

AIRBORNE GEOPHYSICAL INTERPRETATION REPORT



VIP Block Prepared for Nevada Zinc Corp.

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Table of Contents

1.0	Introduction.....	1
2.0	Interpretation Procedures.....	2
3.0	Target Response.....	3
4.0	Interpretation.....	3
5.0	Deliverables.....	4
5.1	Maps.....	4
6.0	Recommendations.....	4

List of Figures

Figure 1:	VIP Block area location relative to Dawson, YT.....	1
Figure 2:	Survey and tie lines outlined in yellow and the boundary in red.....	2
Figure 3:	VIP block with areas of interest outlined in red; Zone A and Zone B.....	5

List of Appendices

Appendix A: References

Appendix B: VIP Block Interpretation Maps

1.0 Introduction:

This report details the interpretation of geophysical data collected by Precision GeoSurveys Inc. for Nevada Zinc Corp. The interpretation was performed on airborne magnetic data collected in December 2010, on the VIP Block.

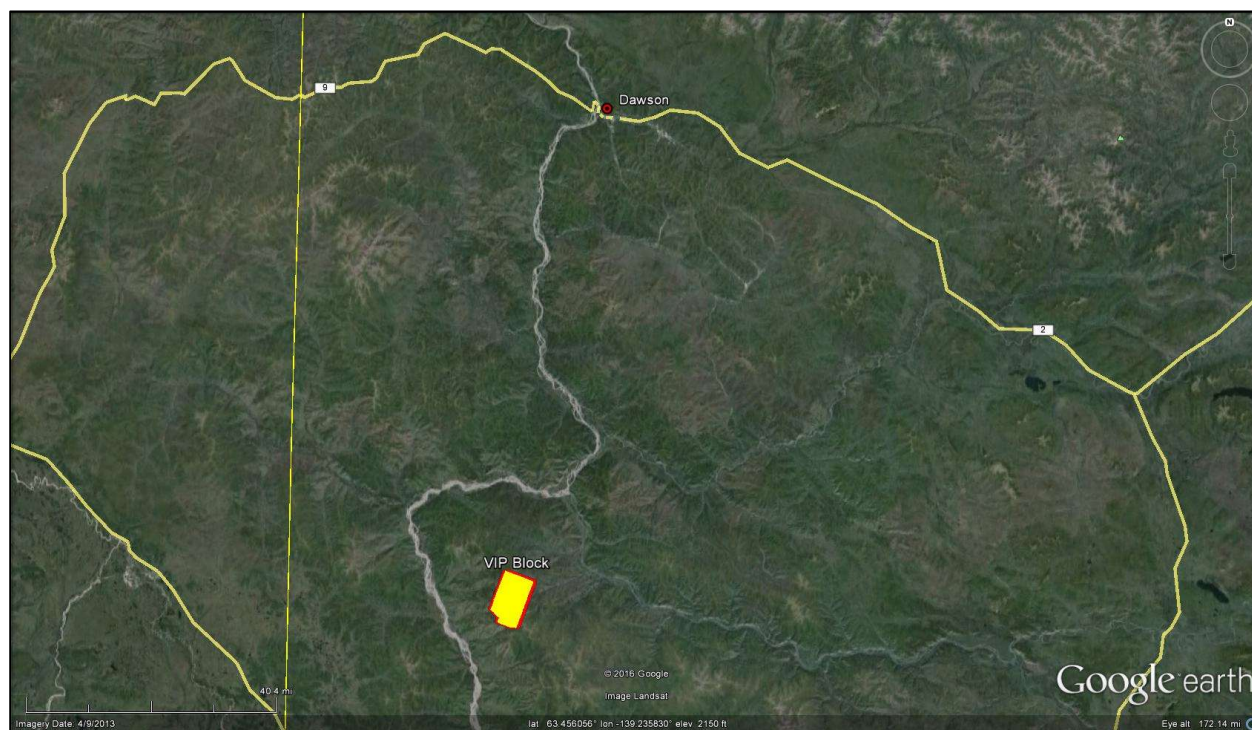


Figure 1: VIP Block area location relative to Dawson, YT.

The VIP Block is located centered at 557500m E, 6979000m N (Figure 1). It is located approximately 125 km south-west of Dawson, YT. The survey area itself is approximately 7.5 km by 12 km. A total of 1055 line kilometers of magnetic and radiometric data were flown for this survey; this total includes tie lines and survey lines. Only the magnetic data were interpreted for this report. The survey lines were flown at 100 meter spacing at a 020°/200° heading; the tie lines were flown at 1000 meter spacing at a heading of 110°/290° (Figure 2).



Figure 2: Survey and tie lines outlined in yellow and the boundary in red.

All locations are expressed in UTM Zone 7N with respect to the WGS84 datum. The magnetic data was collected using a Scintrex cesium vapor CS-3 magnetometer at a sample rate of 10 Hz. The system was mounted on the front of the helicopter in an approved “stinger” configuration.

