Ryanwood Exploration Inc.

COMPREHENSIVE COMPILATION, MODELLING AND INTERPRETATION OF GEOPHYSICAL DATA

Antimony Property, YT

Work Performed On: February 14 to 23, 2020

Prepared By:

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Executive Summary

The Antimony property is located 67 kilometres northeast from Dawson City. The western boundary of the claim block is located approximately 2 kilometres east of the Dempster Highway. The property is located on NTS Map Sheets 116B/8 and 116B/1. The center of the property is situated at UTM coordinates 632000E 7135000N (NAD 83, UTM Zone 7).

The GroundTruth Exploration has completed compilation, levelling and merging of all available high-resolution aeromagnetic datasets within the identified area of interest for the Antimony property. Then the compiled data were used for 3D unconstrained inversion modelling and interpretation of regional magnetic lineaments/structures. This work was undertaken on behalf of Ryanwood Exploration Inc.

The results provide guidance to the regional structures, prospective geology and location of possible alteration and mineralization zones. This work was performed from February 14 to 23, 2020.

The extensive set of digital deliverable products that accompany this presentation report include cut-off iso-surfaces, grids and maps, shapefiles, and the inversion models in several different, commonly used formats.

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1.0 Introduction

Geophysical prospecting methods used in exploration provide information about the physical properties of the subsurface. These properties can, in turn, be interpreted in terms of lithology and/or geological characteristics of deposits. Moreover, the geometric distribution of physical properties can help delineate geological structures and may be used as an aid in determining mineralization and subsequent drilling targets.

The Antimony property has a long history of various methods of Geophysical survey work undertaken. These surveys include 1975 Conwest Airborne Radiometric survey, 1984 Cody Hawk Ground EM/Mag, 1988 Total Energold Airborne EM/Mag, Ground EM, 2007 Logan Resources VLF and Magnetic surveys.

Ryanwood Exploration is planning to re-evaluate the geophysical work done by compiling and reprocessing historical data with modern inversion and modelling software, integration and interpretation of results. The report will prepare recommendations for tested and untested exploration targets and assess the suitability of geophysical used methods historically to determine the best methods moving forward. The outline of the claim boundary is shown in Figure-1.

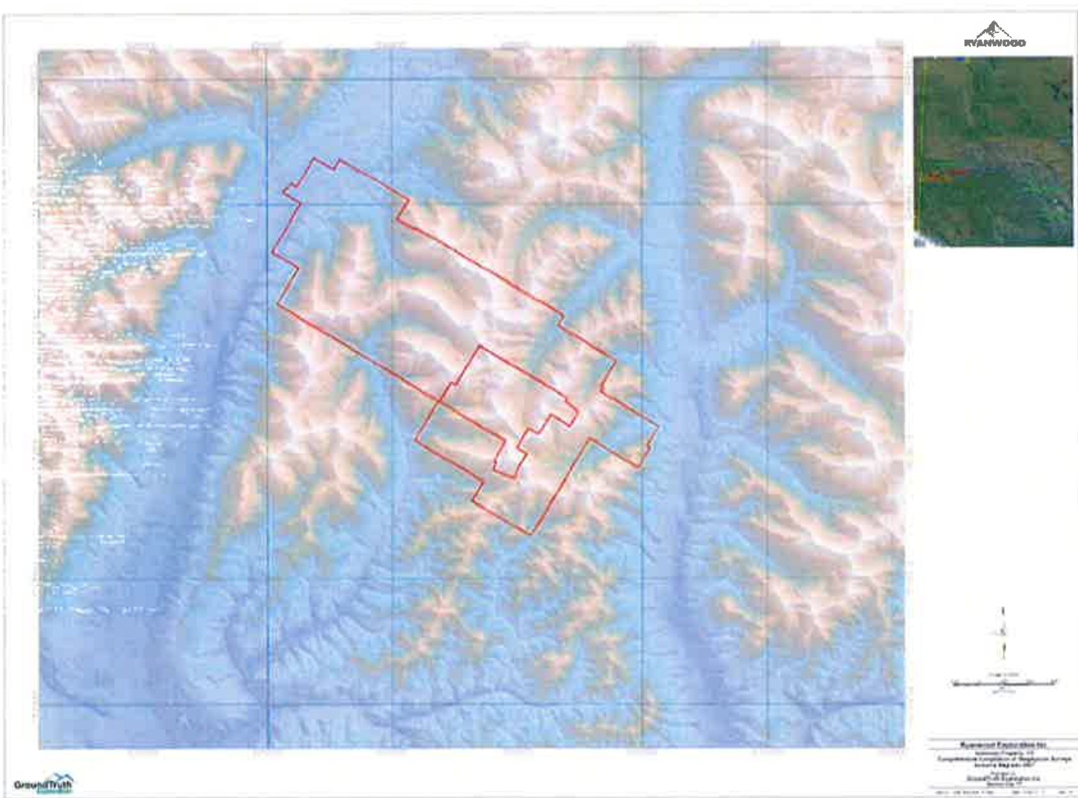

Figure 1: The outline of claim boundary for Antimony project.

2.0 Compilation of airborne magnetic data

Magnetic anomaly maps are essential tools for mapping surficial and buried rocks, for determining the geologic structure, and for discovering some types of mineral deposits. Regional geologic features may become more evident after individual aeromagnetic surveys are compiled and plotted at the same scale in a consistent way.

The GroundTruth Exploration has completed compilation, levelling and merging of all available high-resolution aeromagnetic datasets within the area of interest identified for the Antimony region into usable wholes. The results provide guidance to the regional structures, prospective geology and location of possible alteration and mineralization zones.

The available and downloaded datasets for this project consist of about 7 distinct aeromagnetic surveys collected at different times, elevations and line spacings. All data were provided or transformed to the NAD83 UTM Zone 7N Datum and coordinate system. Topographic data were obtained from the White Gold Corp. on a 15m grid. This topography surface was used as a reference for levelling of all airborne magnetic data. The data processing was carried out in the same coordinate system. The available datasets are organized into two groups as follows:

- Regional scale airborne magnetic data, a total of 6 datasets
- Property scale high-resolution aeromagnetic data, a total of 1 datasets

The survey parameters of datasets that have been used for compilation and levelling are summarized in Table-1. The outline of the area of interest, claim boundaries and layout of flight lines for the airborne magnetic survey are shown in Figure-2.

The software programs used for data preparation and processing include Geosoft and USGS extension GX modules. For levelling and compilation of aeromagnetic datasets into a regional scale, the below data processing sequences was performed for all datasets throughout the project.

- Data QC/QA, inspection and analysis of geophysical and spatial data, edit of the database for bad data points, down-sampling
- Checking the survey parameters for each survey block, extracting the geomagnetic ambient field parameters to calculate Reduced to Pole (RTP) field
- Continuation transformation and 2D grid processing of RTP, filtering, and decorrugation if required

- Leveling of RTP data by using appropriate processing approach depending on the quality of data such s tie-line correction, virtual tie-line, etc.
- Compilation of leveled data and adjustments, creating derivative grid products, review of processing steps if required

All data were imported into Geosoft. Data were examined and edited for bad data points. The ambient magnetic field including declination, inclination, and International Geomagnetic Reference Field (IGRF) was computed for each survey block. The magnetic data were upward continued to a datum surface and corrected for the DC shifts (if needed) before levelling.

Figure-3 shows the magnetic RTP for regional compiled data and property scale compiled data after leveling and merging.

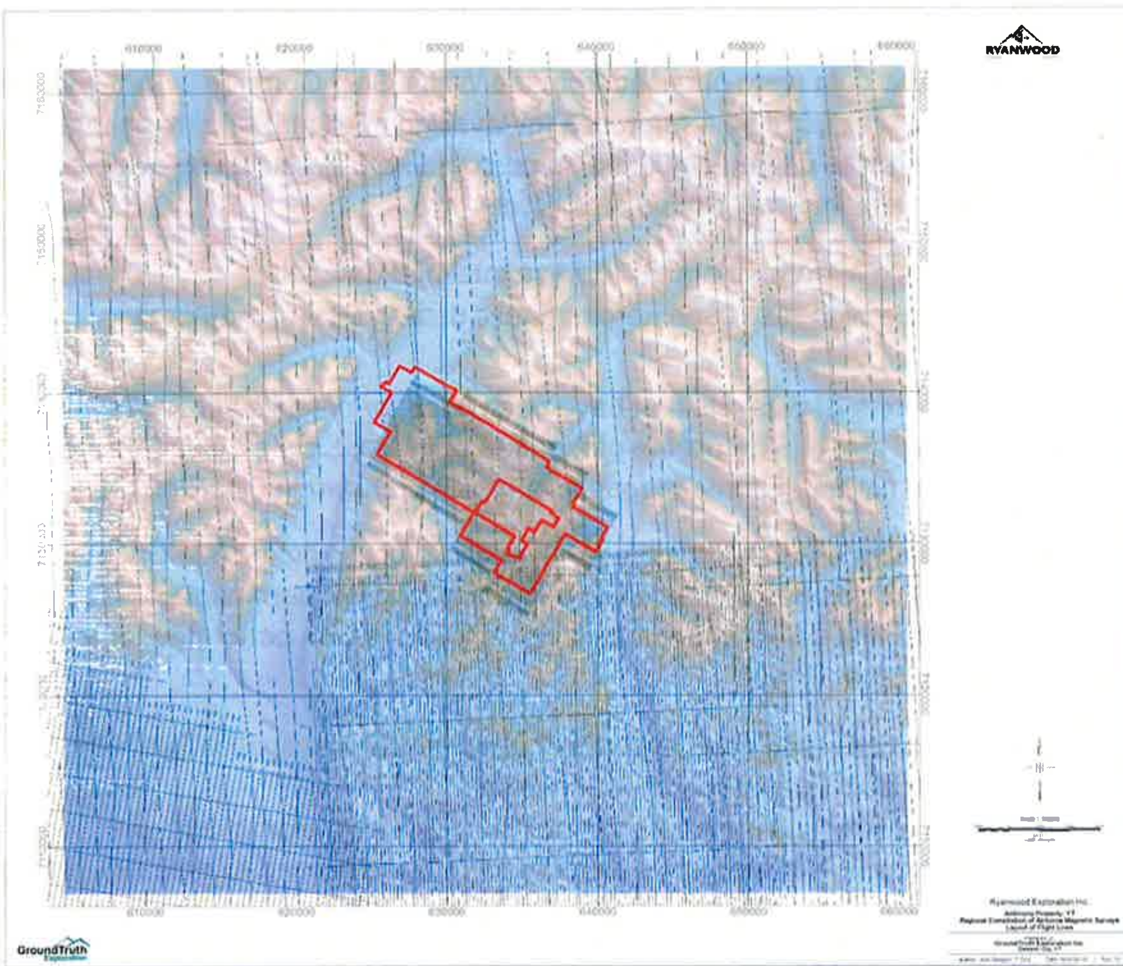

Figure 2: The outline of the area of interest, claim boundaries and layout of flight lines for the regional airborne magnetic survey.

