOSCIENCE

We put the geology into geophysics data.

Northern Geoscience is an independent geophysical interpretation consultancy led by Robert Charnock, an exploration geophysicist and economic geologist. We turn airborne magnetic surveys into geological maps and ranked exploration targets that exploration teams can plan from, for junior explorers through to major mining companies, anywhere in the world.

40	23	10+	Juniors to majors
airborne interpretation projects since 2020	deposit styles interpreted	years of airborne interpretation	exploration companies of every size

Every stage of exploration

Near-mine

The structures and host units that control a known deposit, traced under cover to find extensions and repeats.

Brownfields

The mineralizing system followed across the district: along-trend structures, favourable stratigraphy and alteration footprints.

Greenfields

A first geological map of covered or poorly exposed ground, with prospectivity mapping to rank land packages.

Services at a glance

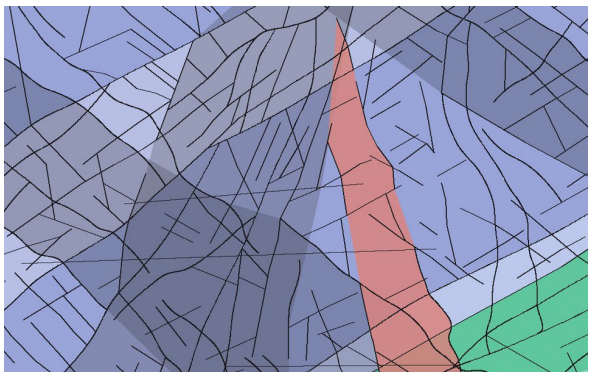
Service	What it gives you
Lithological & structural interpretation	A solid-geology map of lithology, structure, intrusions and alteration, with recommended follow-up areas
Mineral prospectivity mapping	Data-driven mineral potential maps and a ranked list of exploration targets
Magnetic derivatives, lineaments & domains	A structural framework from the magnetic data: derivative grids, magnetic lineaments, density and orientation, magnetic domains
Geological data services	Digitized geology, a project GIS database, land and market research

Interpretation and prospectivity mapping can be run together or on their own. Both include the magnetic derivatives, lineaments and magnetic domains. Every project runs on our own in-house software, custom-made for a geophysical exploration pipeline, so each step is repeatable, documented and tuned to exploration data.

CORE SERVICE

Lithological & structural interpretation

Typical turnaround: 1–2 months, depending on survey size and resolution



Our main interpretation product. Interpretations are done by hand digitally, over several iterations, until we are confident the geologic map is as true as possible to the known geologic setting and the underlying magnetic data. Mapped geology is used as a guide, but we let the data speak for itself. Magnetic data from original or past surveys, including legacy company and government surveys, may be used and stitched together. Gravity and radiometric data may be added, where available, to aid the interpretation.

What you receive

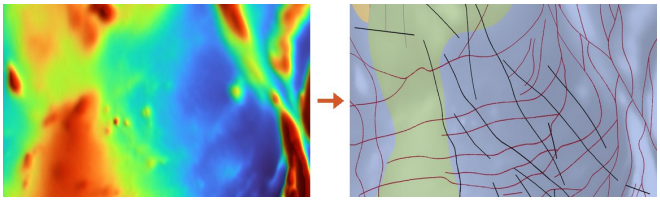
- Interpreted lithology, including intrusive units, and lithological domains
- Structural framework: faults, shear zones, folds
- Alteration zones
- Magnetic derivatives, lineaments and magnetic domains (included)
- Report with figures and recommended follow-up areas
- GIS package of every interpreted layer, ready for ArcGIS Pro or QGIS

What we need from you

- Area of interest and the commodities or deposit models of interest
- Your own data, where you have it: airborne magnetics (grids or line data), gravity, radiometrics, geology maps, drilling, geochemistry, known occurrences
- Given just an area of interest, we find the public data that covers it; older surveys can be stitched in

What shapes the quote

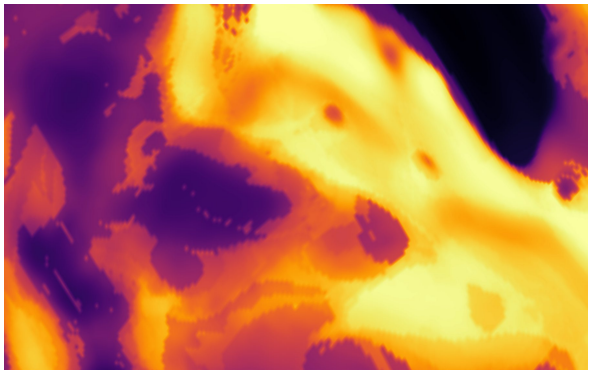
- Area and survey line-kilometres
- Number of surveys to merge
- Extra data sets to integrate
- Regional versus camp-scale detail
- Delivery date



CORE SERVICE

Mineral prospectivity mapping

Typical turnaround: 1–4 weeks



Our main data-driven product. Mineral potential maps built from the geophysical and geochemical data available over an area of interest. Magnetic data is often the main driver; gravity, radiometric and geochemical data strengthen the results. Evidence layers are created from the data, tested against known mineralization or targets, and combined into prospectivity maps.

