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MEMORANDUM

Date: October 21, 2022

From: Ross Polutnik, P.Geo

To: Bjorn Olsen, New Sunro Copper Ltd.

SUBJECT: Airborne Magnetic Inversion & Interpretation on the New Sunro Copper Property

S.J.V. Consultants Ltd. was engaged by New Sunro Copper Ltd. to review, 3D model, and interpret airborne magnetic data acquired on the New Sunro Copper property. The New Sunro Copper property is located on south-western Vancouver Island, British Columbia, approximately 2 km northeast of the community of Jordan River and 48 km west of Victoria. The New Sunro property claims are shown in Figure 1.

The New Sunro property hosts the past-producing Sunro Mine, which was active from 1962 to 1976 (BC MINFILE 092C 073) and contains significant underground workings. Four additional MINFILE showings/prospects are located on the property as shown in Figure 2. The property is actively being explored for additional copper, gold, and silver mineralization.

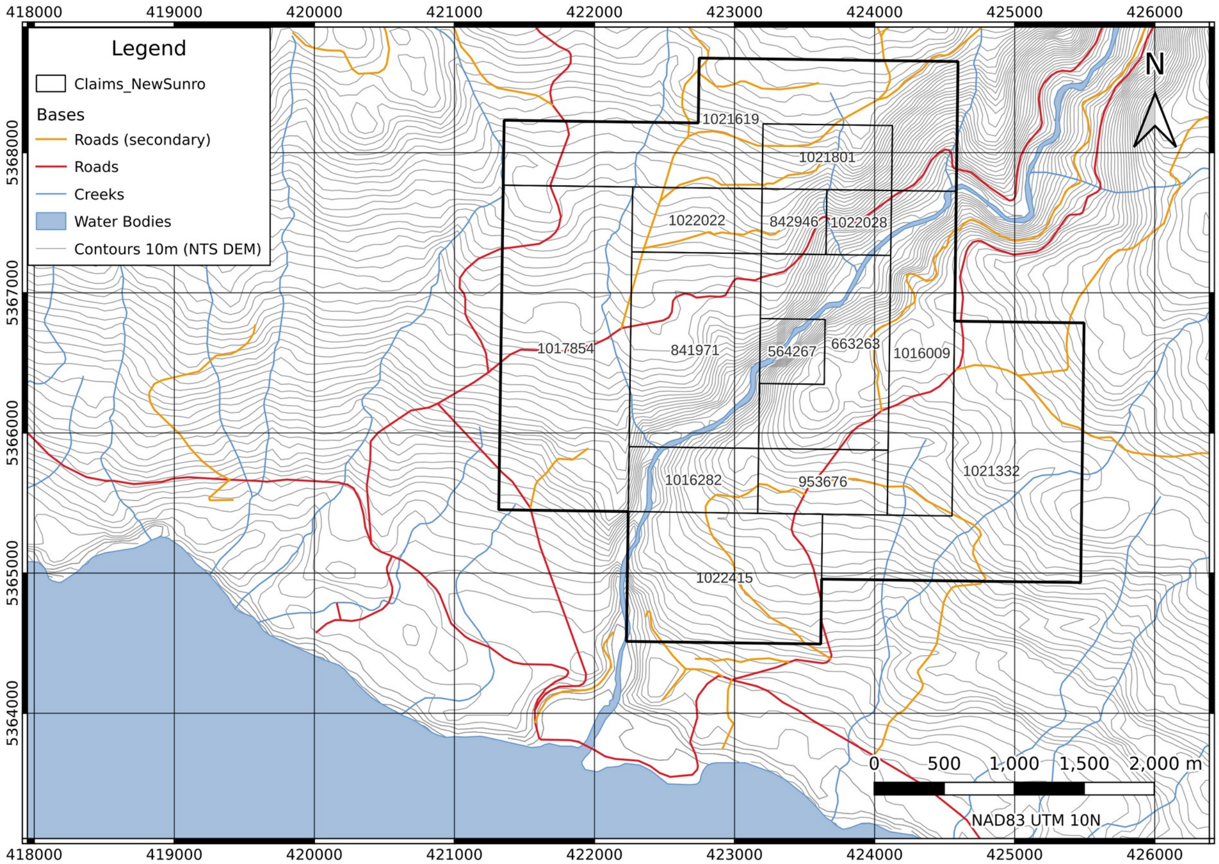

Figure 1: New Sunro property claims

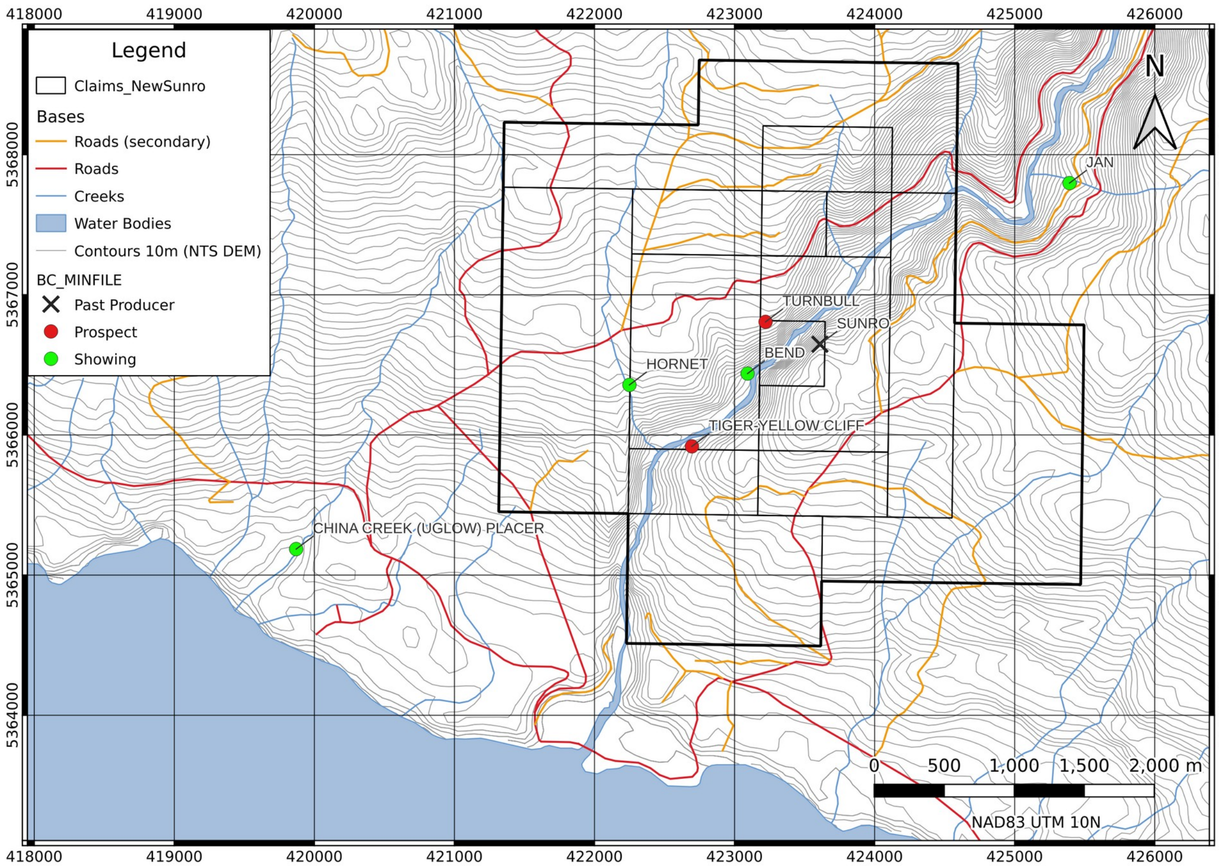

Figure 2: New Sunro property claims with MINFILE points

The property geology consists of two major rocks units (Figure 3). The primary rocks are basalts and diabase dykes of the Metchosin Formation, which have been intruded by multiple gabbro bodies. Detailed mapping on the property indicates that there are three northwest striking gabbro bodies crossing the property with widths between 200 m and 800 m across. These are referred to as the south, central and north gabbros. Known mineralization occurs along the contacts between the host volcanic rocks and the central gabbro (Figure 4) near where the Jordan River intersects the gabbro. As shown in Figure 5, the known mineralization can be separated into two groups: mineralization associated with the northeast (G0) contact and mineralization associated with the southwest (G1) contact (Houle, 2016). For a detailed discussion of the the project geology and a summary of the historical work completed, see the technical report written by Houle (2016).