2.0 Interpretation Procedures:

To interpret the magnetic data, the original data was reviewed to determine what further processing steps were required. After initial review, the data was micro-leveled to further reduce any remaining corrugation features in the original magnetic data. The International Geomagnetic Reference Field (IGRF) model was then calculated based on the survey dates and location. The IGRF model provided a background magnetic field that was then removed from the micro-leveled data to yield the Residual Magnetic Intensity (RMI) of the survey area. The RMI was gridded using a cell size of 25 metres, a quarter (1/4) of the survey line spacing, for further processing filters to be applied to.

The Calculated Vertical Gradient (CVG) was calculated and used to determine the initial structural interpretation. A downward continuation filter of 20 metres was then performed to create a filtered grid that would allow targets below magnetically quiet overburden to be emphasized. This gives a clearer picture of the structure, and can highlight changes or breaks along the structure. An upward continuation filter of 100 metres was performed to act as a low pass filter in order to detrend the data and confirm the structural interpretation. To help identify the edges of the interpreted structures, a Horizontal Gradient (HG) filter was applied to the RMI data.

Final maps (Appendix B) were created for each processing tool and the interpreted structure was overlain. Soil geochemistry values provided by the client were also included on the maps.

3.0 Target Response:

Epithermal mineral deposits are often hosted in structurally controlled features. These features include faults and shear zones, which act as hydrothermal conduits, and units which cut across these conduits.

The magnetic data are first analyzed to determine primary structures. Linear structures such as faults and shear zones tend to show up on airborne magnetic surveys as long linear magnetic highs, paralleled by a corresponding magnetic low along the strike of the structure. Cross cutting offset in these linear features can be interpreted as faults.

Circular magnetic highs surrounded by a magnetic low are generally interpreted as intrusive bodies. Whether they cross cut any other features will help to determine their relative age.

Certain features, such as large magnetic anomalies that coincide with topographic highs, do not indicate structural features like faults or shear zones. These are generally identified as units that are resistant to weathering with iron content higher than the surrounding units.

4.0 Interpretation:

The primary structure of the VIP Block are a series of lineations that are oriented NW to SE. There is offset to some of these lineations, indicating secondary faulting.

On the southern corner of the block, there is a large magnetic high associated with a topographic high. This would indicate a large resistive unit that would normally not be of much interest. However, the offset and rotation of the unit with the lineations immediately to the west indicate that there may be faulting around the unit.

On the northeastern section of the grid are two magnetic highs that would indicate intrusive bodies. The larger, western anomaly also cross cuts some of the NW/SE lineations, indicating that it is a younger unit.

Along the western edge of the survey area are two anomalies that are somewhat circular in shape but with a much lower residual magnetic intensity. The shape would indicate that they could possibly be intrusive units, while the lower magnetic signature would indicate that they may be much older and more heavily altered.

5.0 Deliverables

All digital data are presented on a USB memory stick with the logistic report. The survey data are presented as maps, geotiffs, and a report.

5.1 Maps

Digital maps were created for the VIP interpretation report. The following map products were prepared:

Overview Maps (colour image with elevation contour lines):

- Interpreted Structure with Digital Terrain Model (VIP_InterpStructure_withDTM)

Magnetic Maps (colour image with elevation contour lines):

- Residual Magnetic Intensity with Interpreted Structure (VIP_RMIwStructure)
- Calculated Vertical Gradient with Interpreted Structure (VIP_CVGwStructure)
- Downward Continuation of 20 m (VIP_DownwardContinuation)
- Downward Continuation of 20 m with Interpreted Structure (VIP_DownwardContinuation_wStructure)
- Upward Continuation of 100 m (VIP_UpwardContinuation)
- Upward Continuation of 20 m with Interpreted Structure (VIP_UpwardContinuation_wStructure)
- Calculated Horizontal Gradient (VIP_HG) of RMI
- Calculated Horizontal Gradient with Interpreted Structure (VIP_HGwStructure)

6.0 Recommendations:

The VIP block contains several NW/SE striking lineations as well as cross cutting faults that could indicate hydrothermal conduits that would be of interest (Figure 3).

The main area of interest should include the southern corner (Zone A in Figure 3) of the VIP block where there appears to be faulting of a larger unit creating potential zones of epithermal deposits.

The northern section of the block (Zone B in Figure 3) may also be an area that needs further evaluation due to the concentration of shear or fault zones as well as the relatively young intrusive unit.