Table 1: The regional scale datasets used for compilation.

No.	Survey Block	Year	Line direction	Line Spacing	Survey Type
1	Yukon 31-114	1964	S-N (N 0°)	1200m	Regional Scale
2	Yukon 177 A Dawson	1965	S-N (N 0°)	1200m	Regional Scale
3	North Yukon Area 1b-e	1988-89	S-N (N 0°)	20000m	Regional Scale
4	Larsen Creek	1996	SE-NW (N 357°)	500m	Regional Scale
5	Brewery Creek	1997	NW-SE (N 177°)	250-500m	Regional Scale
6	Dawson	2014	SW-NE (N 010°)	400m	Regional Scale
7	Cheynne	2007	SW-NE (N 028°)	100m	Property Scale

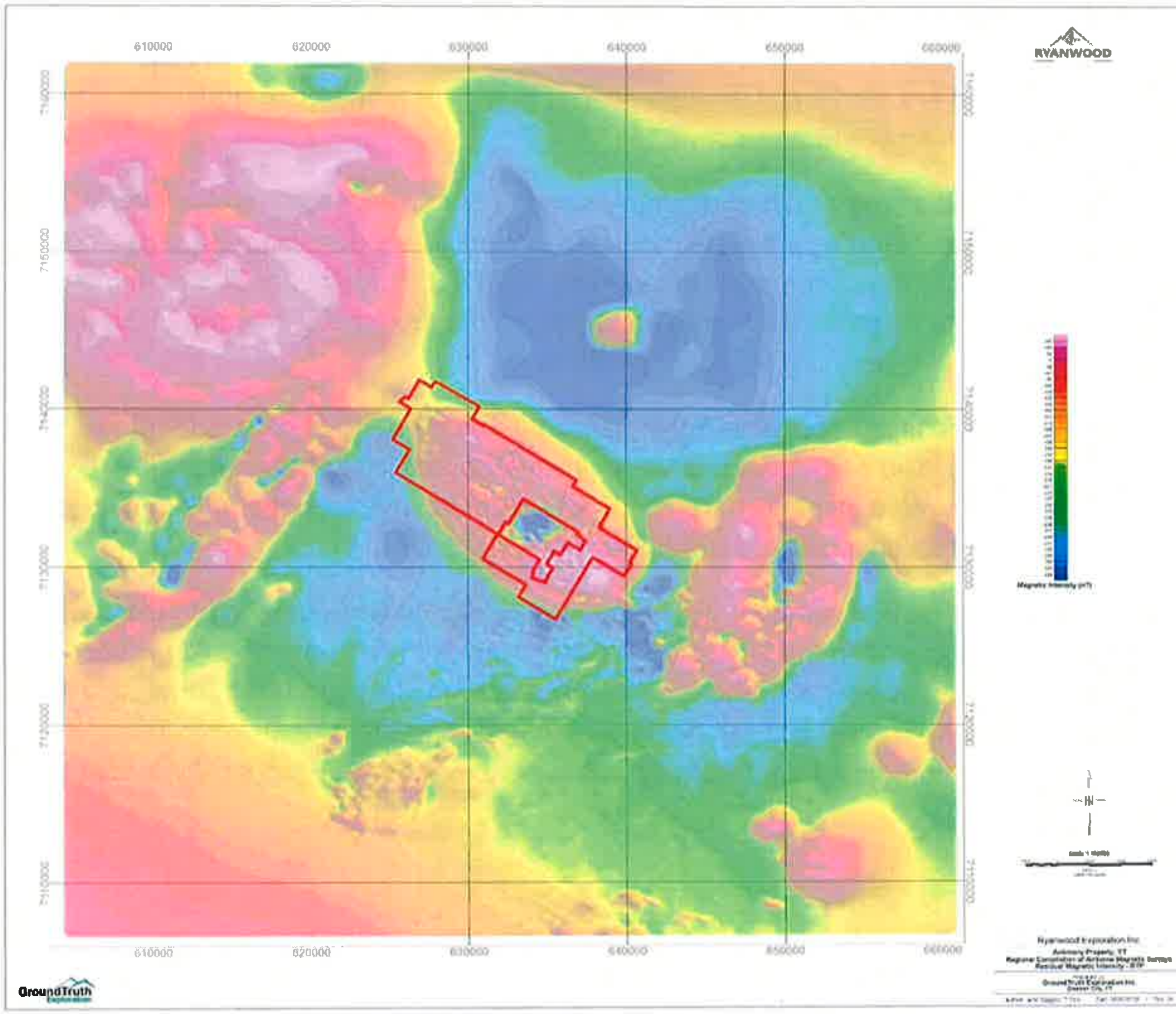

Figure 3: The magnetic (reduced to pole) RTP grid for regional and property scale compiled data after leveling and merging.

3.0 3D unconstrained inversion modeling of mag data

Magnetic Total Field data are inverted for a 3D susceptibility model of the earth using the UBC-GIF MAG3D inversion code. The assumption has been made that no self-demagnetization or remanent magnetization effects exist. The topography is included in the inversions. The ambient magnetic field parameters are needed for inversion modeling and computation of the Reduced-to-Pole (RTP) magnetic anomaly which are calculated by MAGMAP extension module of Geosoft for all data points.

3D inversion modelling has been performed using a discretized 3D earth, which employs many fine cells, each of which has a constant physical property value. The discretization is in the form of cuboid cells for the 3D magnetic inversions and is commonly referred to as a mesh. The mesh parameters are based on the survey and system parameters and are made small enough to reduce modelling errors due to discretization and are also small enough so that they do not introduce additional regularization in the inverse problem.

The 3D model has a core mesh of regularly sized cells corresponding to the lateral extents of the data. Padding cells of increasing dimensions extending east, west, north, south, and vertically down complete the volume used in the inversion. The padding cells help accommodate signals that cannot easily be accounted for the core mesh. Padding cells are removed for deliverable model products.

The RTP magnetic field after compilation, levelling and merging of data is used for the regional inversion. The magnetic data were upward continued to a datum 200m above the flight surface before inversion. Regional 3D magnetic inversion modelling used a coarse discretization with cell sizes of 500m x 500m x 100m.

A standard deviation equivalent to 2% of the magnetic field was assigned to the data. The data were prepared in the UBC ASCII data format for inversion modelling. The coefficients for each model component is computed from corresponding length scales. The inversion modelling parameters for regional modelling are presented in Table-2. Observed and the predicted data from the recovered magnetic susceptibility model are shown in Figure-4.

Table 2: Regional inversion modelling specifications.

Inversion Modelling Parameters	Inversion Modelling Parameter Value
Convergence Criteria	Chi-factor = 2
Coefficients for each model component	αs = 4.5E-07, αx = αy = 1.0 , αz = 7.11E-2
Number of data inverted	154,269
Ambient magnetic field vector	Inclination = 90°, Declination = 0°, Inducing Field Strength = 56,872 nT
Number of cells	126 x 124 x 83 = 1,296,792
Global Susceptibility Bounds	Lower bound=0 SI, Upper bound=1 SI

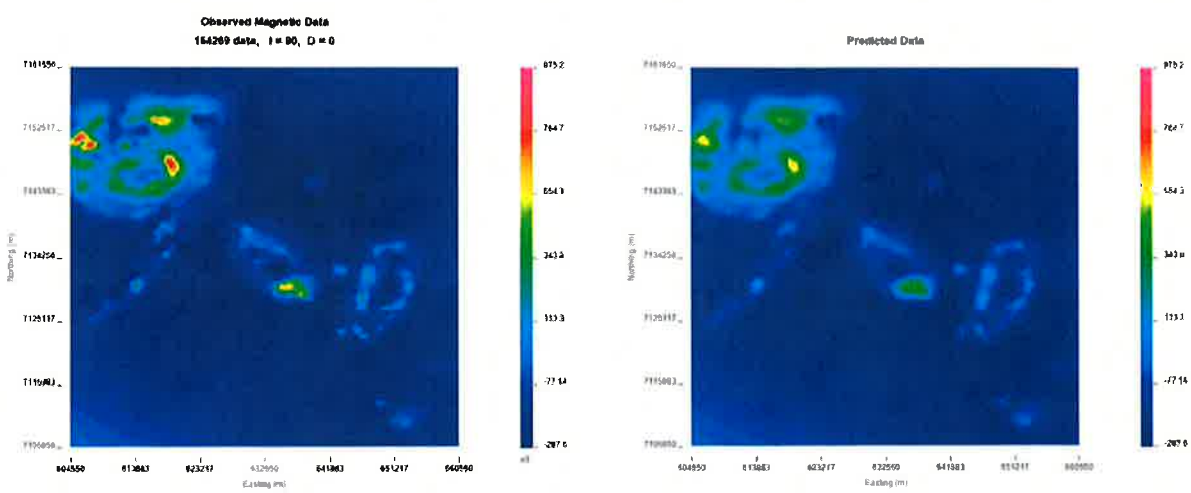

Figure 4: Observed (Left) and predicted data from the recovered regional susceptibility model (Right).