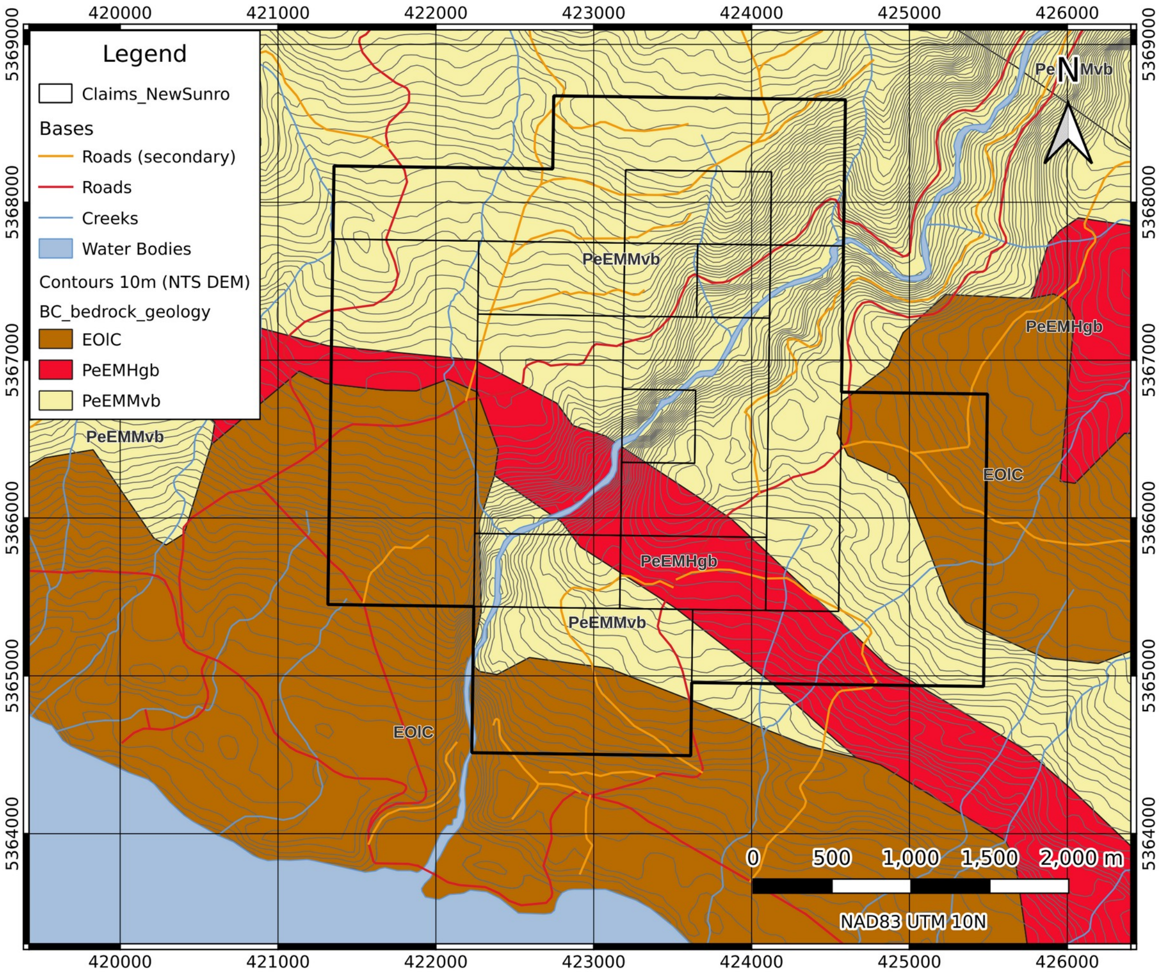

Figure 3: Regional geology (based on digital BC Geology). Modified from Houle (2016).

EOIC: Carmanah Group sedimentary rocks

PeEMMvb: Metchosin Formation (basaltic volcanic rocks)

PeEMHgb: High-level gabbro (gabbroic to dioritic intrusive rocks)

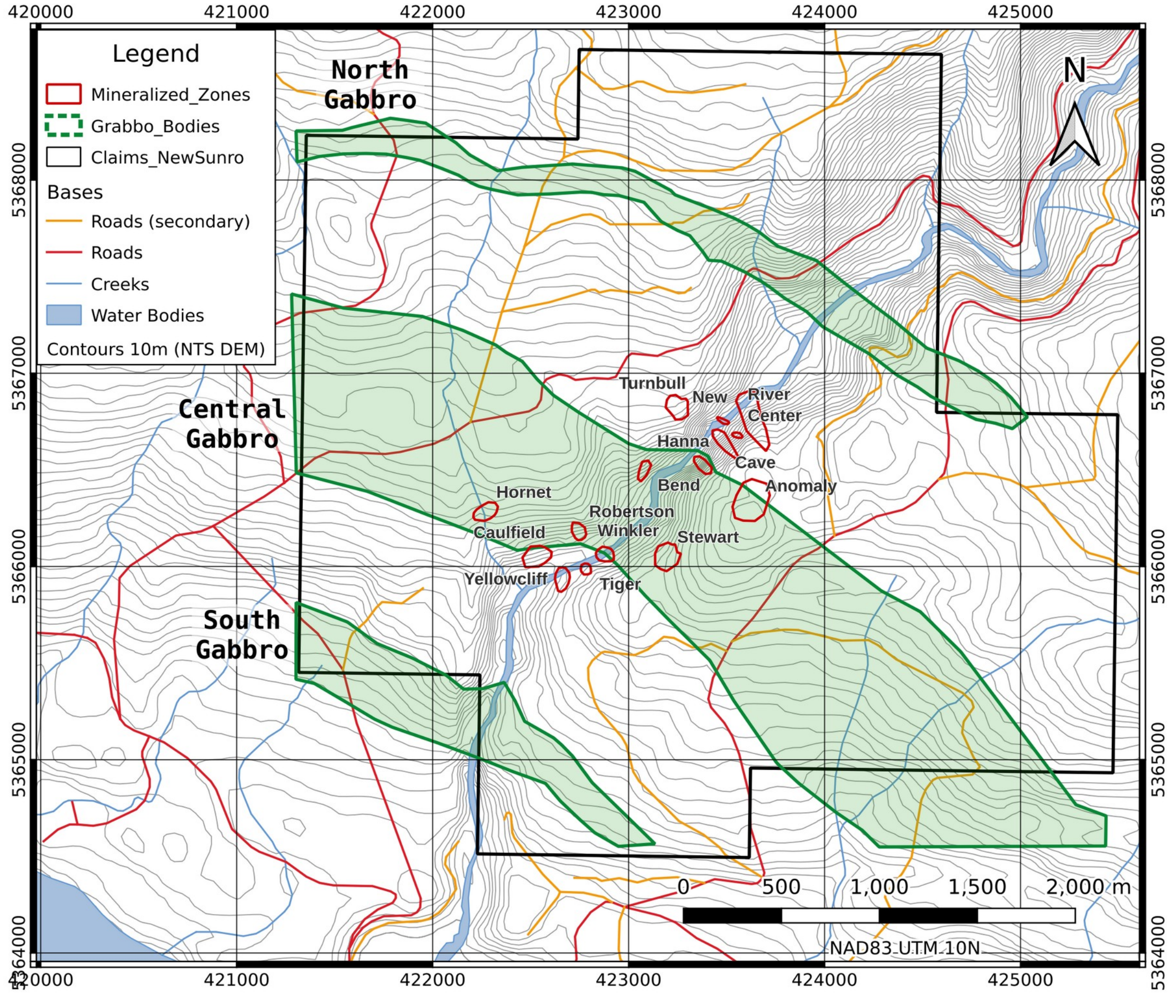

Figure 4: Gabbro units and known mineralized zones (modified from Houle, 2016)

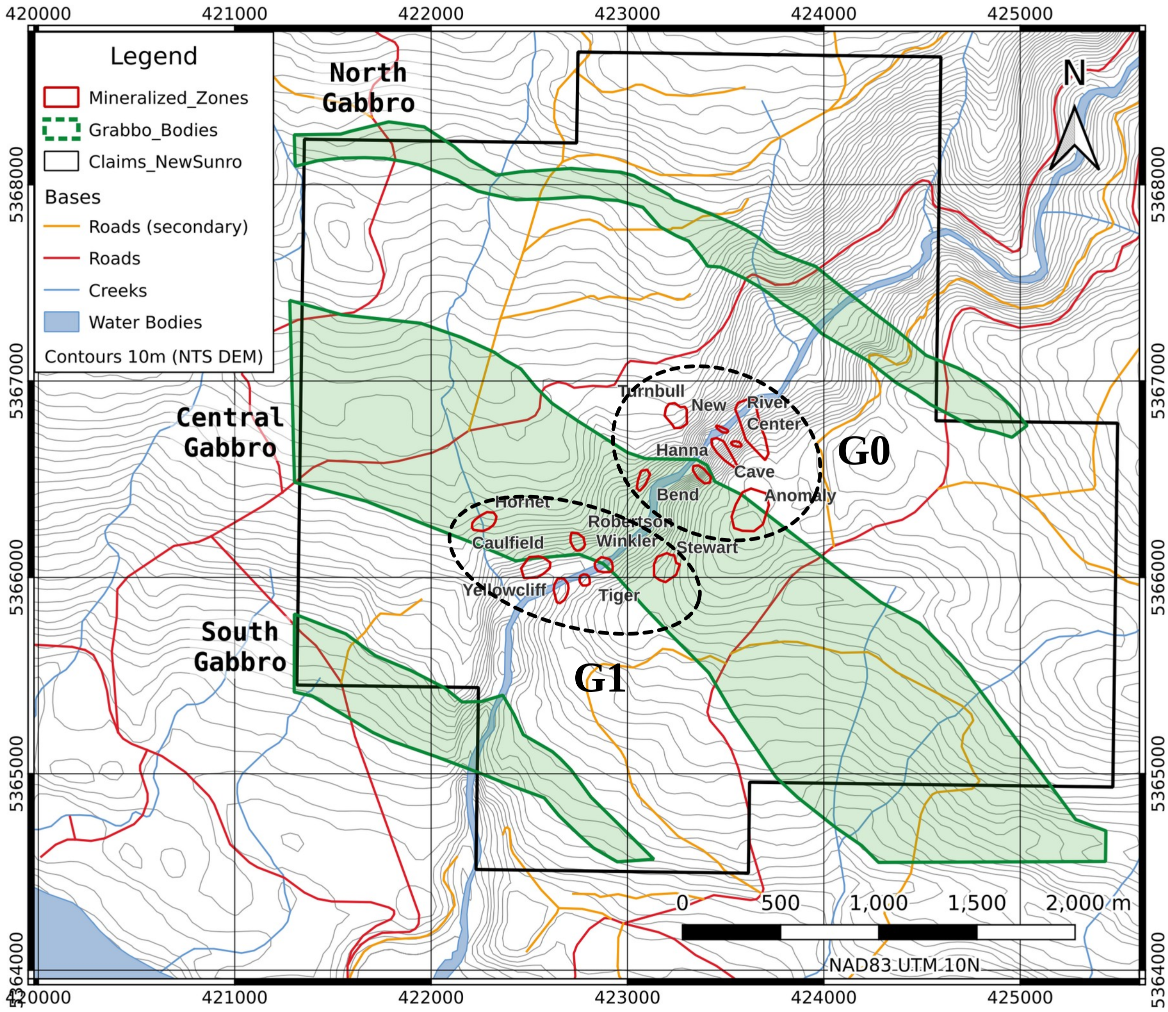

Figure 5: Gabbro units and known mineralized zones with groupings (modified from Houle, 2016)