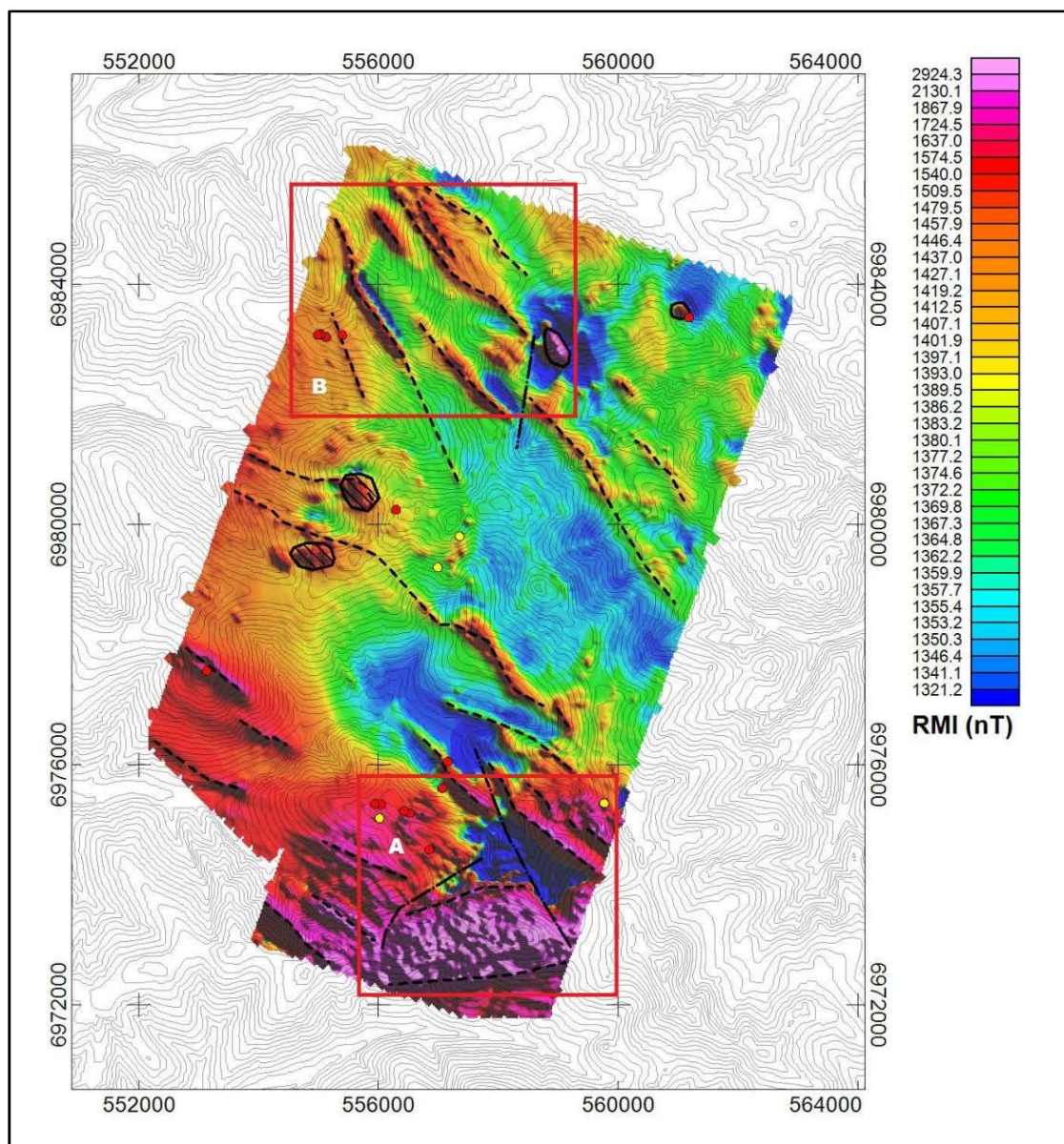


Figure 3: VIP block with areas of interest outlined in red; Zone A and Zone B.