A method for separating regional and residual magnetic fields using an inversion algorithm was applied to data prior to the detailed inversion of the Antimony magnetic data. The separation is achieved by using a regional susceptibility model out of inversion results of regional magnetic data. The local volume of detailed 3D inversion block is removed from the regional model (model cell values in that volume are set to 0), and the magnetic fields are calculated by forward modelling used as the regional field. The residual data are obtained by subtraction of the regional field from the original data.

These residual data reflect the response from local and shallower geology that are often dominated by stronger regional sources, and they can be subsequently inverted on the local volume of interest (usually with a more detailed model discretization). The residual data may also be useful for qualitative interpretation of geology within the volume of interest. This modelling-based approach to regional signal removal provides a robust result that is consistent with the modelling objectives. The modelling workflow for separation of the regional signal is outlined as follows:

- Regional Inversion: Invert the entire dataset using a coarse mesh to produce a regional model.
- Regional Response: Define a local volume of interest. Set the magnetic susceptibility value to zero inside this volume and forward model to obtain the regional response.
- Regional Removal: Calculate a residual by subtracting the regional response from the original data.
- Detailed, local Inversion: Invert the residual data using a refined mesh over the local volume of interest.

By calculating a regional response for local volumes of interest, a separate local inversion can be performed on the residual dataset. The regional susceptibility model with zero values for the local block of inversion for Antimony property is shown in Figure-5. Magnetic Field Intensity before and after regional removal are shown in Figure-6.

The data for Antimony property were collected between August 19 – 28, 2007, after removing the regional signal were used for detailed inversion modelling (Figure-6, Right). Detailed local inversions used a more finely discretized 3D mesh with 50m x 50m x 25m cell dimension for the Antimony property.

A standard deviation equivalent to 2% of the magnetic field was assigned to the airborne magnetic data. The data were prepared in UBC ASCII data format for inversion modelling.

The coefficients for each model component is computed from corresponding length scales. The inversion modelling parameters for regional modelling are presented in Table-3. Observed and the predicted data from the recovered magnetic susceptibility model are shown in Figure-7.

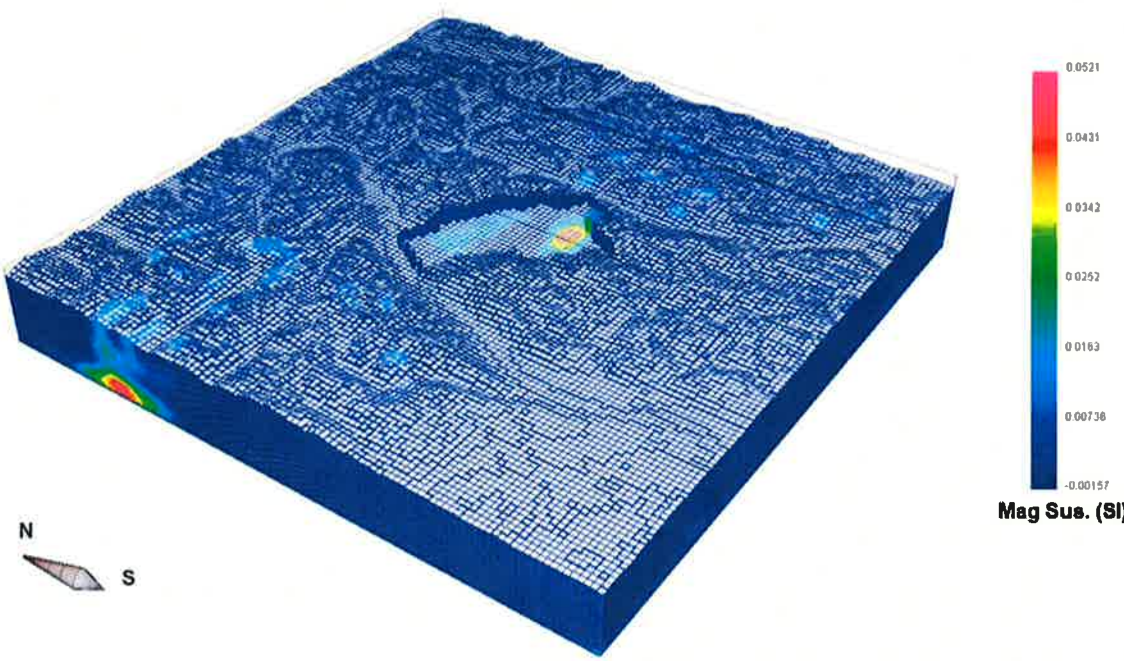

Figure 5: The 3D Regional magnetic susceptibility model with magnetic susceptibility value of inside of the local grid set to zero. The regional response is computed by forward modeling of this model over the observation points of property scale data.

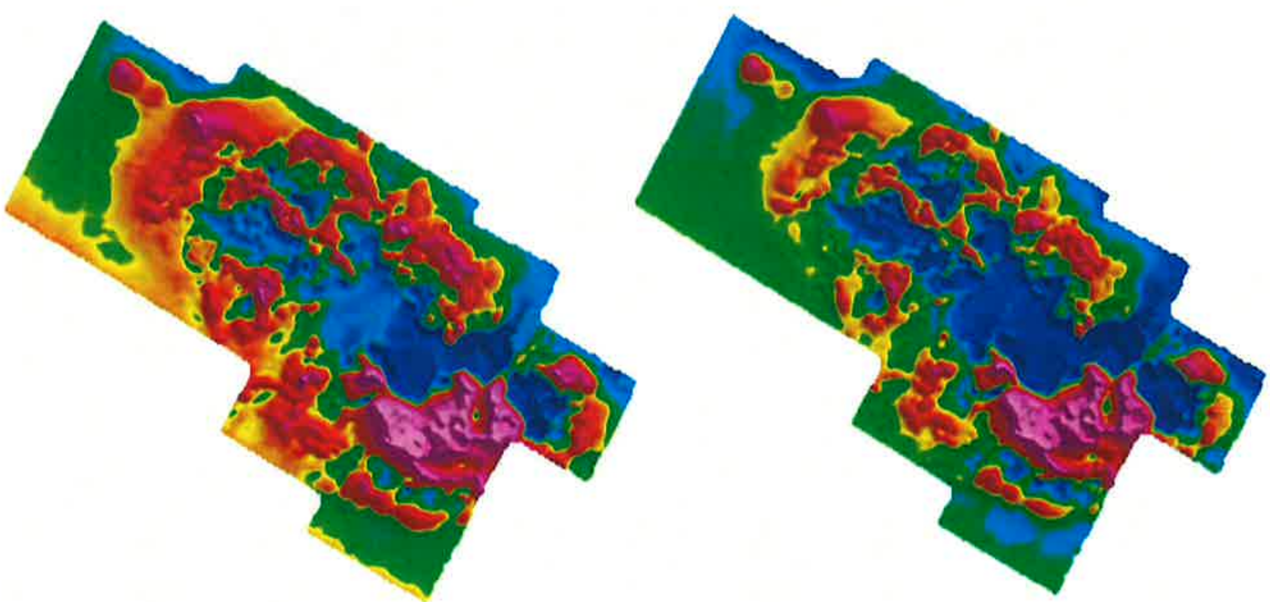

Figure 6: Original magnetic field data for the Antimony property 2007 airborne magnetic survey (Left), and corrected data after removing the regional signal by forward modeling of regional sus model (Right).

Table 3: Inversion modelling specifications for the Antimony property detailed inversion.

Inversion Modelling Parameters	Inversion Modelling Parameter Value
Convergence Criteria	Chi-factor = 2.5
Coefficients for each model component	αs = 4.5E-05, αx = αy = 1.0 , αz = 4.45E-1
Number of data inverted	10,531
Ambient magnetic field vector	Inclination=90°, Declination =0°, Inducing Field Strength = 56,872 nT
Number of cells	331 x 306 x 88 = 8,913,168
Global Susceptibility Bounds	Lower bound=0 SI, Upper bound=1 SI (min, max)

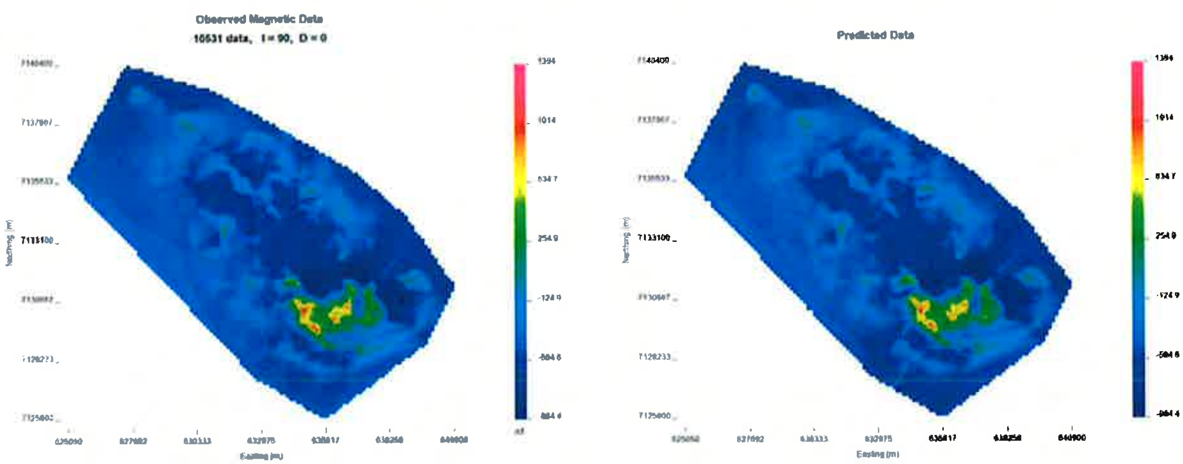

Figure 7: Observed (Left) and predicted data from the recovered detailed susceptibility model (Right) of the Antimony 2007 airborne magnetic data.