In 2015, on June 9 and 10, Precision GeoSurveys carried out an airborne magnetic and radiometric survey over the entire New Sunro Copper property. The data was acquired along NE-SW oriented lines with a line spacing of 100 m, for a total of 149 line kilometres. The magnetic data was collected using a Scintrex cesium vapor CS-3 magnetometer housed in a front mounted stinger. Precision GeoSurveys carried out standard post-processing of the magnetic and radiometric data. A detailed description of the airborne geophysical survey, survey parameters, post-processing, and deliverable products can be found in the corresponding logistics report (Poon, 2015). Only the magnetic data will be discussed in this interpretation memo. The airborne survey flight lines are shown in Figure 6 below.

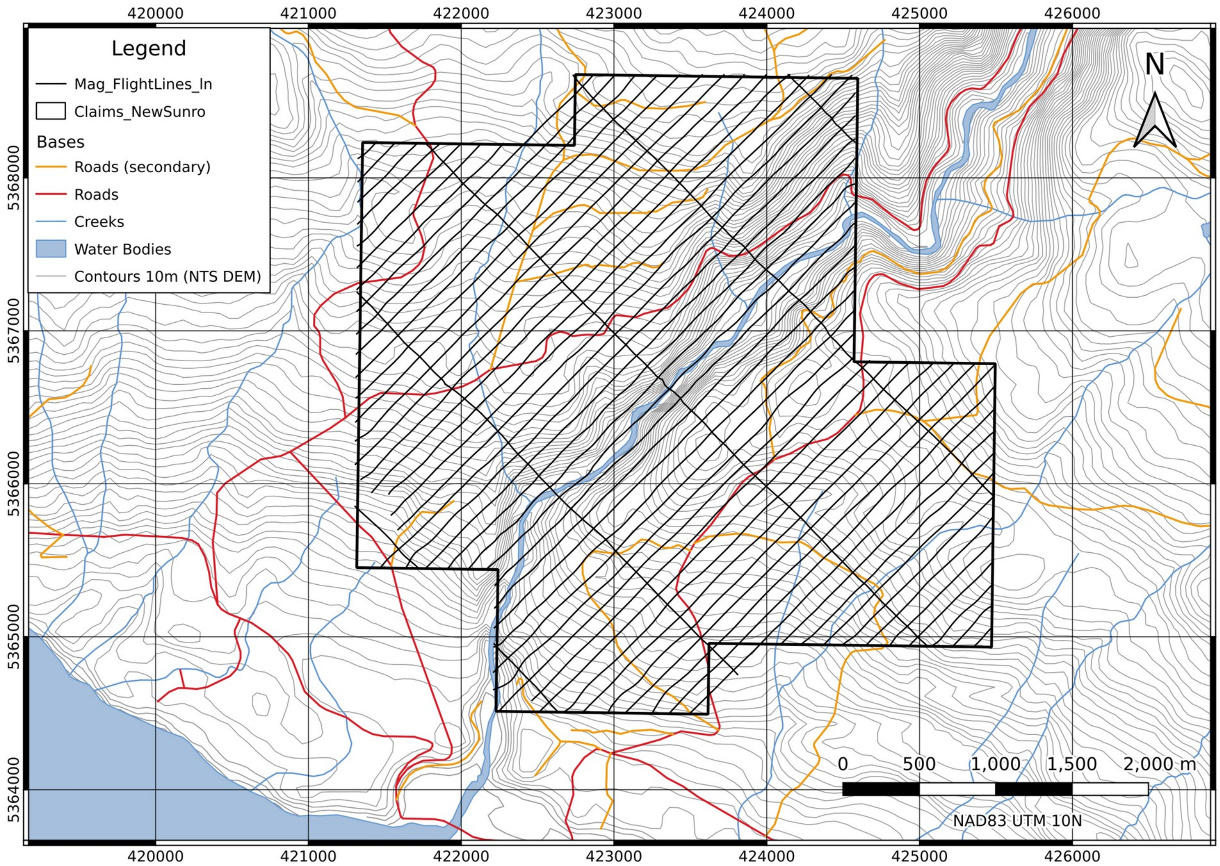

Figure 6: Airborne magnetic survey flight lines

Magnetic 3D Inversion

Unconstrained 3D magnetic inversion modelling was carried out on the airborne magnetic data using the UBC-GIF MAG3D inversion software. The inversion algorithm is designed to mathematically generate a 3D block model of the subsurface showing a possible distribution of rock magnetic susceptibilities (SI) that can produce the magnetic responses observed. The modelling of potential field data (ex, magnetic and gravity data) is non-unique, meaning that there are many models that could fit the observed data. The incorporation of known geologic information during review and interpretation enables the user to evaluate and select an appropriate model that best fits known information.

Residual magnetic values were used as input to the inversion, therefore the magnetic susceptibility (SI) values calculated by the inversion are also relative. The 3D models produced will normally range around 0.0 SI, even though negative SI values are not observed in nature (with the exception of diamagnetic minerals). A single unconstrained inversion model was generated for the entire survey block. The residual magnetic intensity data provided by the contractor was gridded to 60 metre horizontal cells and then used as the input data for the inversion. The inversion mesh was constructed with 30 x 30 x 15 metre cells (x, y, z) in the NAD83 UTM 10N coordinate system.

The inversion modelling utilized the publicly available NTS 50k digital elevation model (DEM) for elevation control. A satellite based high-resolution DEM covering the claim block was provided by the client after the magnetic modelling had already been completed. Based on the model cell sizes (30 m), it is not believed that using this high resolution DEM instead of the NTS DEM would materially change the resulting model results.

The inversion output was first reviewed in the UBC MeshTools3D viewer and then converted to vtk format for more detailed analysis and comparison with geology in the open-source Paraview visualization software.

Interpretation

The magnetic data interpretation utilized 2D plan pseudocolour contour maps and the 3D magnetic susceptibility inversion block model. The main features of each are discussed below.

Pseudocolour Contour Plan Maps

The magnetic data is presented below as 2D plan pseudocolour contour maps. These maps highlight the amplitudes and variations in character of the magnetic response. Changes in characteristics of the magnetic response can indicate lithological changes, geological contacts, structural features, and alteration of magnetic minerals. Discontinuities, breaks, or offsets in trends often indicate faulting. The residual magnetic field (RMI), reduction-to-the-pole (RTP), and the first vertical derivative (1VD) are shown in Figures 7, 8, and 9. The reduction-to-the-pole filter calculates the observed magnetic field response as if the inducing magnetic field had an inclination of 90 degrees, such as at the North Pole. Asymmetric magnetic anomalies are transformed to symmetric anomalies centred over their causative bodies. The first vertical derivative, or calculated vertical gradient (CVG) enhances short-wavelength features of the magnetic field and serves to highlight the edges of magnetic anomalies.

The RMI (Figure 7) response indicates that the survey grid can be divided into three distinct regions of differing magnetic character, described as the southwestern, central-northeast, and north regions. The southwest half of the survey block has the highest magnetic amplitudes and is dominated by two northwest to west-northwest striking linear magnetic highs. The central-northeast portion of the survey block shows a relatively extensive magnetic low, and overall smooth magnetic character. The least magnetic part of the low is approximately centered over the Jordan River. Along the north side of the survey block is an east-west striking moderate magnetic high that may reflect a change in the underlying bedrock geology.

Within the southwestern region, the high amplitude linear magnetic anomalies are observed to follow the mapped extent of the central gabbro. The RTP and 1VD maps (Figures 8 and 9) indicate that these magnetic anomalies are sometimes within the mapped gabbro extent and sometimes outside of the gabbro within the host volcanic rocks. This may be due to changes in alteration along the contact. The magnetic anomalies should be compared in more detail to the geologic mapping, alteration, rock sampling, and drilling results to better determine the relationship.

The vertical derivative of the magnetic field (Figure 9) shows a number of breaks in the magnetic response along the northwest striking high magnetic anomalies. This suggests that these magnetic anomalies may be due to localized magnetic bodies that pinch and swell along the central gabbro contacts rather than a continuous body. They may also indicate cross-cutting structures that occurred during emplacement of the gabbro (Figure 10).