Appendix A

References

List of references used in this report

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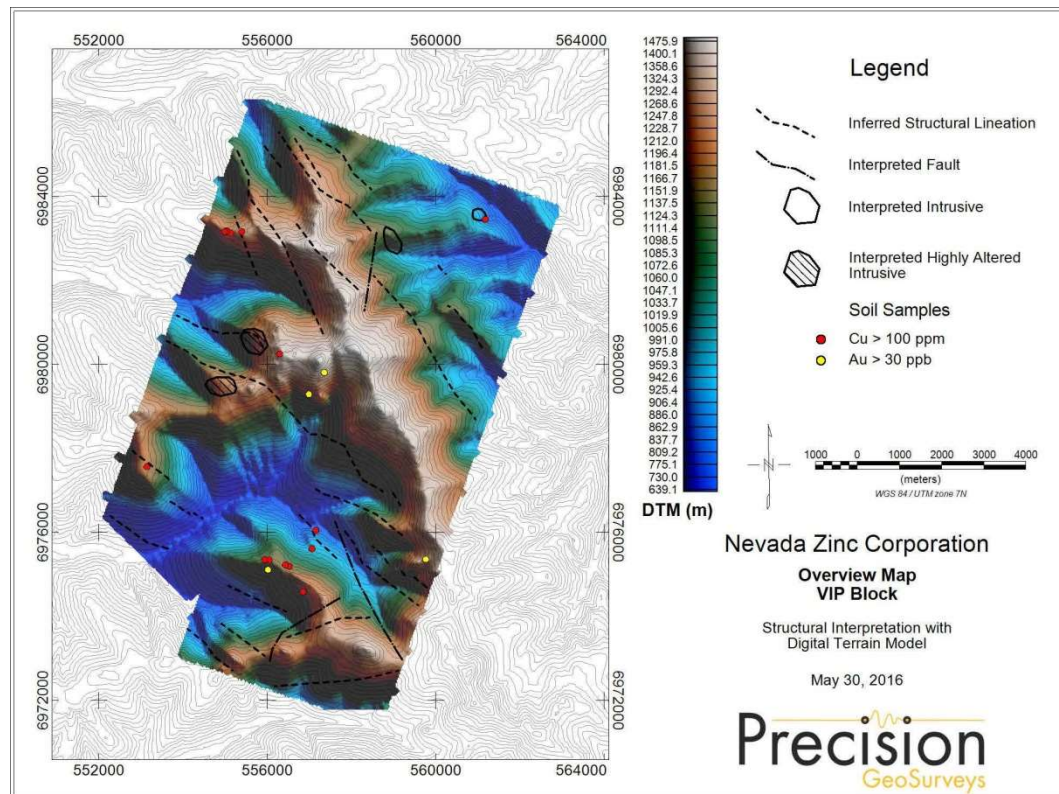
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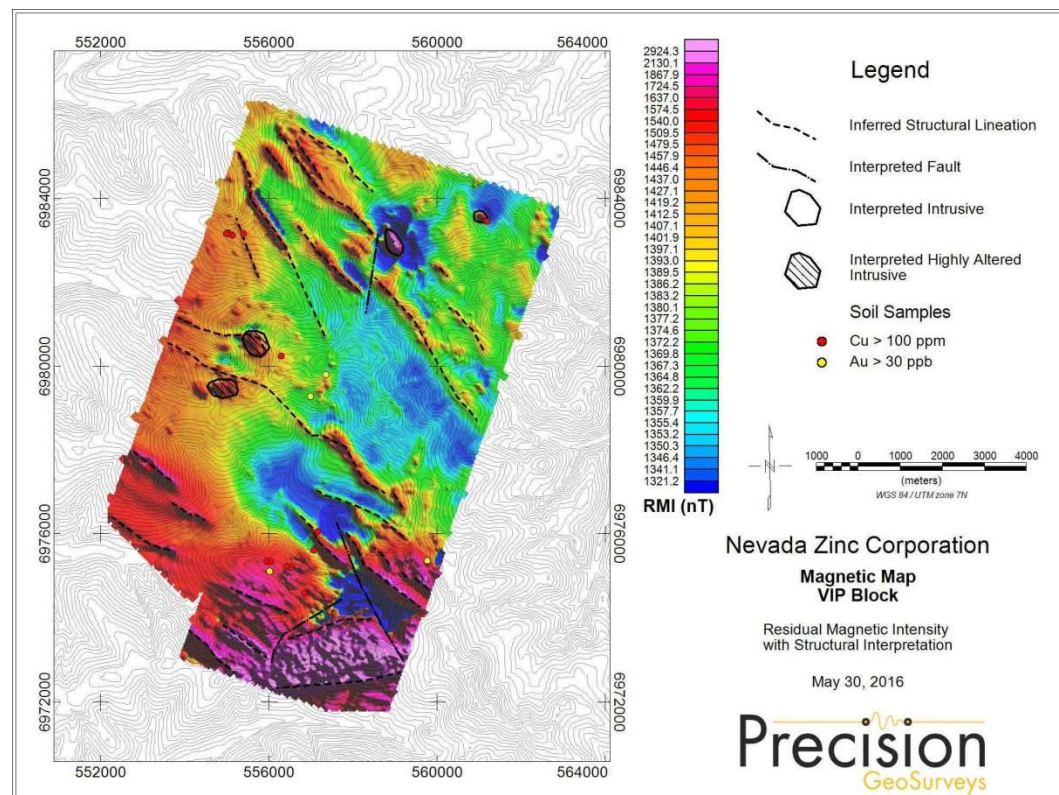
White, N. C., Hedenquist, J. W., 1995, Epithermal Gold Deposits: Styles, Characteristics and Exploration: *Society of Economic Geologists Newsletter*, no. 23, pp. 1, 9-13