What you receive

- Prospectivity maps using several models
- Ranked target list with the reasoning behind each target
- Evidence layers and statistical testing of each layer against known occurrences
- Several model types compared, from statistical to machine learning, with honest validation results, not a black box
- Magnetic derivatives, lineaments and magnetic domains (included)
- Report and GIS package

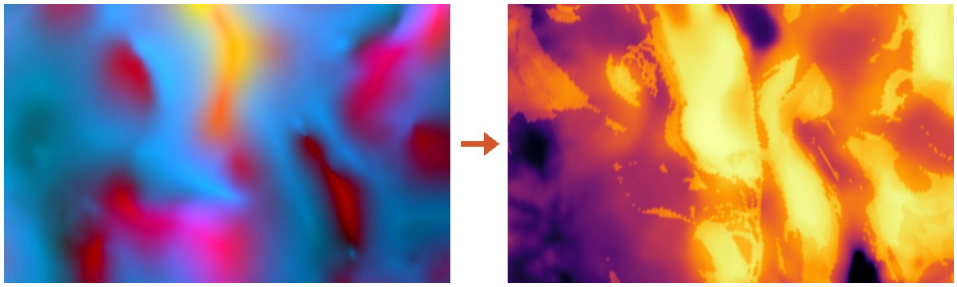
What we need from you

- Area of interest and target commodity
- Your own data, where you have it: magnetics, geochemistry, gravity, radiometrics, known occurrences, drill intercepts or existing targets
- Given just an area of interest, we find the public data that covers it

What shapes the quote

- Number of data sets and evidence layers
- Number and quality of known occurrences
- Size of the area
- Whether a lithological and structural interpretation is added
- Delivery date

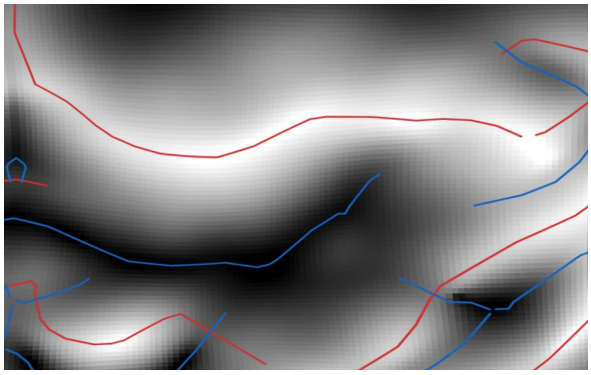
Can run alongside a lithological and structural interpretation, or on its own.



OTHER SERVICE

Magnetic derivatives, lineaments & domains

Typical turnaround: 1–2 weeks



Ahead of a field season or a land decision, these products give your team a structural framework built directly from the magnetic data. The domains and lineaments here are magnetic: traced and classified from the magnetic grids by our tools, not interpreted geological domains or structures. Those come with the lithological and structural interpretation. These products are automatically included with both core services.

What you receive

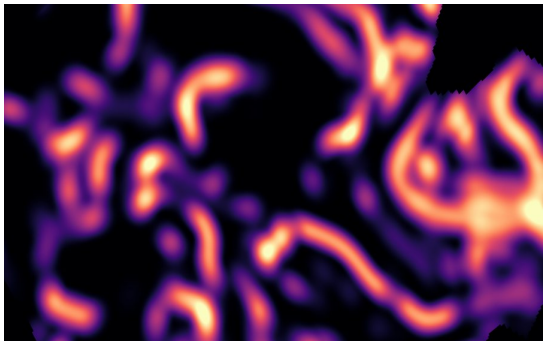
- Magnetic lineaments derived from the tilt derivative, vectorizing the magnetic data
- Lineament density and orientation grids
- Magnetic derivatives: reduced-to-pole, vertical and horizontal derivatives, tilt derivative, analytic signal; PCA bands
- Upward continuation for depth and regional trends
- Magnetic domains classified from the grids, with an agreement grid
- Image set ready for presentations and reports