The central gabbro has a complex response. It corresponds to a moderate magnetic response in the southeast and a more magnetic response in the northwest. As noted above, it is flanked on both sides by the linear high magnetic anomalies for its entire length. The north gabbro sits within the broad magnetic low in the northeast side of the survey block and does not appear to have a distinct magnetic response associated with it. There is a small, approximately 500 m long, high magnetic anomaly on its northwest side. The south gabbro appears to sit within a moderate magnetic low similar to the central gabbro, although is only partially covered by the survey flight lines.

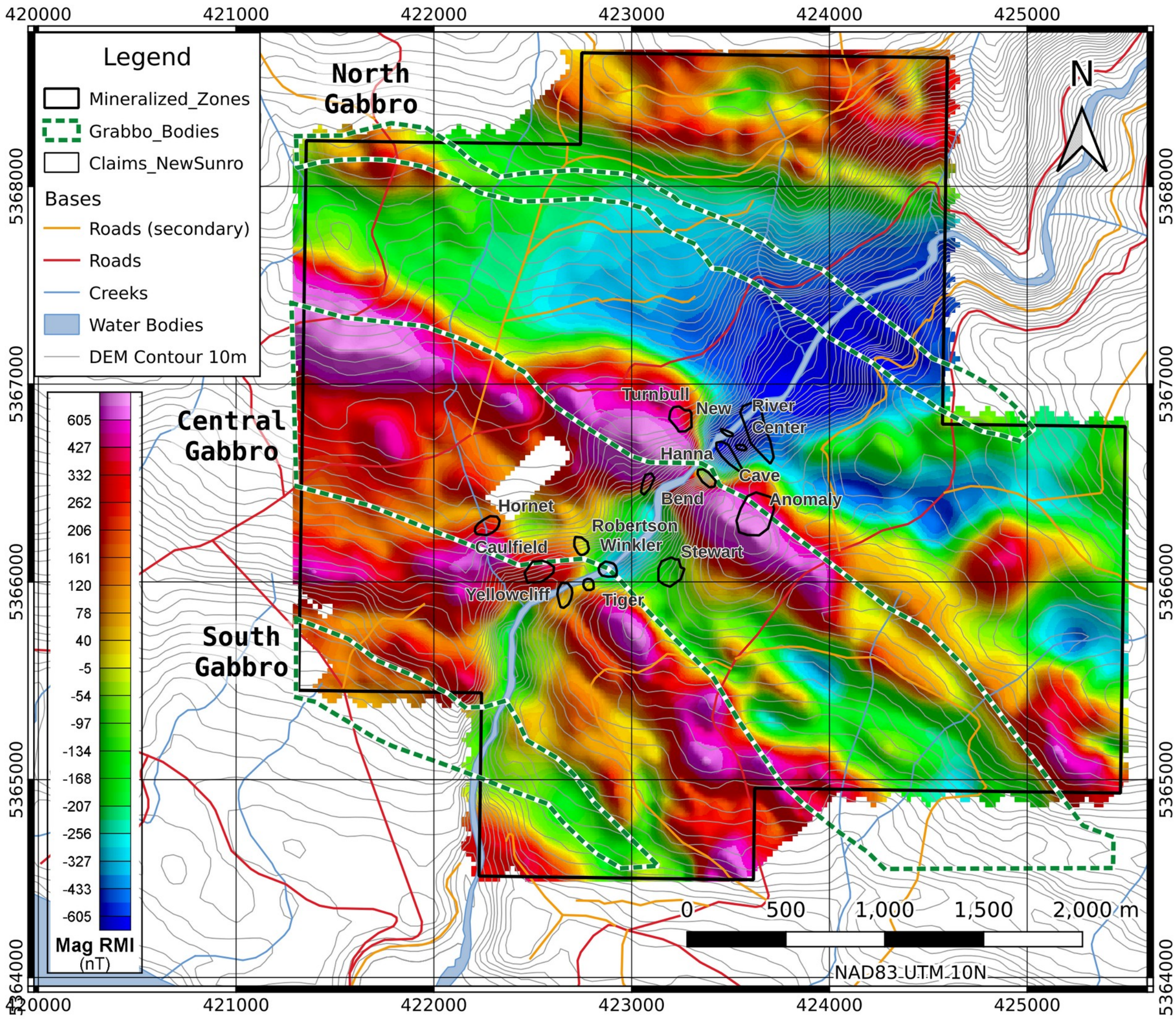

Figure 7: Airborne magnetics. Residual magnetic intensity (RMI)

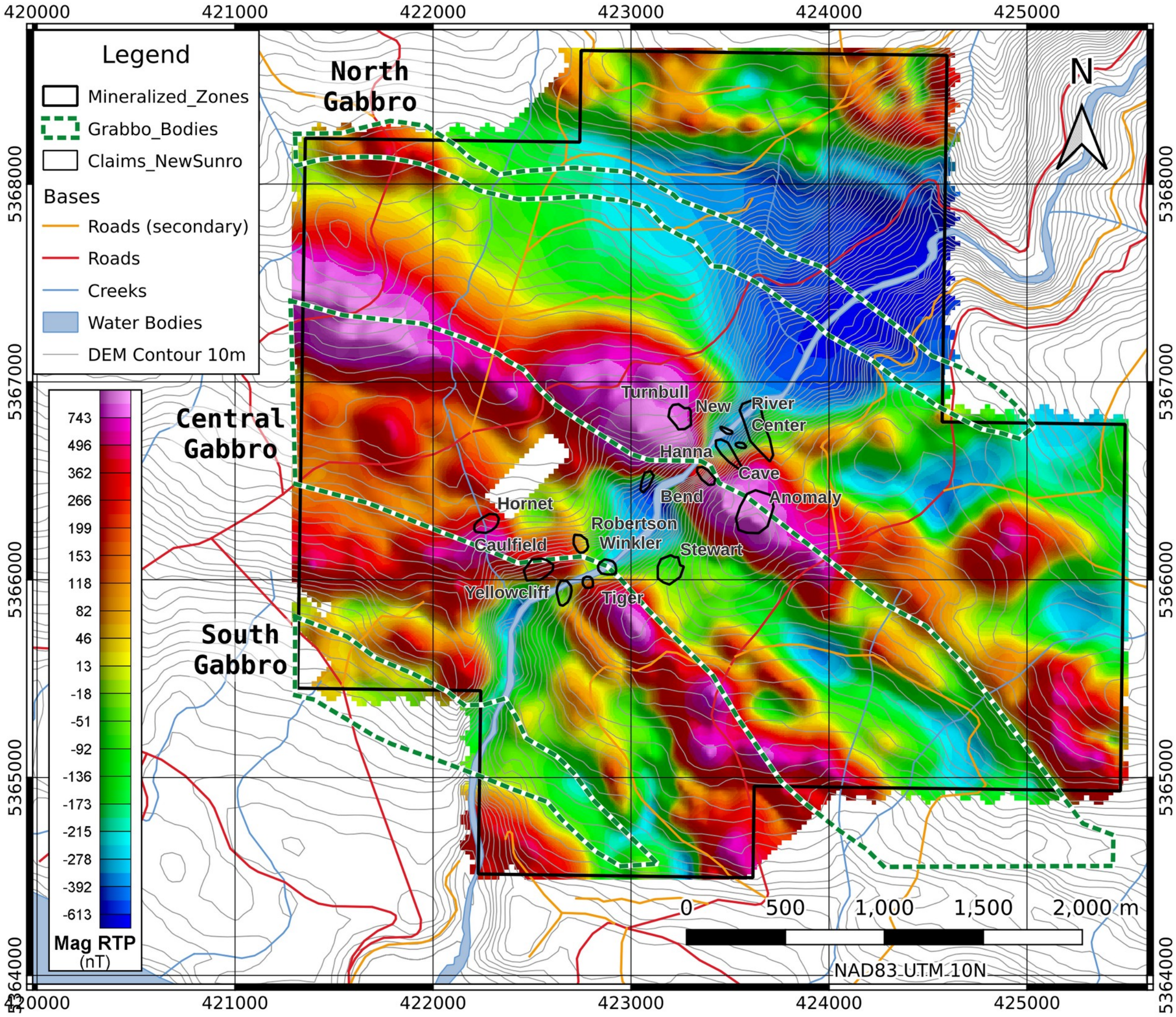

Figure 8: Airborne magnetics. Reduction to the pole (RTP)