Figure-8 and Figure-9 show a horizontal slice at 600m above sea level for regional and 800m above sea level for detailed magnetic susceptibility models. The detailed magnetic susceptibility model is best viewed in 3D using a variety of views with different slices, cut-off values, and colour-scales. The horizontal slices, vertical sections and iso-surfaces convey the main features of the inverted magnetic susceptibility model. All magnetic susceptibility model values are in SI unit. A 3D view of magnetic susceptibility greater than 0.05 SI for a detailed inversion block is shown in Figure-10.

For the detailed local magnetic inversions, the maximum value reaches above 0.1 SI could be sufficient for self-demagnetization effects to be considered in some regions. Higher susceptibilities than this are probable as the model value represents the bulk volume susceptibility for the entire 50 m x 50 m x 25 m cell, and it is likely that it represents a combined effect of higher and lower susceptibilities at the sub-cell. In addition, the smooth-model inversion procedure often underestimates the property value. The models show detailed structure near the surface and gradually more smooth structure with depth which reflects the resolution of the magnetic method. Observed and predicted data are included in the deliverables for comparison and analysis.

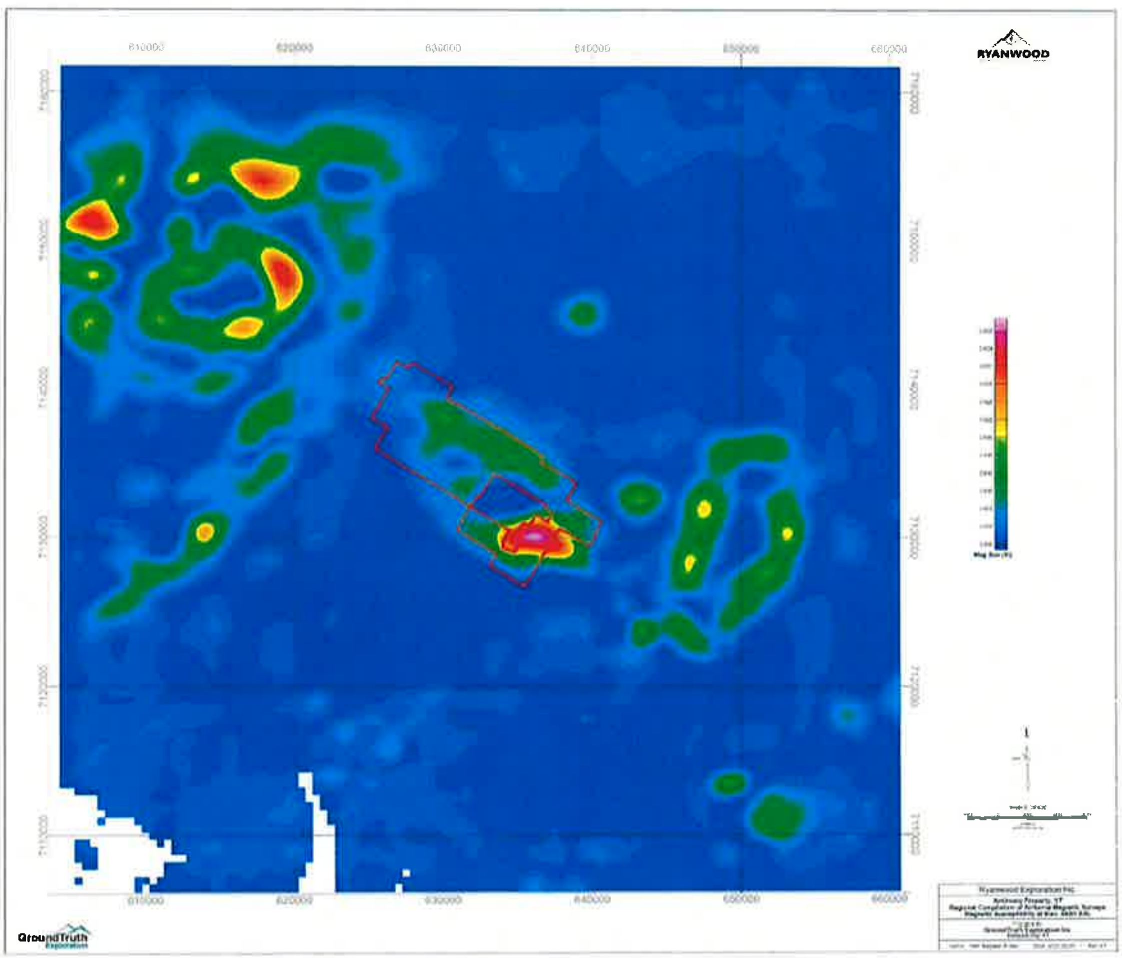

Figure 8: The horizontal slice at 600m above sea level for regional magnetic susceptibility model.

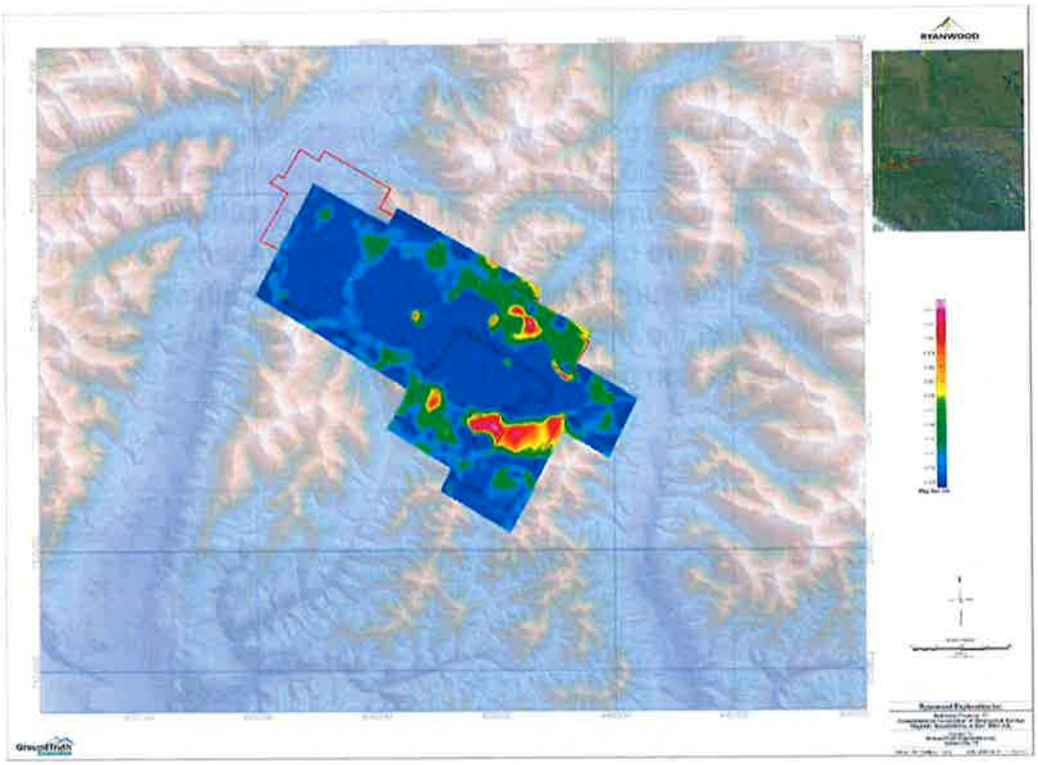

Figure 9: The horizontal slice at 800m above sea level for detailed of magnetic susceptibility model.

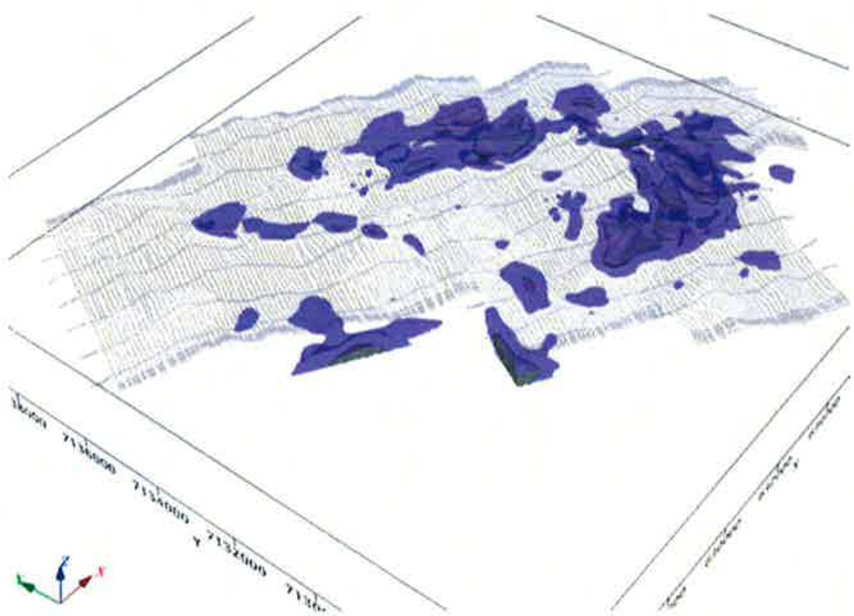

Figure 10: 3D view of high magnetic susceptibility areas greater than 0.05 SI for detailed inversion block (view NW).

4.0 Integration of data and Interpretation

The 3D magnetic susceptibility model can be integrated into 3D formats for detail analysis and visualization. This will ensure that 3D geological models respect a consistent structural, stratigraphic, and topological framework in addition to ensuring consistency between different geophysical models.