Appendix B

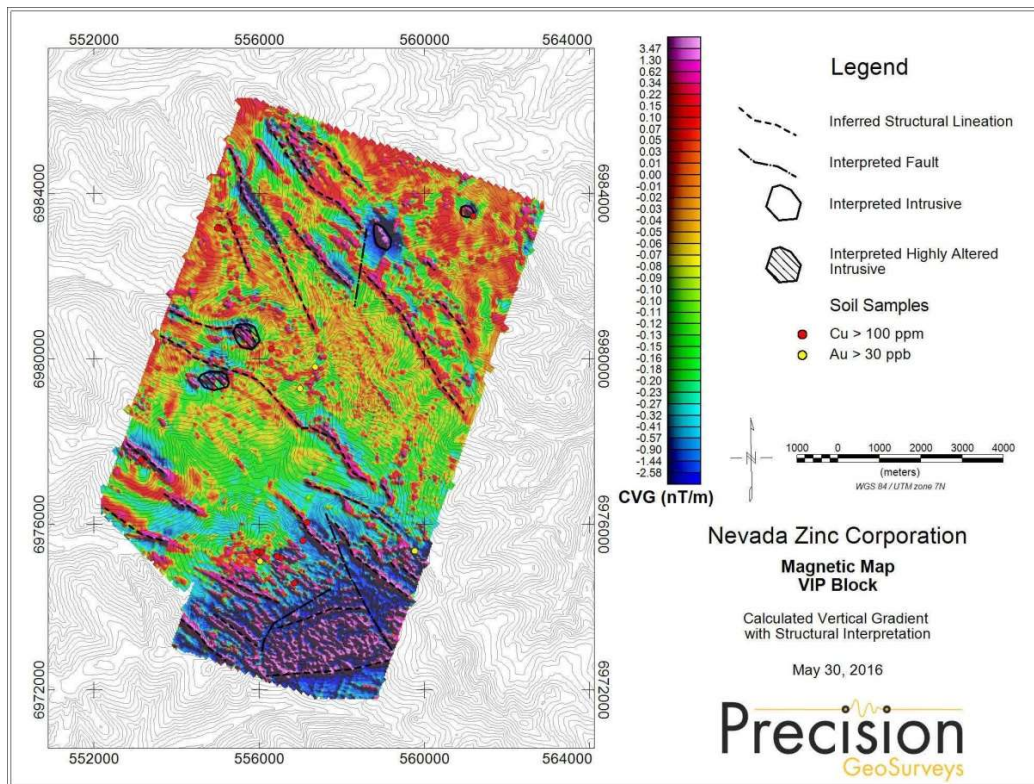
VIP Block Interpretation Maps



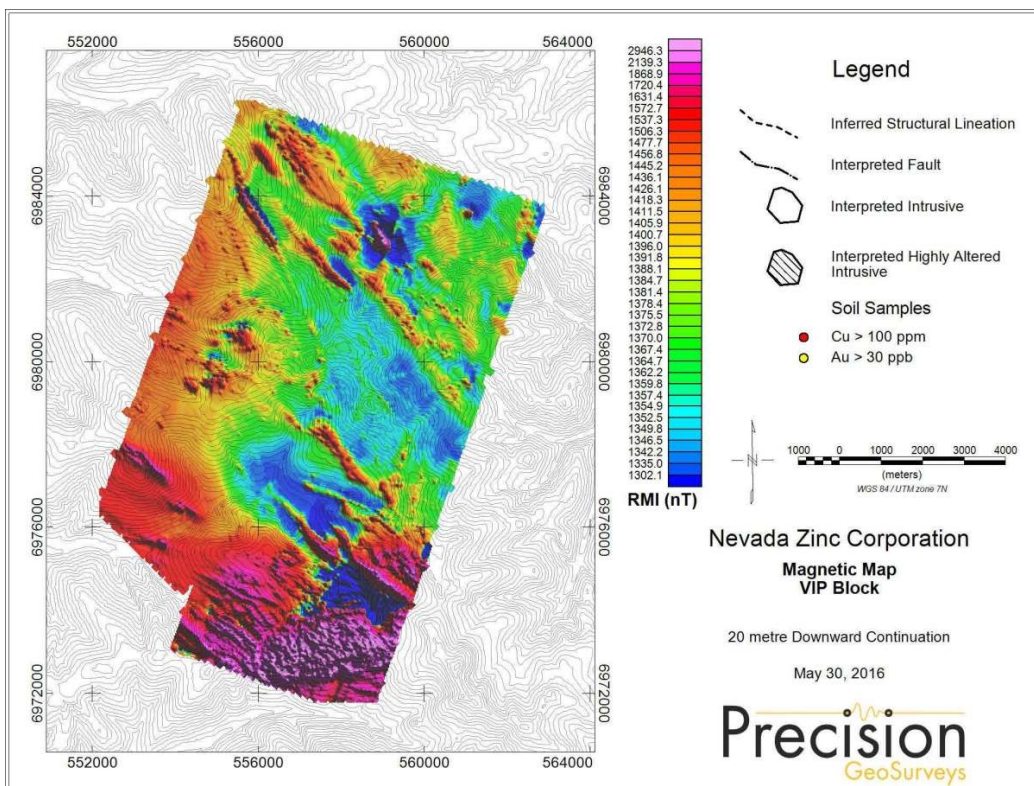
Map 1: VIP Block digital terrain model with interpreted structure.