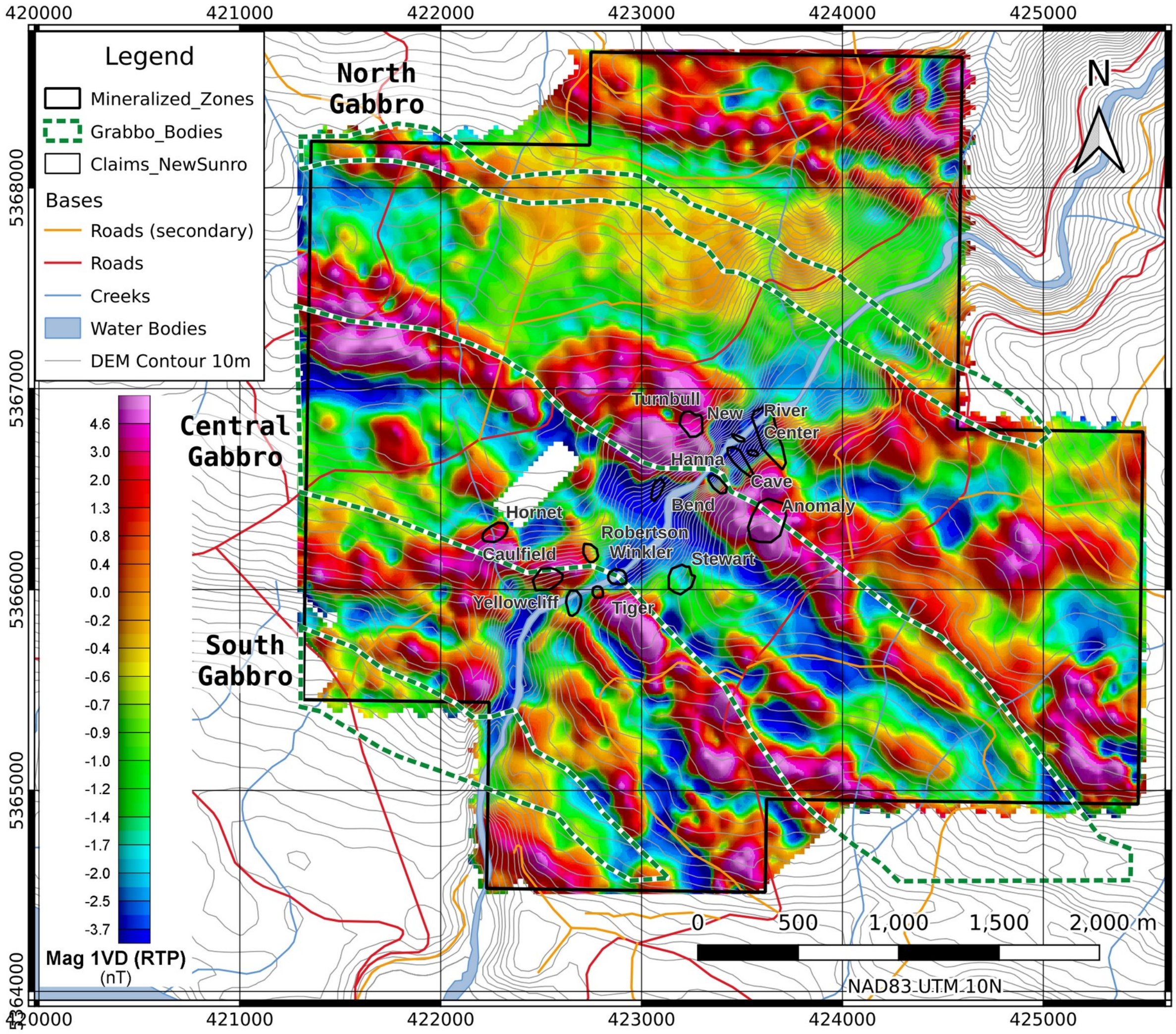

Figure 9: Airborne magnetics. First vertical derivative (1VD) of the RTP

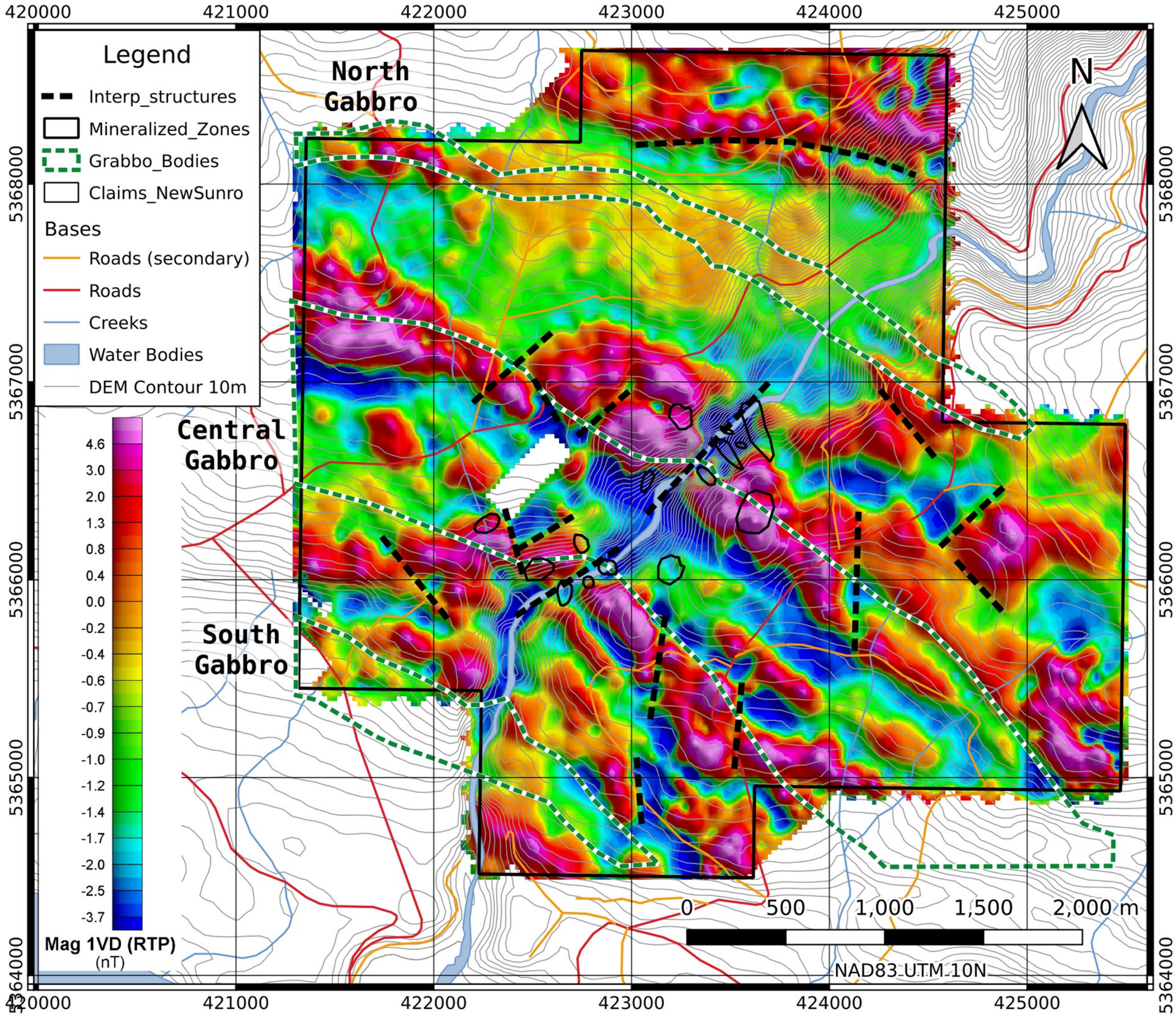

Figure 10: Airborne magnetics. First vertical derivative (1VD) of the RTP with interpreted structures

3D Magnetic Susceptibility Model

An overview of the 3D magnetic susceptibility inversion model is shown in Figure 11 as a series of magnetic susceptibility iso-surfaces. In Figures 12 and 13 the high susceptibility and low susceptibility iso-surfaces respectively are shown individually to more clearly highlight the key characteristics. In Figures 14 and 15 the inversion models are shown in section view looking east and northwest respectively.

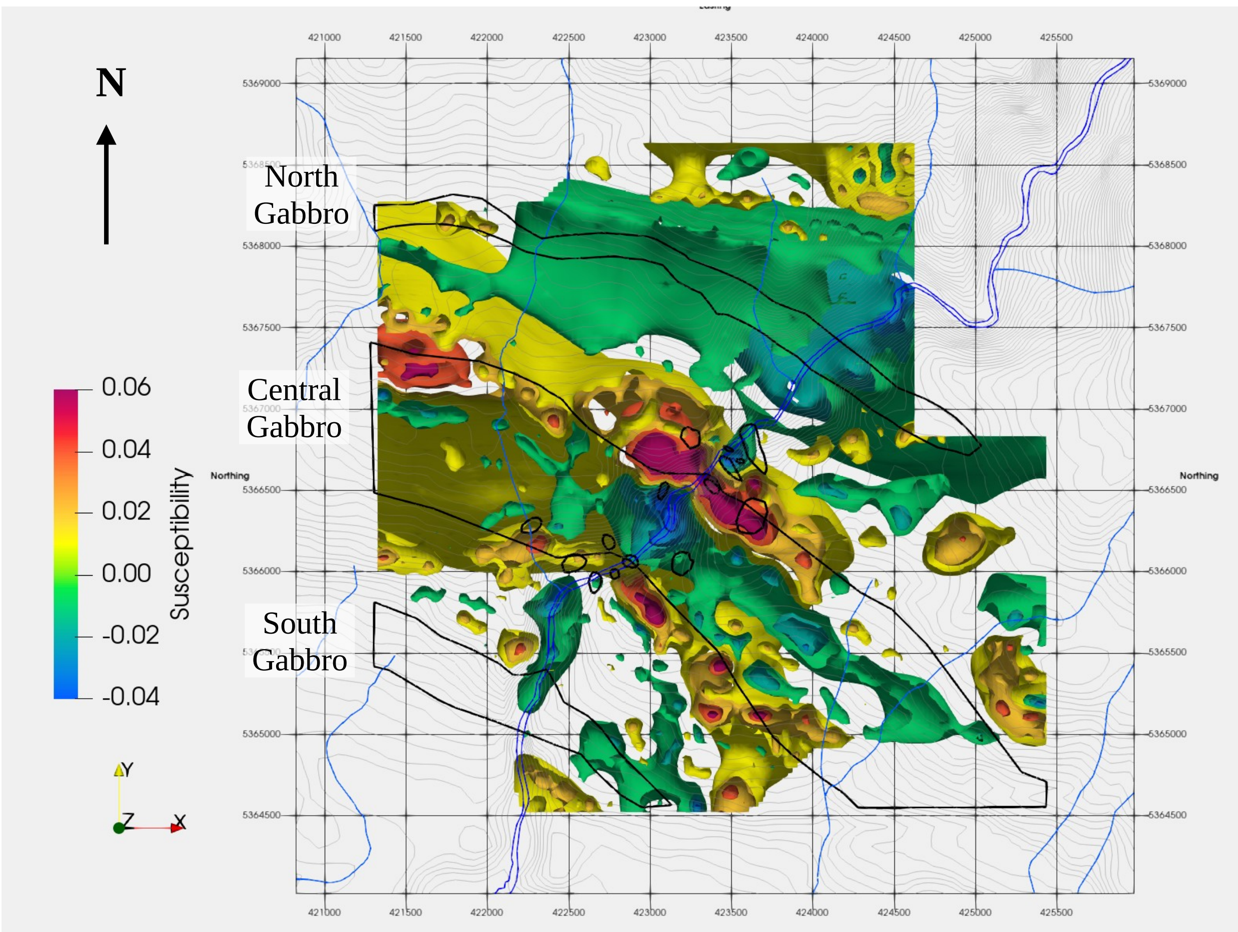

Figure 11: 3D magnetic susceptibility model. Plan view. Iso-surfaces in SI units as follows:

Purple = 0.06, Red = 0.04, Orange = 0.02, Yellow = 0.01,
Green = -0.01, Green/Blue = -0.02, Blue = -0.03, Dark Blue = -0.04

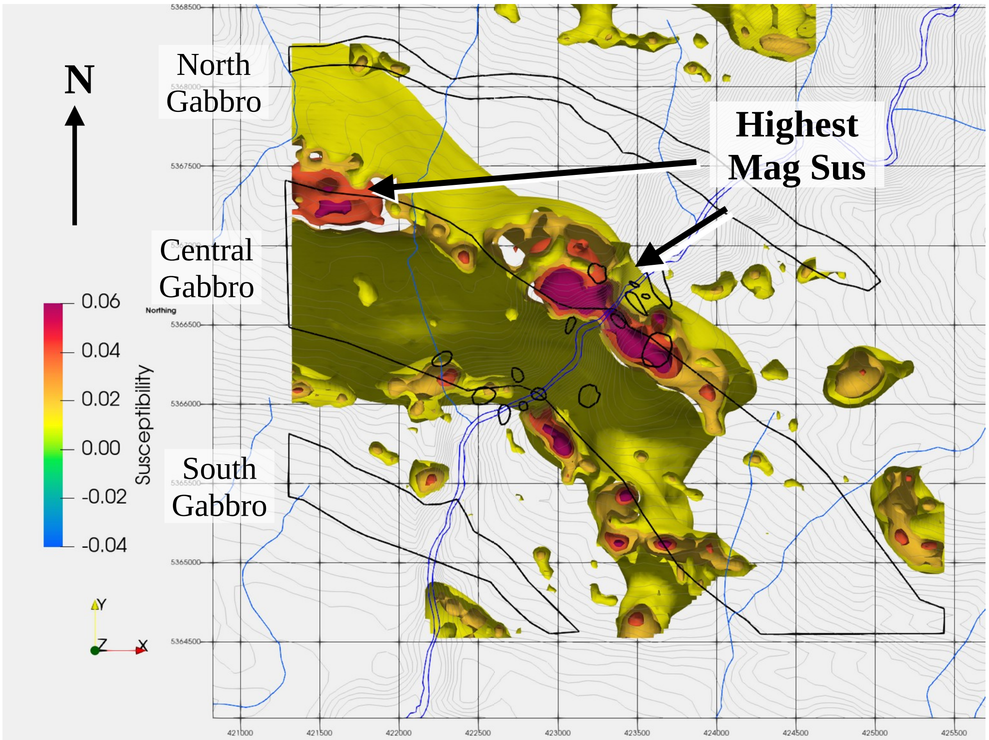

Figure 12: 3D magnetic susceptibility model. High susceptibility bodies (0.01 to 0.06).

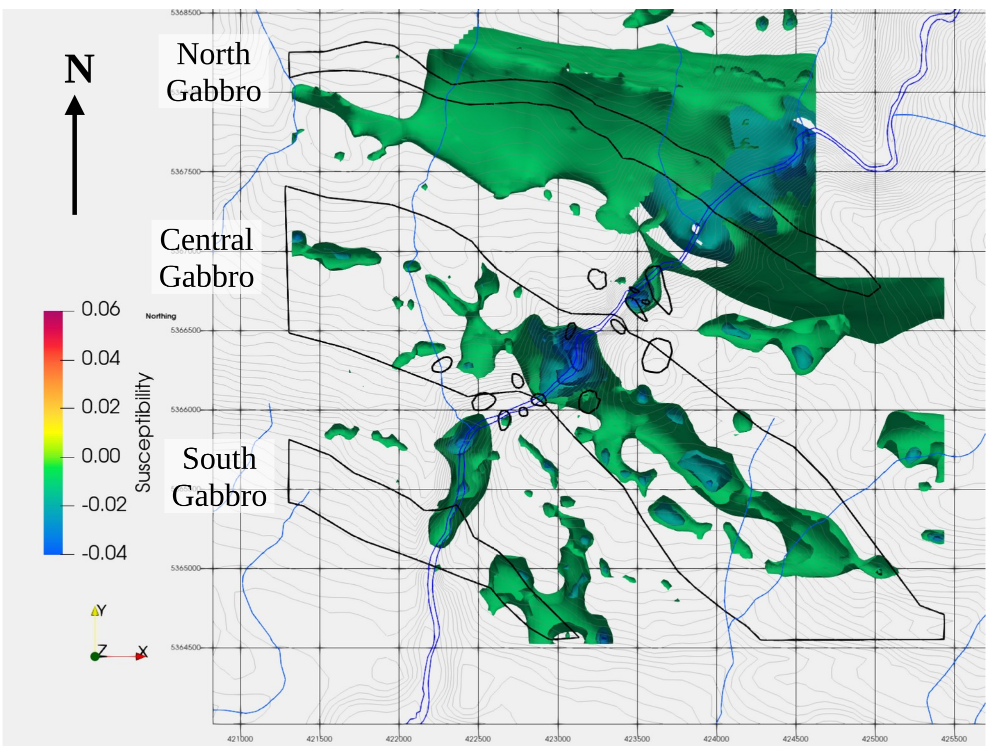

Figure 13: 3D magnetic susceptibility model. Low susceptibility bodies (-0.04 to -0.01).

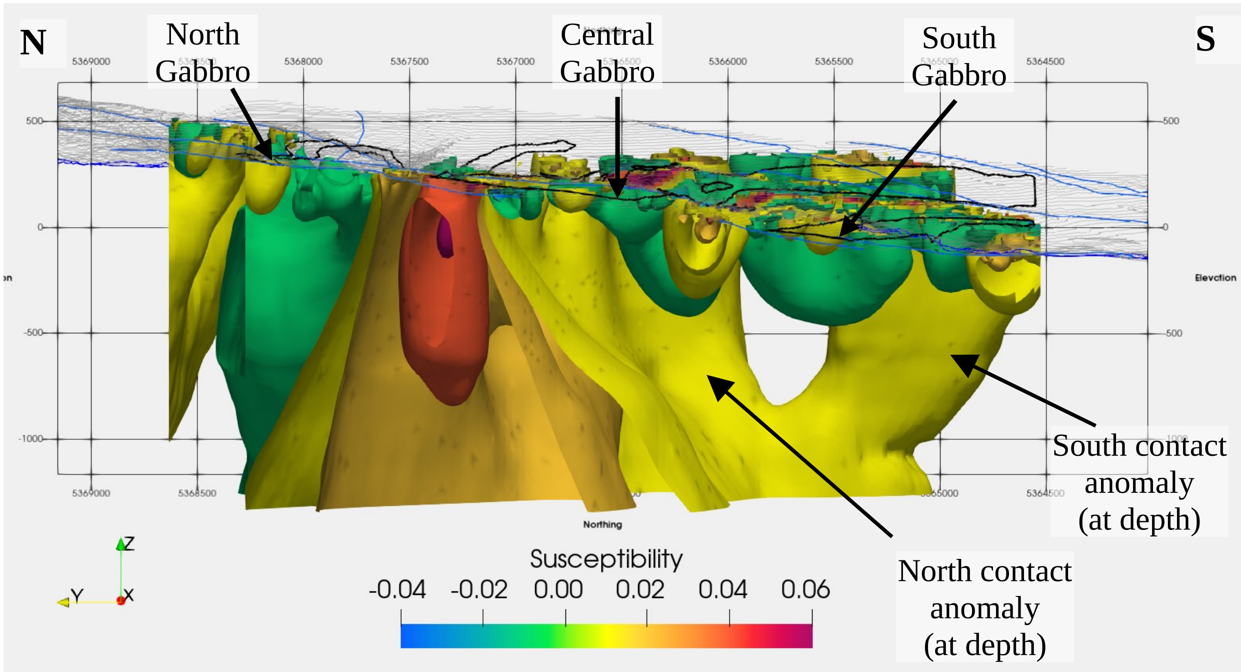

Figure 14: 3D magnetic susceptibility model. Section view - Looking East.