The geologic setting of epithermal deposits includes faulted, fractured, and brecciated rocks. Predominantly, magnetic signatures of epithermal deposits can be characterized as short-wavelength magnetic anomalies that are common over volcanic terranes because of variable magnetizations and polarizations. This pattern may contrast with an area of moderate to intense alteration that will display a longer-wavelength low, often linear in the case of vein systems, caused by the destruction of magnetite. Local magnetic highs may be associated with intrusions as well as alteration areas rich in magnetite. Magnetic lows will be associated with alteration; however, discriminating such lows from the background may be difficult on a deposit scale.

Figure-11 and 12 show the RTP magnetic residual resulting from the application of 200m and 500m upward continuation of gridded data. The RTP magnetic residual and some other derivative products of this grid were used for the mapping of regional magnetic linear features and lineaments. The interpreted lineaments mapped from these grids can better identify lithological and structures features as well as the possible shear and fracture zones.

The electromagnetic (EM) surveys including TDEM and VLF-EM can indicate the veins if they are conductive. Total Energold carried out a high-resolution helicopter EM survey in 1989 (Dvorak, 1989). Figure-13 and 14 show conductors picked from the HLEM survey done by Total Energold (Bowman and King 1989a). Most of the conductive zones are associated with moderate to high magnetic susceptibility areas identified by 3D inversion modelling. These clusters of conductors are labelled with zone “A” to zone “I”. There are two sets of SEE-NWW veins (interpreted by J. L. LeBel, 2006) within the identified zones A and B. The strike of these conductive veins are sub-parallel with a pronounced SEE-NWW trending magnetic feature (Figure-13 and 14).

A helicopterborne radiometric was also undertaken by Donegal Developments Ltd. on behalf of Logan Resources Ltd 0n 2007. In order to the interpretation of radiometric data, epithermal gold deposits are highly variable in form, ranging from thin quartz veins to large disseminated deposits, and are located in a variety of geological environments. Consequently, they exhibit a wide range of geophysical signatures. Hydrothermal alteration accompanying these deposits causes pronounced changes in the potassium content commonly increases causing an increase in radioactivity. The Potassium and

Thurium grids from the airborne radiometric survey are shown in Figure-15 and 16. The EM clusters of conductors are mostly at the edge of high radiometric zones. Also, high Potassium and Thurium zones are reasonably correlated with low magnetic susceptibility areas (Figure-17).

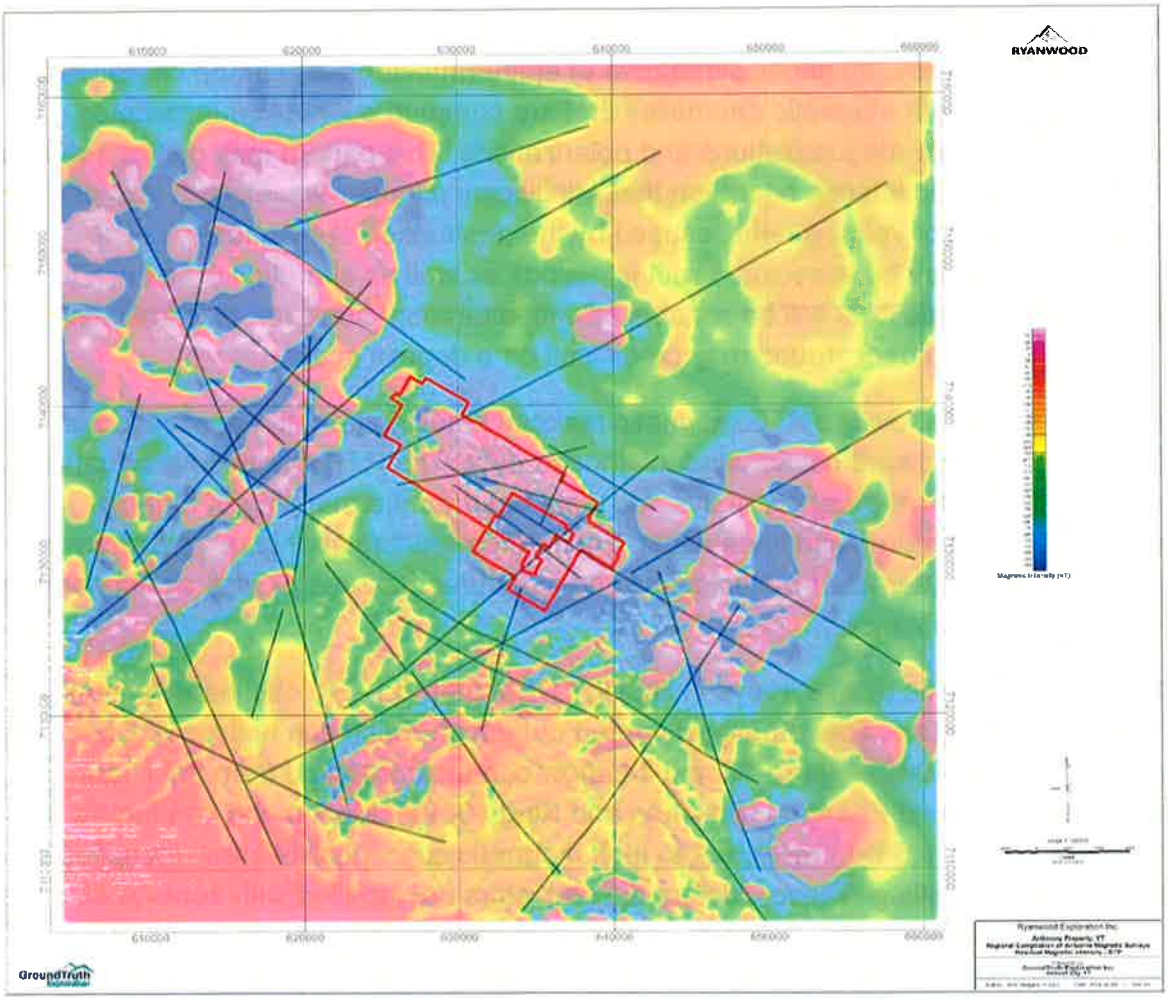

Figure 11: The RTP magnetic residual resulting from upward continuation. The interpreted lineaments can better identify lithological and structures features as well as the fracture zones are mapped from regional complied magnetic data.

The VLF-EM survey carried out on selected areas of the property in 2007 indicated extensions to some of the known gold-bearing veins. The qualitative interpretation of data has identified some potential conductors in other unexplored areas of the property, which might indicate targets for additional prospective vein structures. Data can be processed by using inversion modelling techniques recently developed for the 2D inversion of VLF data. The EMTOMO-VLF2Dmf is a software program for the 2D inversion of VLF-EM data based on the finite element (FE) method. Since the digital data is not available for the VLF survey, thus the data can not be modelled using a 2D inversion code at this time. The plan map of VLF lines are shown in Figure-18, and the data could be modelled using VLF2Dmf once they being digitized and scaled.

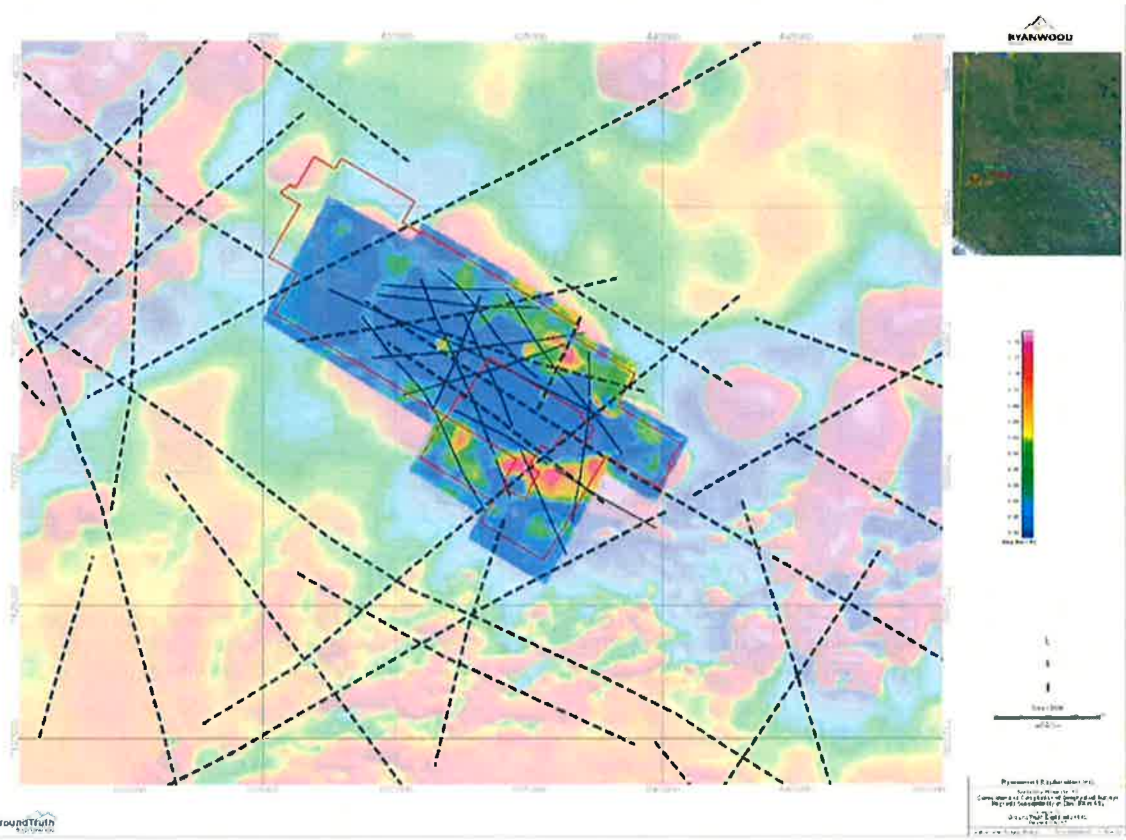

Figure 12: Background is the RTP magnetic residual resulting from upward continuation, the foreground is magnetic susceptibility slice at elevation 800m above sea level. The interpreted lineaments can better identify lithological and structures features as well as the fracture zones. The dashed lines are mapped from regional complied magnetic data and solid lies are mapped from Antimony 2007 airborne magnetic survey.