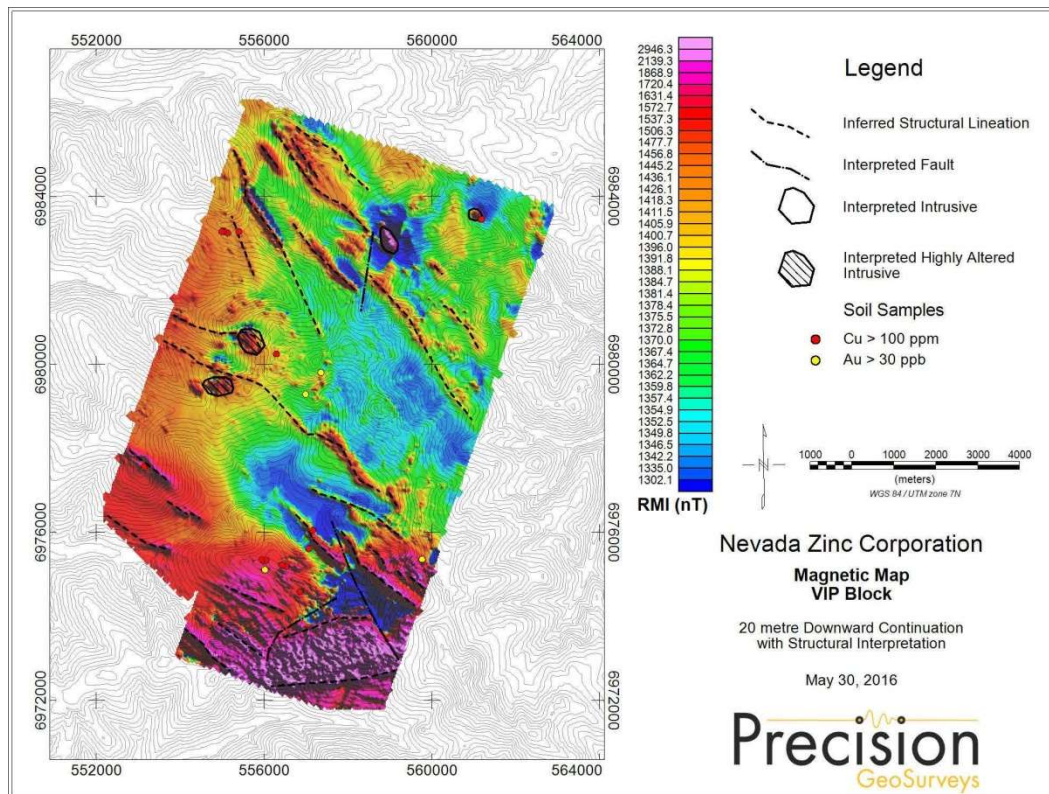
Map 2: VIP Block residual magnetic intensity with interpreted structure.



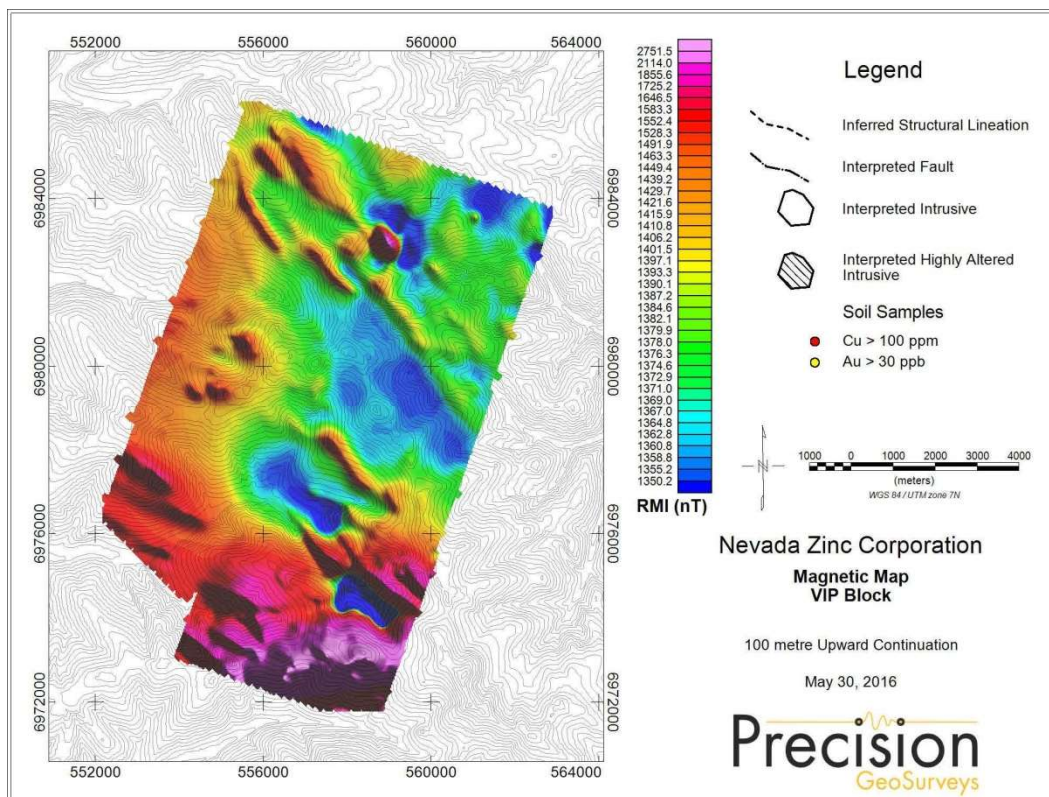
Map 3: VIP Block calculated vertical gradient of the residual magnetic intensity with interpreted structure.



