

Urasar Ground Magnetics Data Review

Prepared for: Freemont Gold Inc.

By: Sean Walker

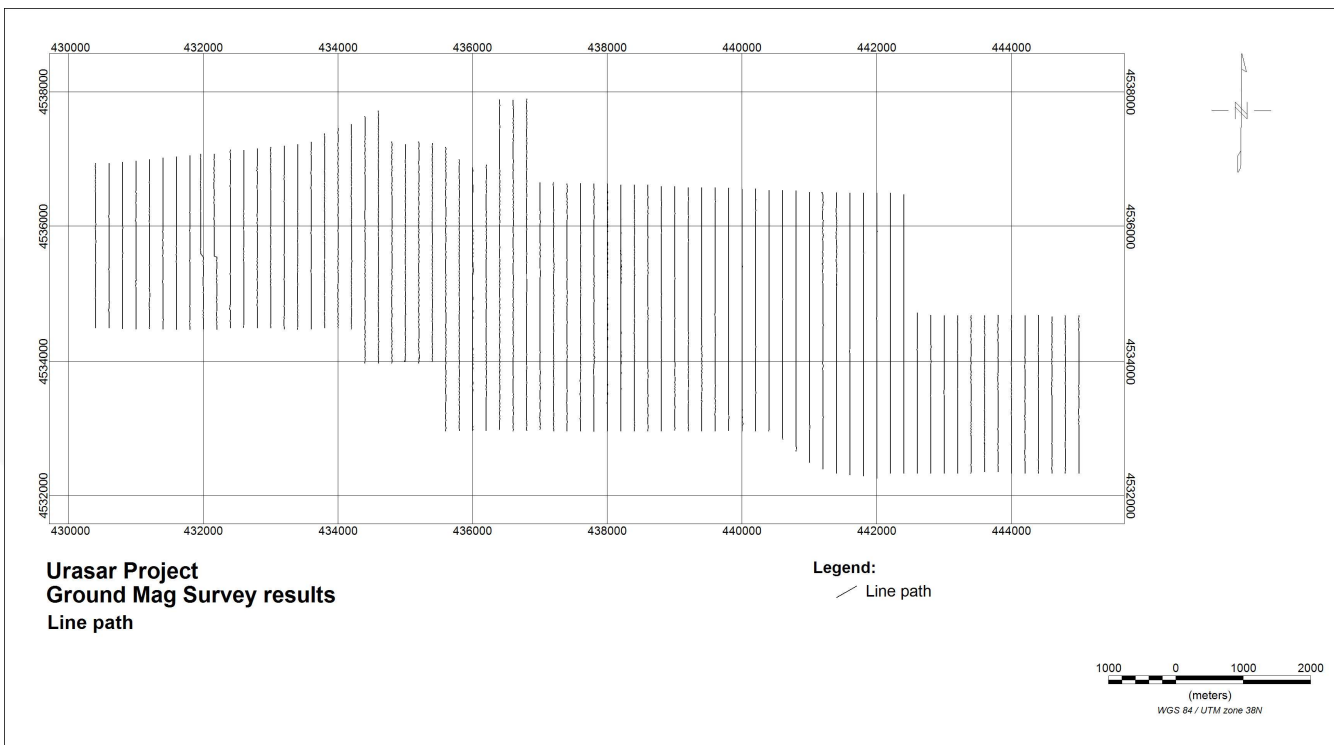
August 2024

Executive Summary

- Ground magnetic data over the Urasar project were processed to produce a cohesive database
- Derivative-based products were generated to highlight structures within the data
- The products show some correlations between features in the data and the mapped geology

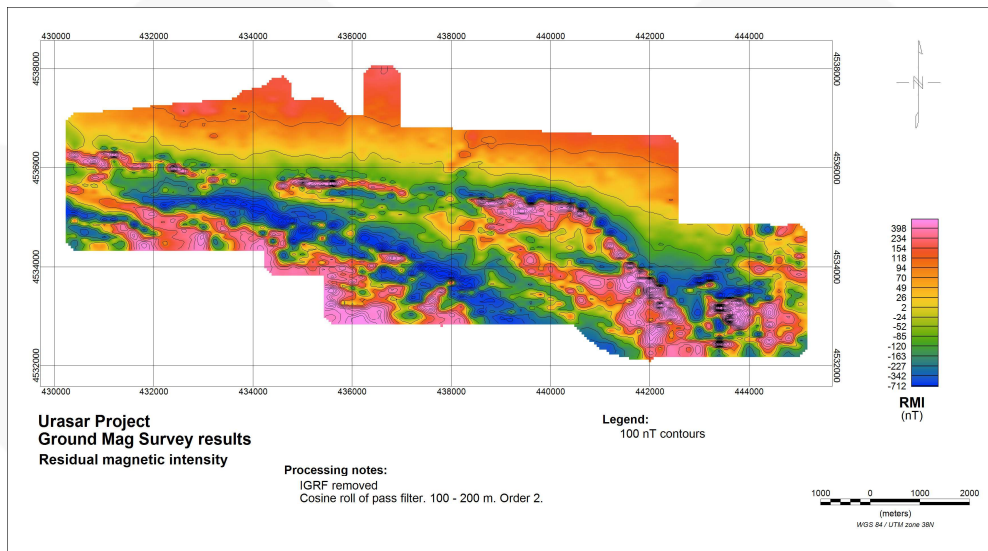
Survey details

- 232 line-km of ground magnetics data collected during May, June and July 2024
- 200 m line spacing
- 20 m station spacing