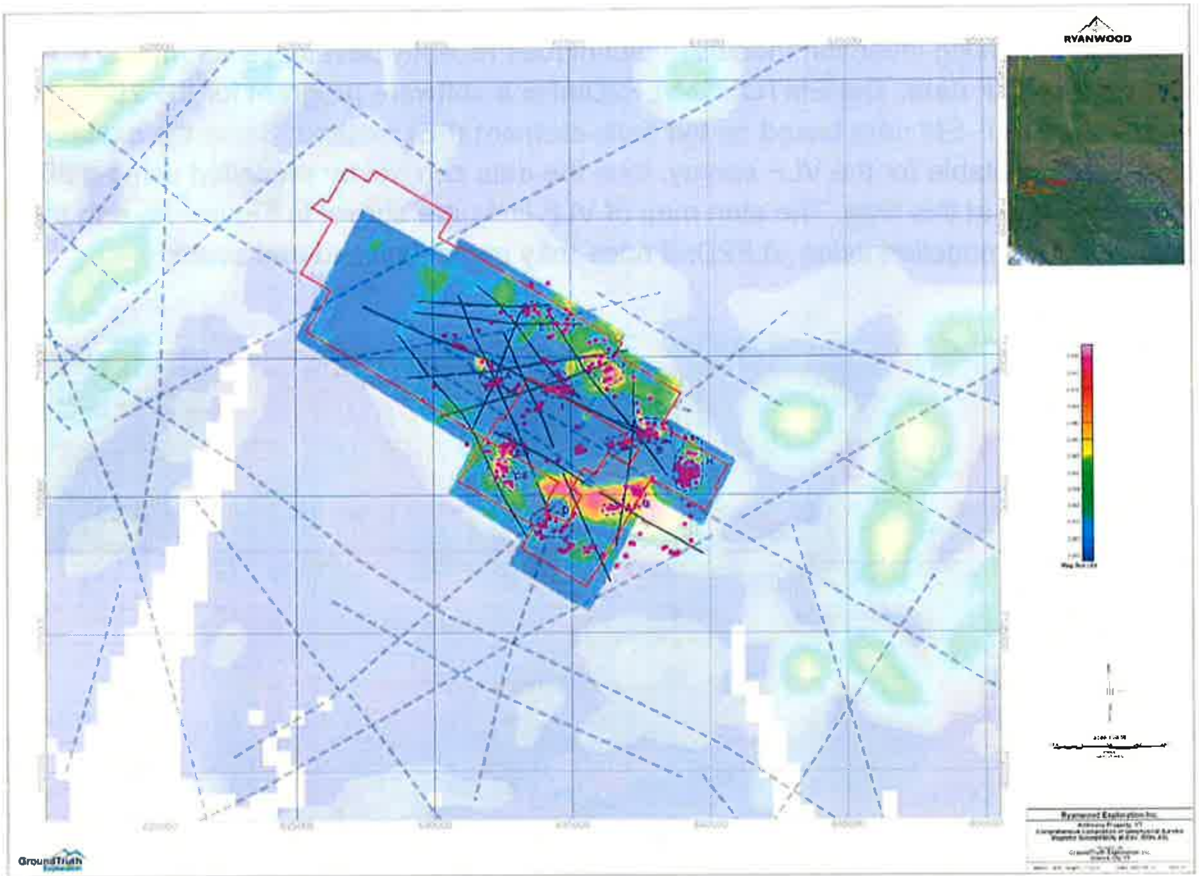

Figure 13: Conductors picked from the HLEM survey done in purple dots. Most of the conductive zones are associated with moderately to high magnetic susceptibility after 3D inversion. These clusters of conductors are labeled with zone "A" to zone "I". There are two set of SEE-NWW veins appear within the zone A and B plotted with dotted lines.

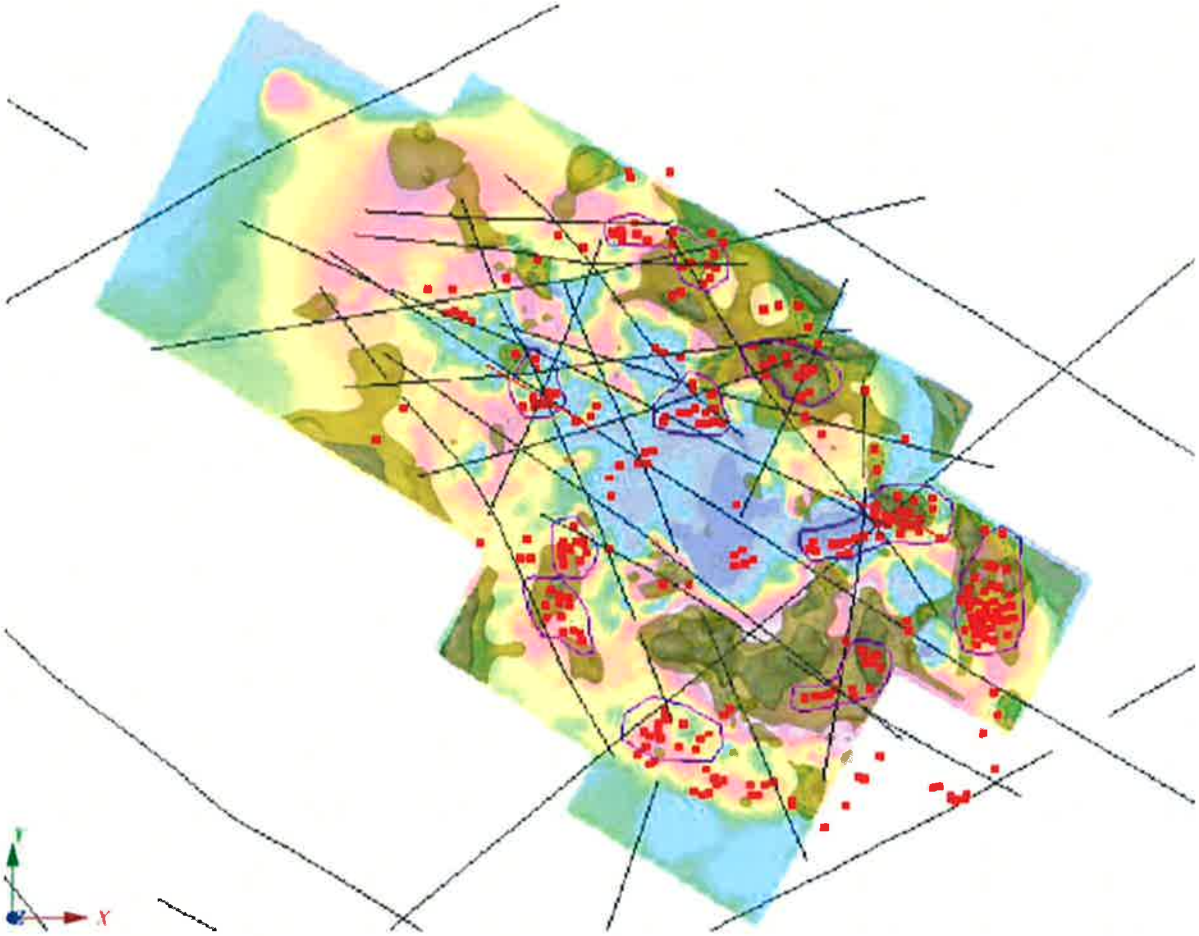

Figure 14: A 3D view from top, magnetic susceptibility iso-surfaces >0.05 SI (dark green) and >0.1 SI (gray) are plotted over the magnetic RTP grid. Conductors picked from the HLEM survey as red dot clusters, and E-W conductor veins are plotted in red lines. The magnetic lineaments/structures are shown with black solid lines. The areas of potential target zones are shown within the purple polygons.