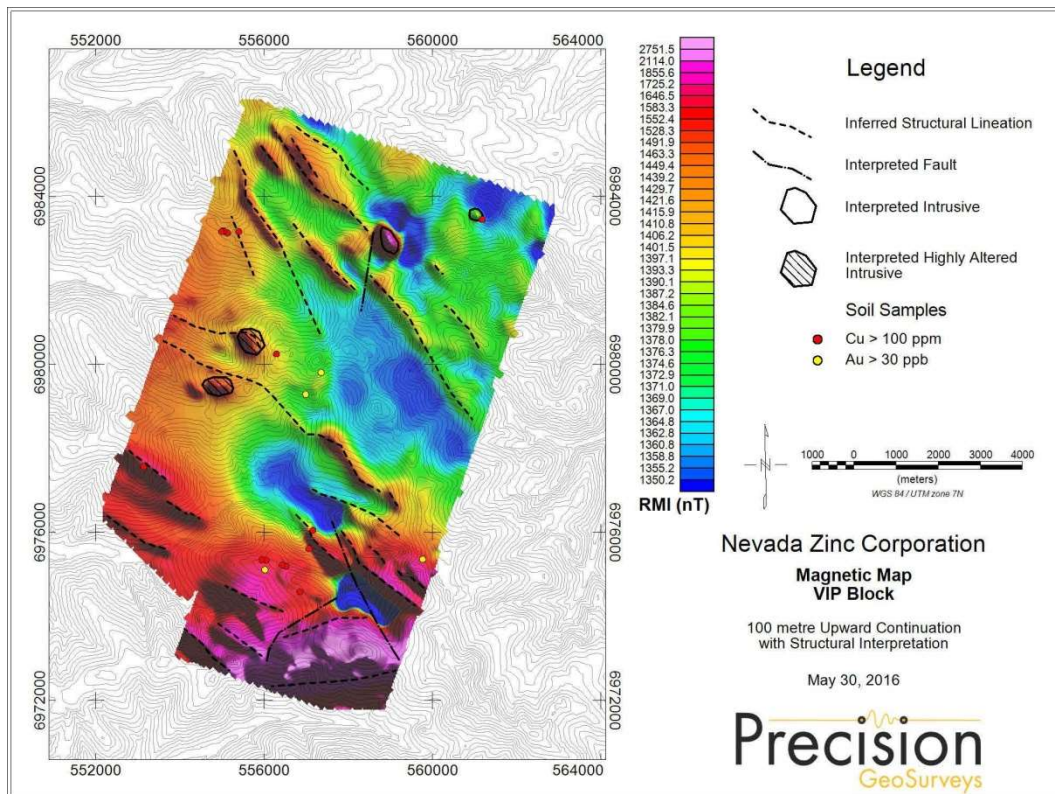
Map 4: VIP Block downward continuation of 20 m.