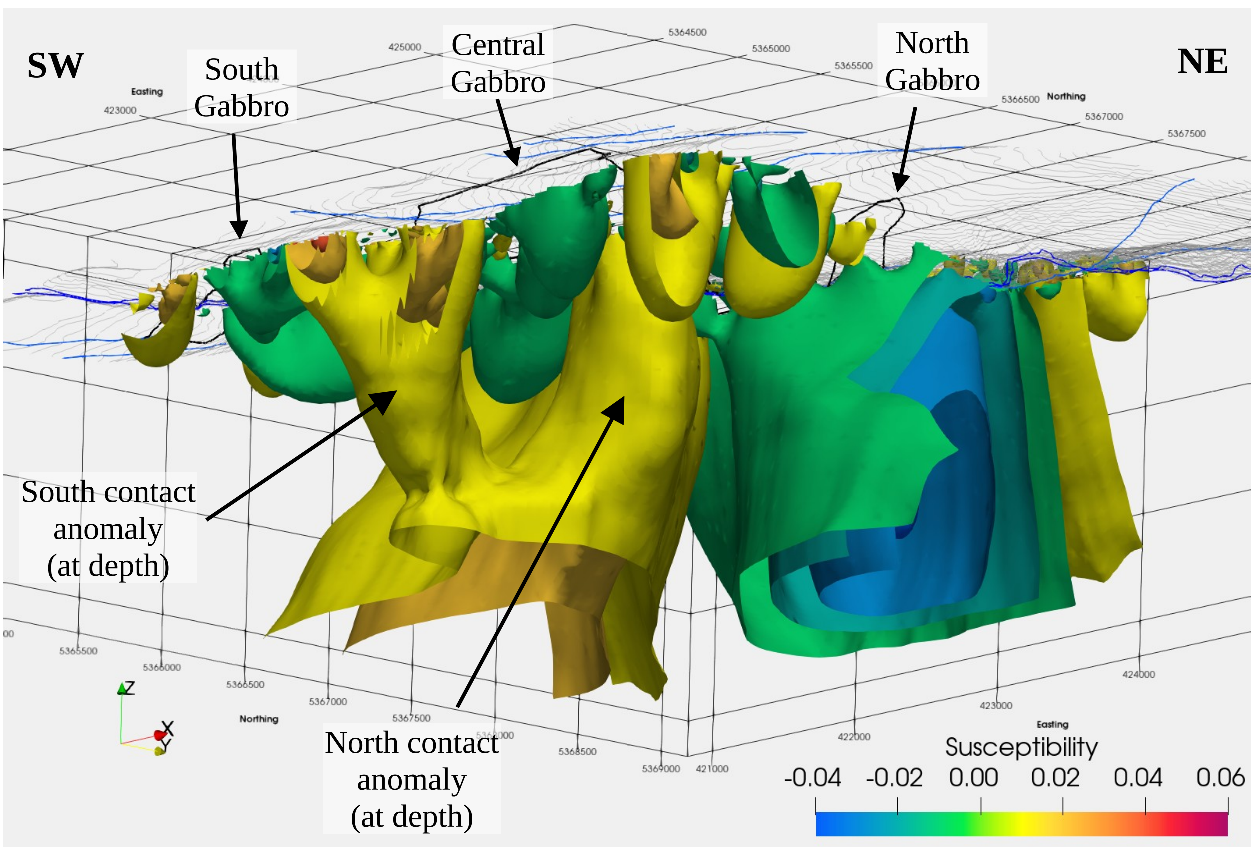

Figure 15: 3D magnetic susceptibility model. View looking northwest from below.

The central gabbro unit models as a low magnetic susceptibility body centered within the mapped gabbro extent (Figures 11 and 13). The susceptibilities are lower on the southeast side of the Jordan River compared to the northwest side of the river, with the lowest amplitudes found where the gabbro crosses the river. Changes in composition of the gabbro and amount of magnetic minerals, such as magnetite, could be one possible explanation for the difference. Approximately 700 m west of the river, the low magnetic susceptibility body appears to end before reappearing around 600 m further west. Detailed mapping (Figure 4b from Houle, 2017) indicates that there is sedimentary rock that cross-cuts the gabbro in this location. Comparison indicates that the sedimentary rocks fit into this region suggesting the sedimentary rocks have slightly higher magnetic susceptibilities compared to the gabbro intrusive (Figure 16).

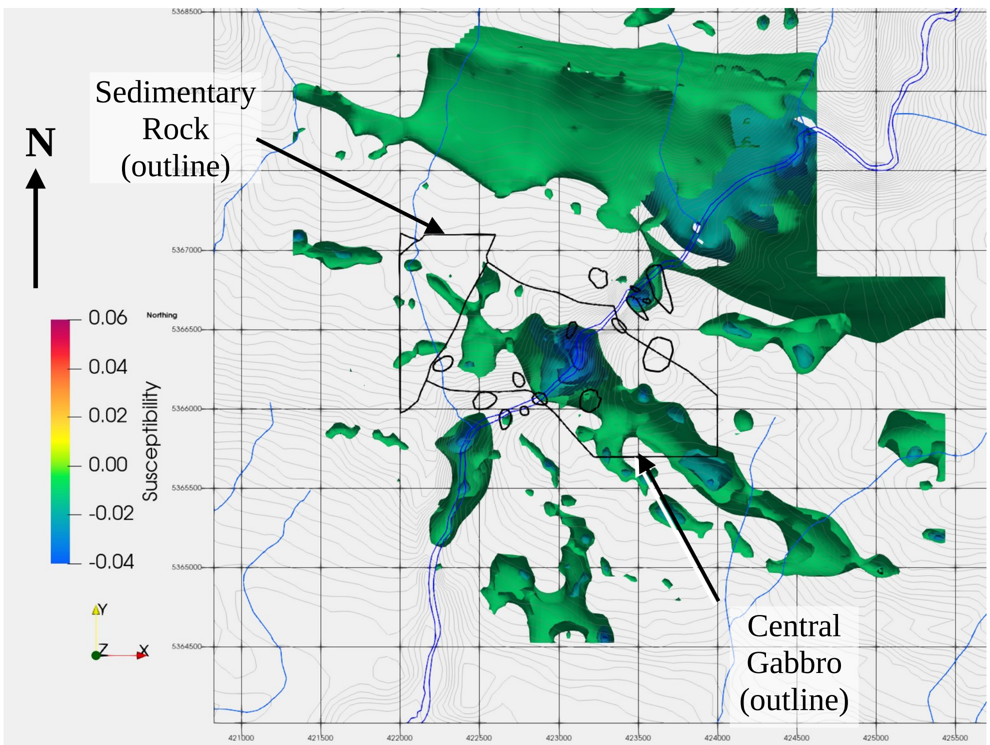

Figure 16: 3D magnetic susceptibility model with detail gabbro mapping. Low susceptibility bodies (-0.04 to -0.01).

The northwest to west-northwest oriented, high magnetic susceptibility bodies are located along the north and south sides of the central gabbro and follow the mapped contacts with the host volcanic rocks (Figures 11 and 12). The high susceptibility body on the north side of the contact is extensive with approximately 1400 m of strike length along with significant depth extent. This body models as a sheet like body with a near-vertical dip (Figures 14 and 15). Within this sheet like body are two very high magnetic susceptibility anomalies, the highest in the survey block (Figures 12 and 17). The first anomaly is centered on Jordan River near the known mineralization and has lobes on each side of the river, which is interpreted as being caused by a cross-cutting structure. The second anomaly is located on the north side of the central gabbro, on the northwest side of the survey block.

The magnetic susceptibility anomalies along the south contact between the central gabbro and the host volcanic rocks are less magnetic and smaller in size. On the southeast end, it appears that the high susceptibility anomaly is connected at depth to the north contact anomaly (Figures 14 and 15). On the northwest end the anomalies are relatively shallow and diverge to the south from the mapped gabbro extent. This may indicate that the gabbro actually extends further south than the mapping indicates on the west side of the survey block, as long as the contact continues to have an associated high magnetic susceptibility anomaly.

The north gabbro unit is situated within a much larger magnetic susceptibility low that has considerable depth extent. The low susceptibility body is widest in the east and decreases in width and in depth extent towards the northwest. As mentioned when reviewing the pseduocolour plan maps, the north gabbro does not have a distinct magnetic response associated with it. There is one small magnetic high on the northwest end of the mapped gabbro, otherwise no magnetic highs are observed.

The known areas of mineralization are located where the central gabbro’s north and south contacts with the host volcanics intersect the Jordan River (Figure 17). The mineralization is observed to mainly sit on the edges of the magnetic highs or are offset a few 100 m’s away and located within a magnetic low. The River and Cave mineralized zones sit within a magnetic low on the NE side of the central gabbro contact and are offset between 100 m and 300 m to the northeast from the magnetic high. The past-producing Sunro mine is situated between these two zones and is within the same magnetic low. The exception to these observations is the Anomaly and Hanna mineralized zones, which are coincident with high magnetic susceptibility anomalies on the north contact zone.