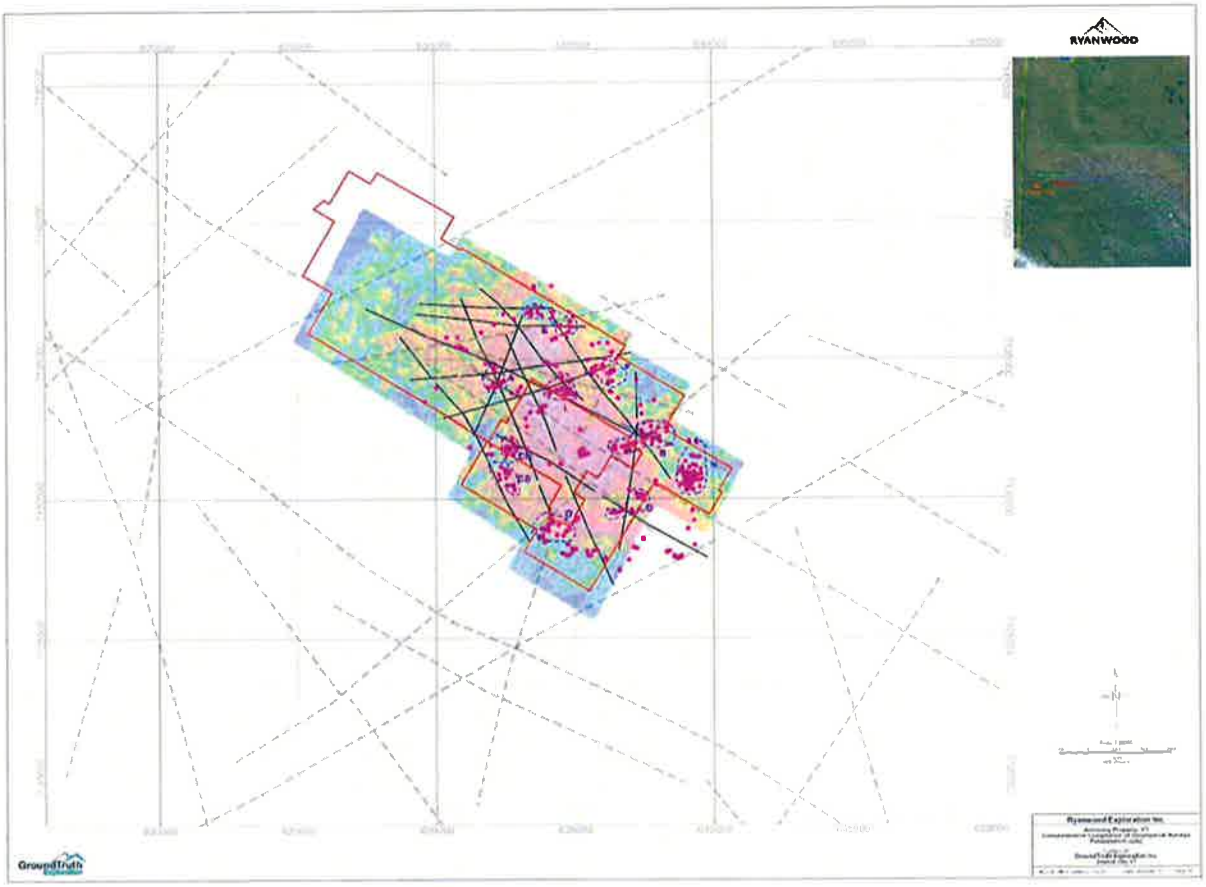

Figure 15: Potassium (cps) grid from airborne radiometric 2007 survey. Most of the conductive zones are located at the edges of low Potassium zones. Some magnetic lineaments/structures are correlated with linear features on radiometry grids.

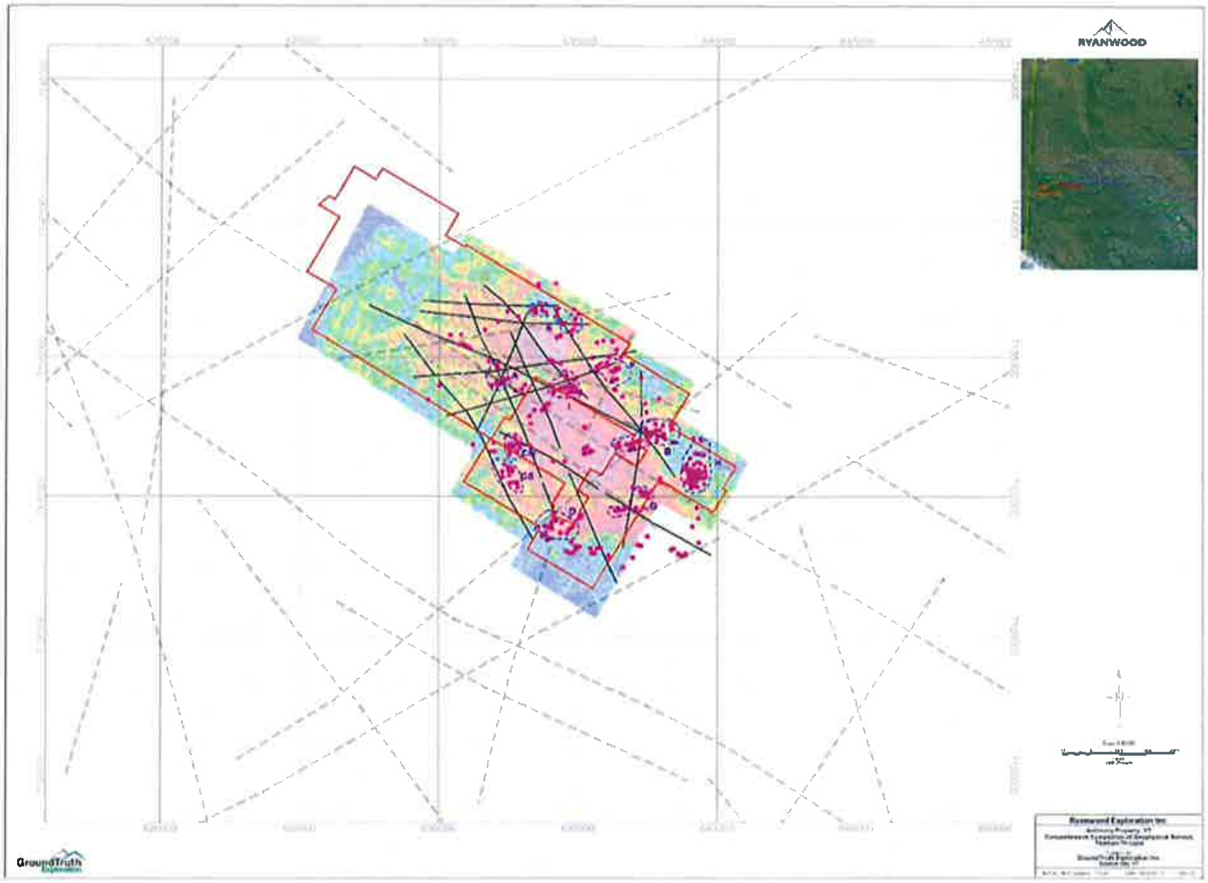

Figure 16: Thorium (cps) grid from airborne radiometric 2007 survey. Most of the conductive zones are located at the edges of low Thorium zones. Some magnetic lineaments/structures are correlated with linear features on radiometry grids.

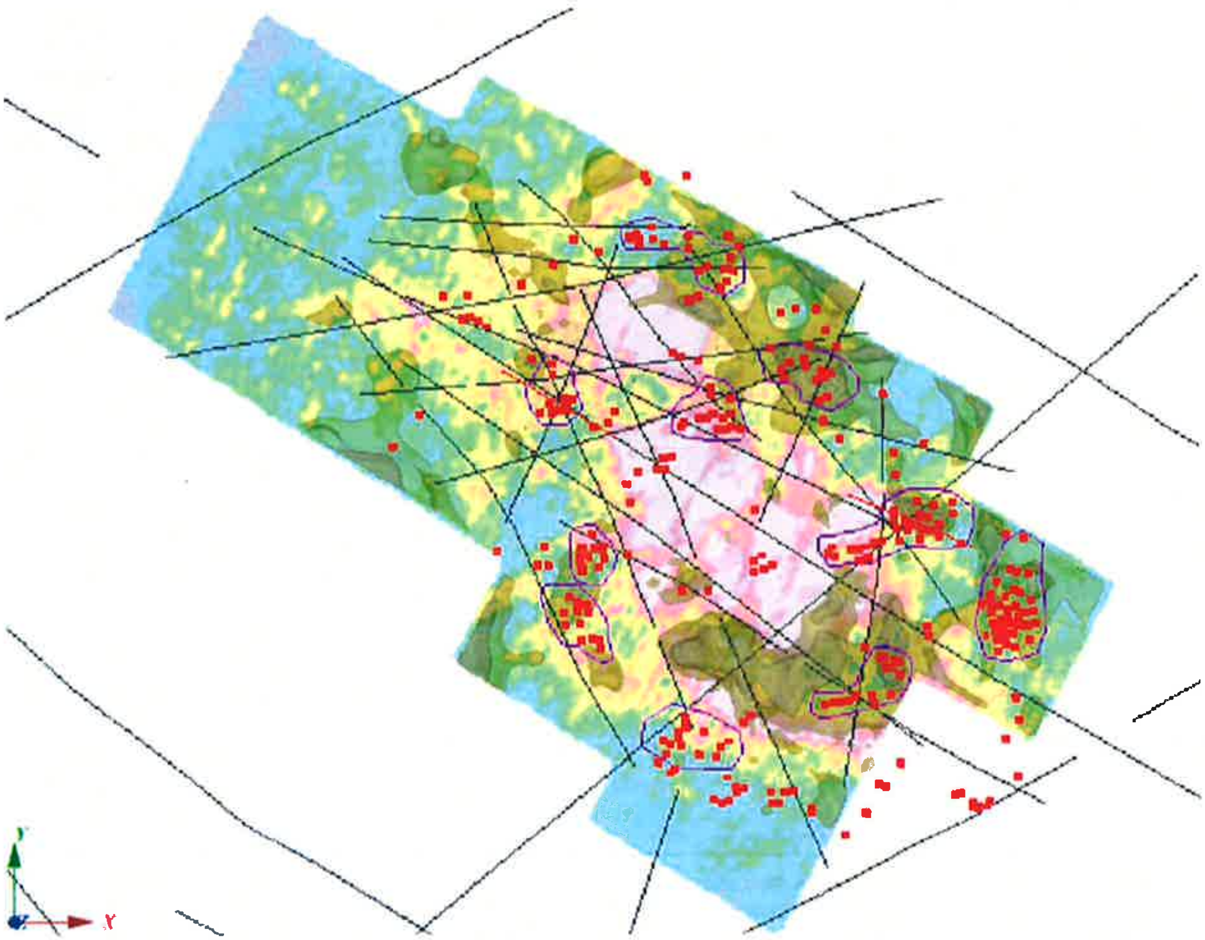

Figure 17: A 3D view from top, magnetic susceptibility iso-surfaces >0.05 SI (dark green) and >0.1 SI (gray) are plotted over the Potassium (cps) grid. Conductors picked from the HLEM survey as red dot clusters, and E-W conductor veins are plotted in red lines. The magnetic lineaments/structures are shown with black solid lines. The areas of potential target zones are shown with purple polygons.

Figure 18: Layout of VLF-EM 2007 survey lines in solid black color.

5.0 Conclusions and Recommendations

Regional and detailed magnetic susceptibility inversion models have been produced for the Antimony property, YT, Canada. These models and the deliverables enclosed to this report will aid the visualization and interpretation of the data to target future exploration on the Antimony property. As well as the modelling products, the work undertaken in modelling preparation is valuable quality control of the data.