What we need from you

- Area of interest
- Your magnetic grid or line data and survey parameters, if you have them
- Otherwise we find the public magnetic surveys that cover the area

What shapes the quote

- Grid size and resolution
- Number of surveys
- Number of continuation levels
- Extra grids to classify into domains (gravity, radiometrics)

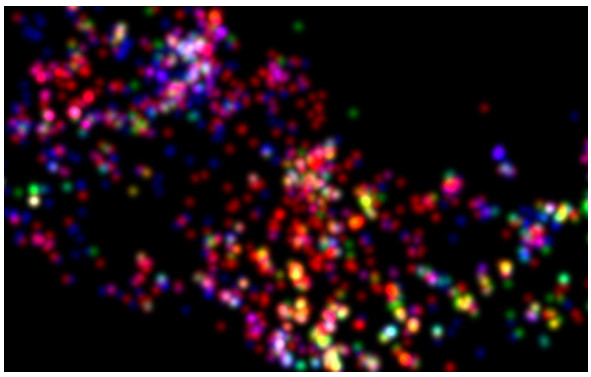




OTHER SERVICE

Geological data services

Typical turnaround: about 5 days per quadrangle map; 3–14 days for data compilation



Good interpretation starts with good data. We also offer these services on their own.

What you receive

- Digitizing and standardizing geology maps
- Compiling public and company data into a project GIS database
- Land package and market research for property evaluation

What we need from you

- Area of interest and commodity
- Your maps, reports and data to compile, if you have them
- We also search for the public data that covers the area

What shapes the quote

- Number and complexity of map sheets
- Number of data sources
- Size of the area

Project_GIS

AOI/	Claims, survey outlines
Geophysics/	Magnetics, radiometrics, EM picks
Geology/	Bedrock, faults, outcrops
Geochemistry/	Lake sed, soil, rock samples
Mineral occurrences/	Occurrences, drill holes
Elevation/	DEM, hillshade
Infrastructure/	Roads, camps, water
Images/	Historical maps
Interpretation/	Lineaments, domains, models

WHAT'S INCLUDED

Products by service

Product	Lithological & structural interpretation	Mineral prospectivity mapping	Magnetic derivatives, lineaments & domains
Interpreted lithology (incl. intrusive units) & lithological domains	●	–	–
Structural framework (faults, shear zones, folds)	●	–	–
Alteration zones	●	–	–
Prospectivity maps & ranked exploration targets	–	●	–
Evidence layers & model validation summary	–	●	–
Magnetic derivative grid package	●	●	●
Magnetic lineaments, density & orientation grids	●	●	●
Magnetic domains & agreement grid	●	●	●
Report with figures	●	●	●
GIS package (ArcGIS Pro / QGIS ready)	●	●	●

Delivered as

- GIS layers as shapefiles or a file geodatabase, with ArcGIS Pro layer files carrying the symbology
- Grids as GeoTIFF, in your project coordinate system
- Report as PDF or PowerPoint, with high-resolution figures; poster on request
- Everything documented so it can support technical reports and regulatory filings

EXPERIENCE

Deposit types by region since 2020

Airborne interpretation projects since 2020, building on five earlier years of the same work at Condor Consulting.

	Athabasca Basin	Yukon & NWT	BC & Alaska	Western US	Shield & Appalachians	Latin America	Total
Unconformity-related uranium	8						8
Porphyry copper			3			4	7
Epithermal gold-silver			2	4			6
Orogenic & intrusion-related gold		2	1	1	1		5
Base metals & copper		3	1	3	2	2	11
Magmatic nickel-copper					2		2
Critical minerals					1		1

Pricing

Every project is quoted after a short scoping call, because the work depends on survey size, data quality, the number of data sets and your deadline. Proposals give a fixed scope, deliverables and timeline. Services can be combined, and derivatives, lineaments and magnetic domains are always included with the core services.

How an engagement works

1 Scoping call

We talk through the property, the commodity, the data you hold and the decisions the work needs to support.

2 Proposal & quote

A fixed scope with deliverables, timeline and price, so there are no surprises.

3 Data hand-off

You share the survey data and supporting files; we confirm everything needed is in hand.

4 Delivery & walkthrough

GIS package and report delivered, with a walkthrough for your team and support as you plan follow-up.

Start a project

Tell us about your property and the airborne survey data you have. Helpful to include: project location, commodity(s) or deposit type, survey type and size (line-km, or the general dimensions of your area of interest), any other data you have (for example gravity, radiometric, geochemical, geology maps or drilling), and your timeline or any deadlines.

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