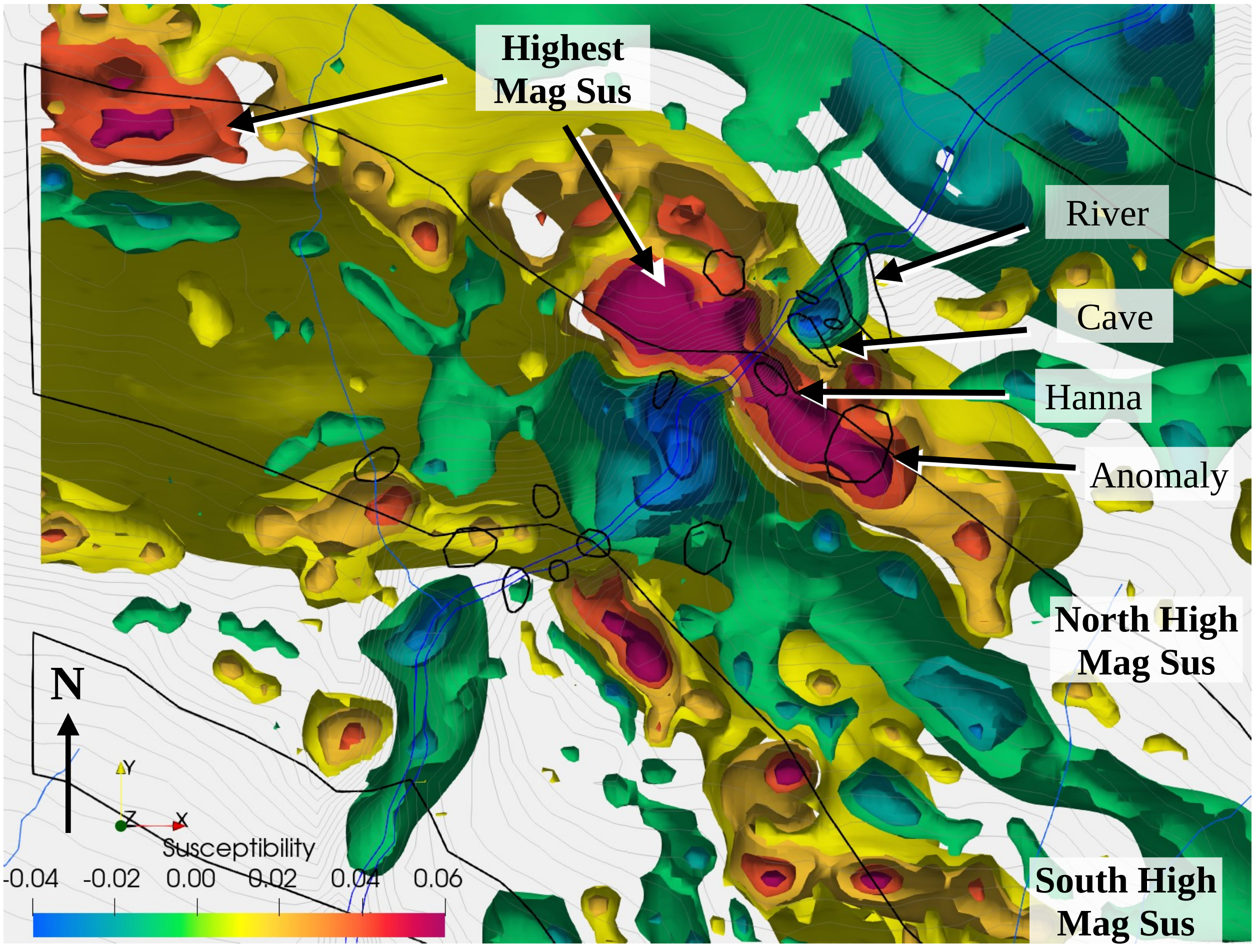

Figure 17: 3D magnetic inversion model. Detail view of central gabbro and known mineralized zones.

Summary

The 3D magnetic modelling has shown that the central gabbro is bounded by high magnetic susceptibility bodies. On the north side of the gabbro, along the contact with the host volcanics, the high magnetic susceptibility body models as a sheet-like body with near-vertical dip. This body has considerable depth extent and extends for over 1200 m along strike. On the south side of the gabbro, the high magnetic susceptibility anomaly in the southeast is observed to connect at depth with the north susceptibility body.

Known mineralization on the property is observed to be located along the edges of the high magnetic susceptibility bodies observed on the north and south sides of the central gabbro. They are concentrated in the region surrounding the Jordan River when it cuts across the central gabbro. Most are situated within magnetic lows.

The high magnetic susceptibility bodies bounding the central gabbro are observed to be located within the gabbro and sometimes outside of the gabbro within the host volcanic rocks. This may be due to changes in alteration along the contact. The magnetic anomalies should be compared in more detail to the geologic mapping, known alteration, rock sampling, and drilling results to better determine the relationship between the mineralization and the magnetic anomalies.

The edges of high magnetic susceptibility anomalies bounding gabbro and proximal to magnetic susceptibility lows are believed to be prospective and worthwhile targets for follow-up. There are a number of target areas along both the north and south contacts of the central gabbro and the south gabbro, as shown in Figure 18 by black dashed circles. The north gabbro does not show any responses similar to the known mineralization.

It is recommended that this interpretation be reviewed by a geologist who is familiar with the geology and drilling on the property.

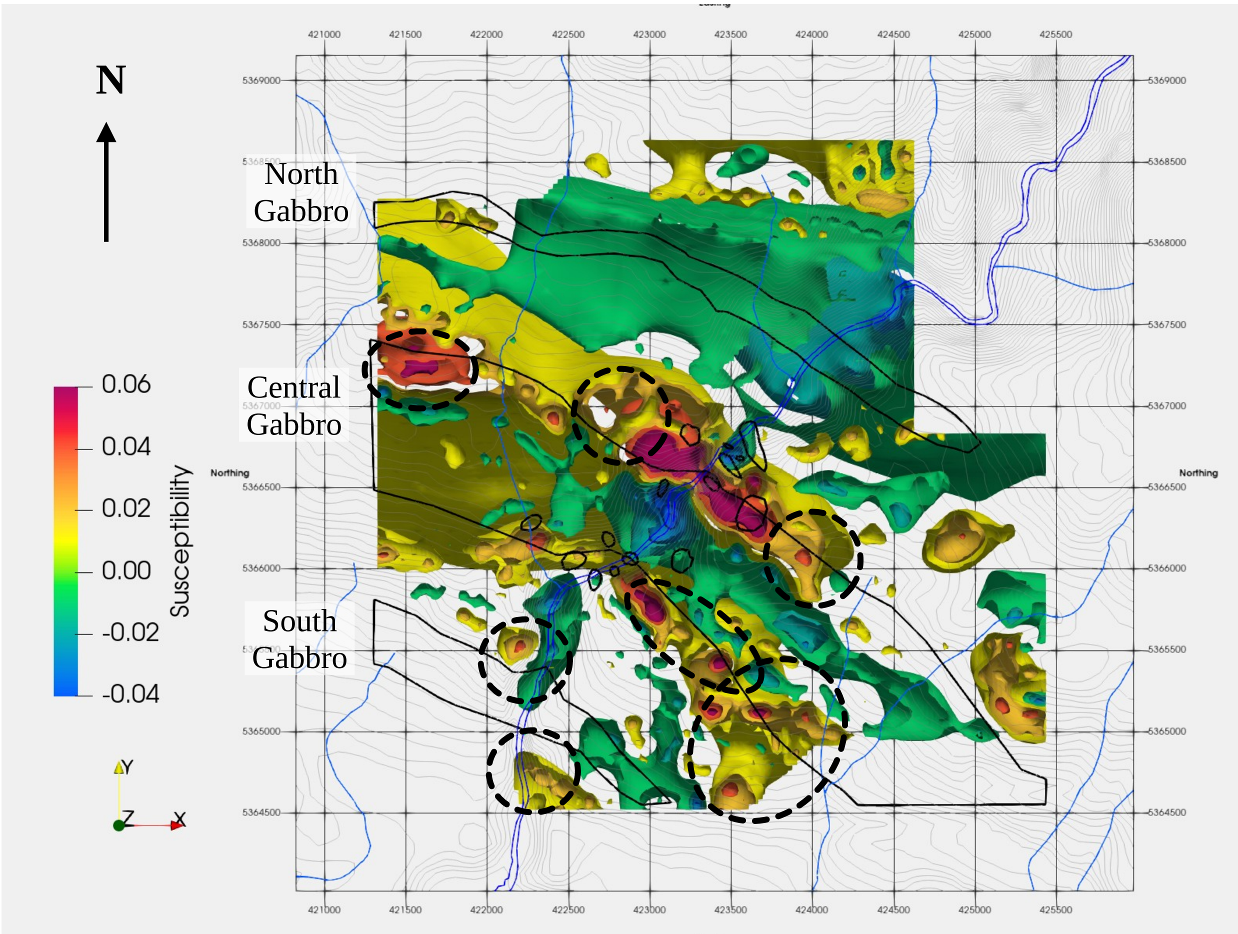

Figure 18: 3D magnetic susceptibility model. Plan view. Suggested target areas for followup indicated as black dashed circles.

1. *Statement of Qualifications*

I, Ross Polutnik, of the city of Burnaby, Province of British Columbia, hereby certify that:

1) I graduated from the University of Alberta with a B.Sc. Specialization in Geophysics degree in 2008.

2) I have practiced my profession continuously from that date.

3) I am a Professional Geoscientist registered (#45076) in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

4) I have no interest in New Sunro Copper Ltd., nor do I expect to receive any.

Signed by: ____________________________

Ross Polutnik, B.Sc. P.Geo
Geophysicist
S.J.V. Consultants Ltd.

Appendix A: References

Houle, J., 2016. 2015 Technical Assessment Report for the New Sunro Property, Vancouver Island, British Columbia for New Sunro Copper Ltd. BC ARIS #35982

Poon, J., 2015. Airborne Geophysical Survey Report, New Sunro Survey Block, Prepared for New Sunro Copper Ltd.