The deeper magnetic susceptibility models can be interpreted within the context of geology in order to help define large structures and intrusives. Although a magnetic susceptibility model has been delivered, it is recognized that other models could have been chosen as appropriate model candidates. Inverse problems are non-unique, and the output depends upon many factors that are difficult to quantify. The three main factors common to all inversions are:

- How to estimate uncertainties in the data

- Details of the model objective function and the priori information
- Determining the appropriate value of the regularization parameter that balances misfit and the model objective function

Considerable care has been taken to remove regional fields prior to the merging process, estimating errors, incorporating reasonable information into inversion modelling, and generating magnetic susceptibility models that fit the data well but do not over-fit the data. In addition, because the inversion algorithms attempt to find the simplest or generally smooth models that fit the data, the provided models will hopefully be representative of the larger-scale features in the earth.

In a 3D GIS frame, the distribution of physical properties can help to identify potential exploration areas, and in follow-up work in these local regions, inclusion of additional information in the form of geologic knowledge (conceptual model, overburden thickness, drilling, outcrop lithology, etc.), petrophysical information, and further geophysics, will help guide the selection of inversion parameters and constraints so that models with enhanced resolution can be obtained. This should make exploration more successful and cost-effective.

For 3D physical property models to be used effectively for interpretation and exploration targeting, a good understanding of the exploration target physical properties will be needed which can be related to geology and geologic processes. Integrated interpretation and 3D GIS analysis on the magnetic susceptibility model can be customized to specific exploration target criteria. In order to continue the construction of a 3D Earth model with multiple earth properties useful for exploration targeting, more layers of information such as different geophysical data or models, geochemical data, drilling, and geologic mapping and structural information can be added.

If geologic or physical property information is made available, the models can be recreated with this information acting as a constraint on the inversion process. This would produce more reliable models that are consistent with multiple data sets.

The magnetic inversion modelling did not account for either remanent or self-demagnetization affects. In some areas, these may be present, and it will be important to understand the effect more complicated magnetization has on the data in order to avoid misleading interpretations.

It is recommended that the VLF data available in graphs be digitized and scaled, then the digitized data be modelled using the 2D inversion program VLF2Dmf. Also, some more ground VLF and magnetic and Resistivity-IP surveys are recommended over the identified target zones.

6.0 Submittal

The work in this report has been completed by Amir Radjaee Senior Geophysicist of the GroundTruth Exploration under supervision by Isaac Fage Operational Director of the GroundTruth Exploration.

7.0 Deliverables

Report in pdf format

- **COMPREHENSIVE COMPILATION, MODELLING AND INTERPRETATION OF GEOPHYSICAL DATA**
  February 23, 2020

Autocad DXF format

• **Anti_3D_SURF_Mag_Sus_GT0.1SI**	**Mag sus. Iso-surface >0.1 SI**
• **Anti_3D_SURF_Mag_Sus_GT0.05SI**	**Mag sus. Iso-surface >0.05 SI**

Grids in Geosoft format

• **Ant_3D_inv_it07_Sus_200.grd**	**Mag sus elevation slice at 200m ASL**
• **Ant_3D_inv_it07_Sus_400.grd**	**Mag sus elevation slice at 400m ASL**
• **Ant_3D_inv_it07_Sus_600.grd**	**Mag sus elevation slice at 600m ASL**
• **Ant_3D_inv_it07_Sus_800.grd**	**Mag sus elevation slice at 800m ASL**
• **Ant_Reg_inv_it07_Sus_200.grd**	**Regional mag sus elevation slice at 200m ASL**
• **Ant_Reg_inv_it07_Sus_400.grd**	**Regional mag sus elevation slice at 400m ASL**
• **Ant_Reg_inv_it07_Sus_600.grd**	**Regional mag sus elevation slice at 600m ASL**
• **Ant_Reg_inv_it07_Sus_800.grd**	**Regional mag sus elevation slice at 800m ASL**
• **Antimony_Reg_RTP_mrgd.grd**	**Regional merged RTP**
• **Antimony_Reg_RTP_mrgd_1VD.grd**	**Regional merged RTP first vertical derivative**
• **Antimony_Reg_RTP_mred_TDR.grd**	**Regional merged RTP tilt derivative**
• **Antimony_RTP.grd**	**Antimony survey RTP**
• **Antimony_RTP_1VD.grd**	**Antimony survey RTP first vertical derivative**
• **Antimony_RTP_TDR.grd**	**Antimony survey RTP tilt derivative**
• **Antimony_RTP_REGrmvd.grd**	**Antimony survey RTP after regional removal**
• **Antimony_K_cps.grd**	**Antimony survey Potassium (cps)**
• **Antimony_Th_cps.grd**	**Antimony survey Thorium (cps)**
• **Antimony_Ur_cps.grd**	**Antimony survey Uranium (cps)**
• **Antimony_Th_K.grd**	**Antimony survey Thorium / Potassium ratio**

ArcView Shapefiles

- **RW_Antm_Reg_mag_lineaments** — **Regional interpretation of mag lineaments**
- **RW_Antm_mag_lineaments** — **Antimony survey interpretation of mag lineaments**

Maps in pdf format

"Description in map title"

- **RW_Ant_Reg_mag_RTP.pdf**
- **RW_Ant_Reg_mag_RTP_1VD.pdf**
- **RW_Ant_Reg_mag_RTP_TDR.pdf**
- **RW_Ant_Reg_mag_RTP_1VD_Interp.pdf**
- **RW_Ant_Reg_magsus_El600m.pdf**
- **RW_Ant_mag_RTP_1VD_Interp.pdf**
- **RW_Ant_magsus_El800m.pdf**
- **RW_Ant_mag_sus_Interp.pdf**
- **RW_Ant_mag_sus_Interp_target.pdf**
- **RW_Ant_mag_sus_Interp_target_surf.pdf**
- **RW_Ant_K_Interp_target_surf.pdf**
- **RW_Ant_Th_Interp_target_surf.pdf**
- **RW_Ant_Th_K_Interp_target_surf.pdf**

Magnetic sus 3D model in UBC format

- **Antm_3Dmag.msh** — **Mesh file**
- **Antm_3Dmag.sus** — **Mag sus model**

8.0 References

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9.0 Statement of Qualifications

I, Amir H. Radjaee, of the city of Vancouver, Province of British Columbia, do hereby certify

that:

1- I am a Senior Geophysicist at GroundTruth Exploration Inc. Ltd with business address: 109 Callison Way, Dawson City, YT, Y0B 1G0, Canada.
2- I graduated with a Master of Science (MSc) degree in Geophysics from the University of Tehran and Doctor of Philosophy (PhD) degree in Geophysics from the International Institute of Earthquake Engineering and Seismology.
3- I have been employed in my profession as a Geophysicist since my graduation.
4- I am a member of Association of professional Engineers and Geoscientist of the Province of British Columbia, License# 36294.
5- The information for this report is based on available data explained in the Introduction section of this report and from the results derived from further modelling and post-processing works.
6- I have no interest in the property described as the Ryanwood Inc., nor do I have any plans to acquire any such interests.

Dated this 18th day of February, 2020, Vancouver, B.C

3D INVERSION MODELING AND INTERPRETATION OF
AIRBORNE MAGNETIC DATA

Appendix-A

Modelling Software
UBC-GIF MAG3D

MAG3D is a program library (version 5.0 as of September 2013) for carrying out forward modelling and inversion of surface, airborne, and/or borehole magnetic data in the presence of a three dimensional Earth. The program library carries out the following functions:

- Forward modelling of the magnetic field anomaly response to a 3D volume of susceptibility contrast.
- Data are assumed to be the anomalous magnetic response to buried susceptible material, not including Earth's ambient field.
- The model is specified using a mesh of rectangular cells, each with a constant value of susceptibility, and topography is included.
- The magnetic response can be calculated anywhere within the model volume, including above the topography, simulating ground or airborne surveys, and inside the ground simulating borehole surveys.

This inversion code assumes susceptibilities are "small". This means results will be wrong when susceptibilities are high enough to cause self-demagnetization. There is no method for incorporating remanent magnetization in this code.

Inversion of surface, airborne, and/or borehole magnetic data to generate 3D models of susceptibility contrast. The inversion is solved as an optimization problem with the simultaneous goals of minimizing an objective function on the model, and generating synthetic data that match observations to within a degree of misfit consistent with the statistics of those data. To counteract the inherent lack of information about the distance between source and measurement, the formulation incorporates a depth or distance weighting term. By minimizing the model objective function, distributions of subsurface susceptibility contrast are found that are both close to a reference model and smooth in three dimensions. The degree to which either of these two goals dominates is controlled by the user by incorporating a priori geophysical or geological information into the inversion.

Explicit prior information may also take the form of upper and lower bounds on the susceptibility contrast in any cell (as of version 5.0). The regularization parameter (controlling relative importance of objective function and misfit terms) is determined in either of three ways, depending upon how much is known about errors in the measured data.
The large size of useful 3D inversion problems is mitigated by the use of wavelet compression. Parameters controlling the implementation of this compression are available for advanced users (MAG3D Manual).

Invoice

GroundTruth Exploration

Box 70, Dawson, YT Y0B 1G0
Phone (867) 993-5612
Fax: (867) 993-5617

Date	Invoice #
24-Feb-20	10344
Terms	**Due**
Net 14	9-Mar-20

Invoice To:
Shawn Ryan Prospecting
40 Drift Drive
Whitehorse, YT

Description	Amount
Feb 24/20 - Evaluation Report on Antimony Property Geophysics Compilation (preapproved by Dawson Recorder on Feb 14/20) 1. Evaluation Report on Antimony Geophysical Data- Amir Rajaee Comprehensive Compilation, Modelling and Interpretation Feb 14-23, 2020 - 10 days Charged at Consulting Rate of $1050/day, including all processing software	$10,500.00

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Subtotal	$10,500.00
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Total Due	$11,025.00

Thank you for your business!