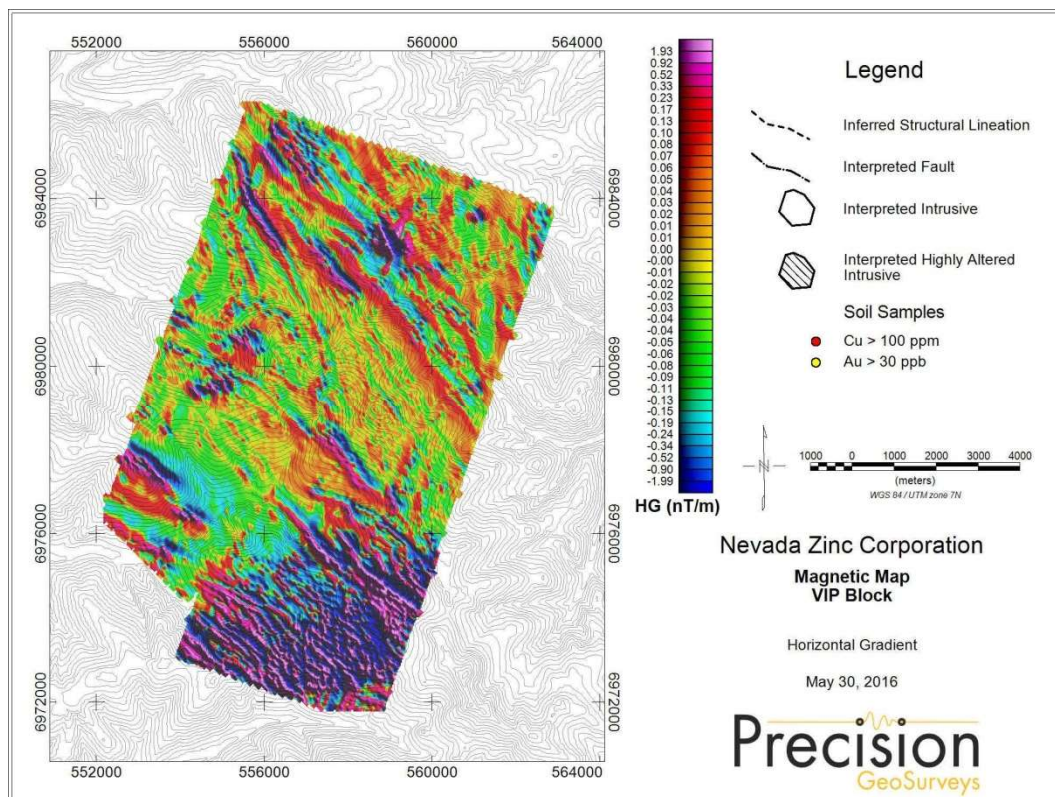
Map 5: VIP Block downward continuation of 20 m with interpreted structure.



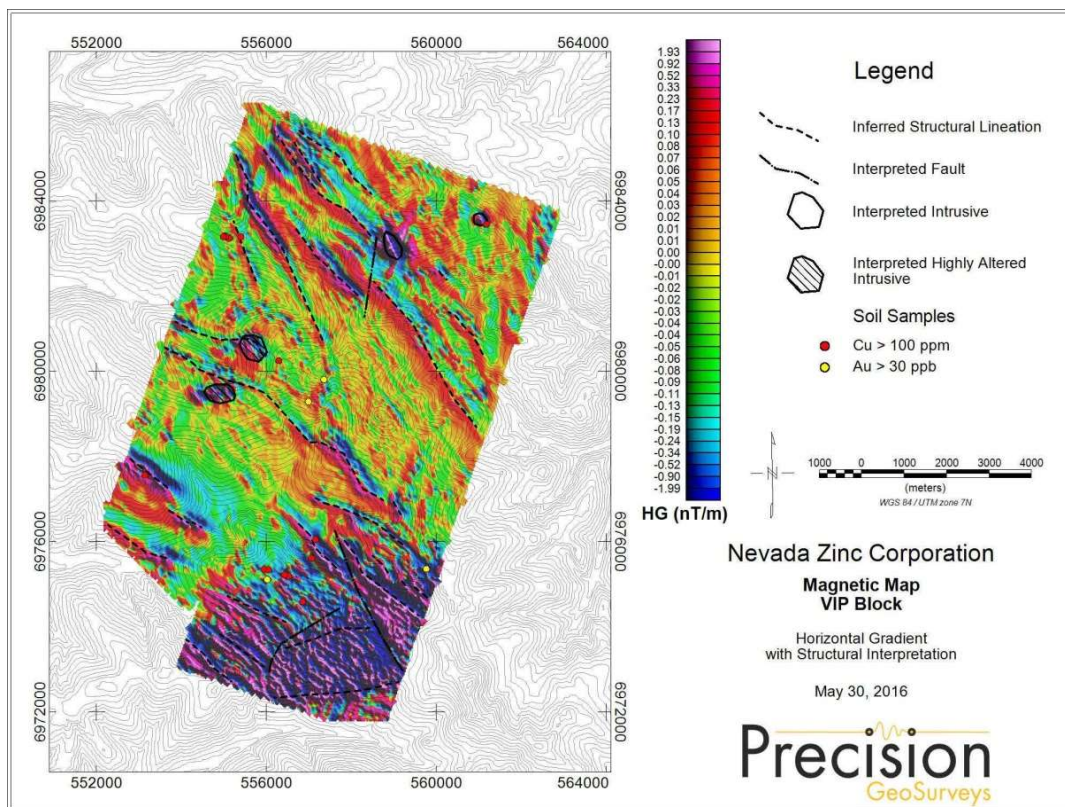
Map 6: VIP Block upward continuation of 100 m.



Map 7: VIP Block upward continuation of 100 m with interpreted structure.



Map 8: VIP Block calculated horizontal gradient of the residual magnetic intensity.



Map 9: VIP Block calculated horizontal gradient of the residual magnetic intensity with interpreted structure.