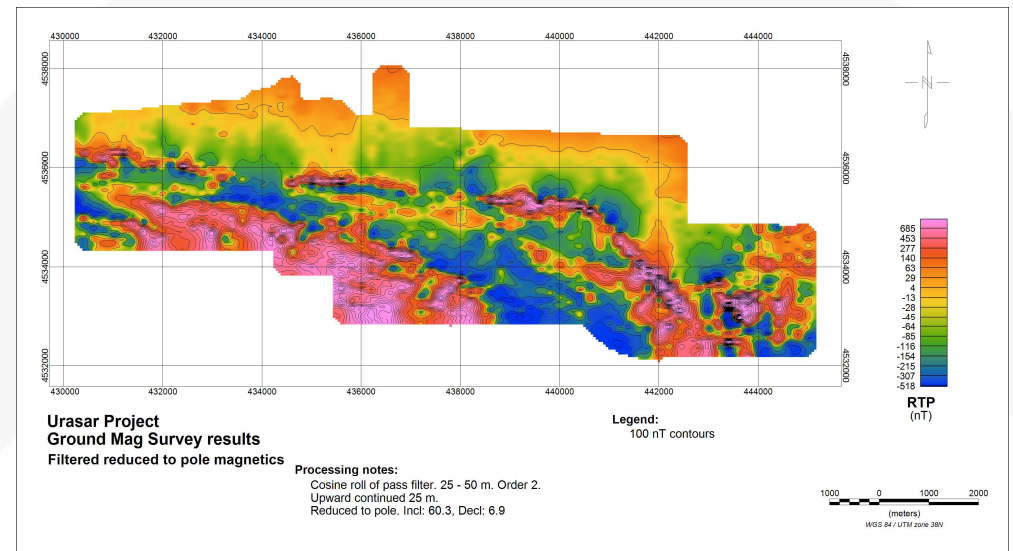


RMI and RTP

RMI



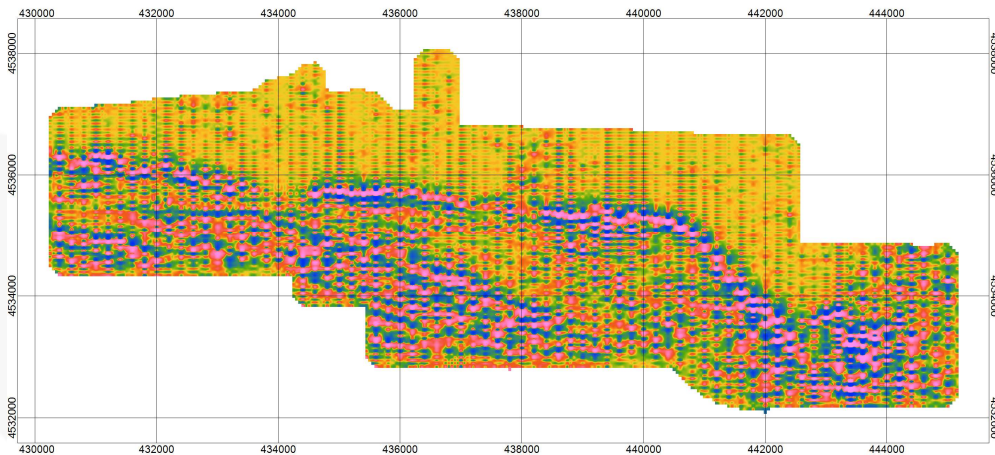
RTP



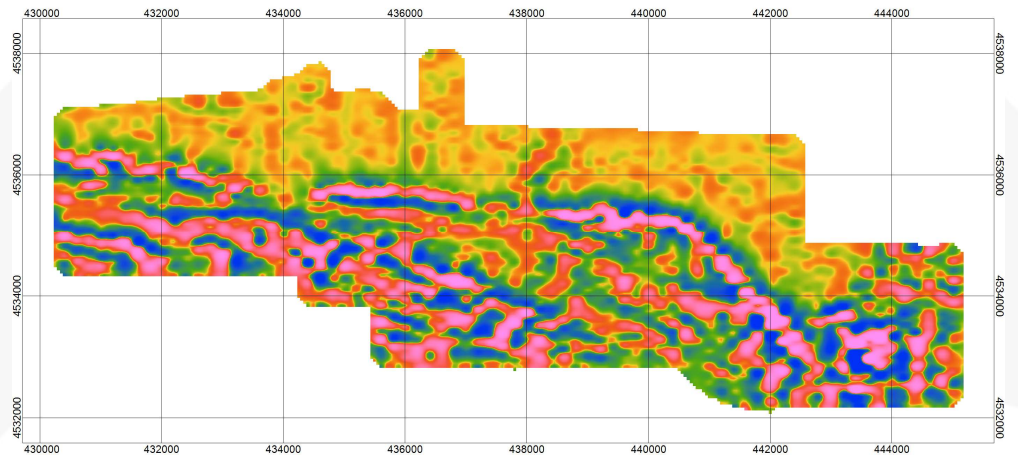
- The RMI image on the left has been diurnally corrected and has had the IGRF field and the mean value removed.
- The magnetic field inclination is 60.3 degrees. Reduction to the pole is required to interpret the data accurately
- The reduced to pole (RTP) is the image on the right

Pre-processing (UP100)

2VD RTP no filtering



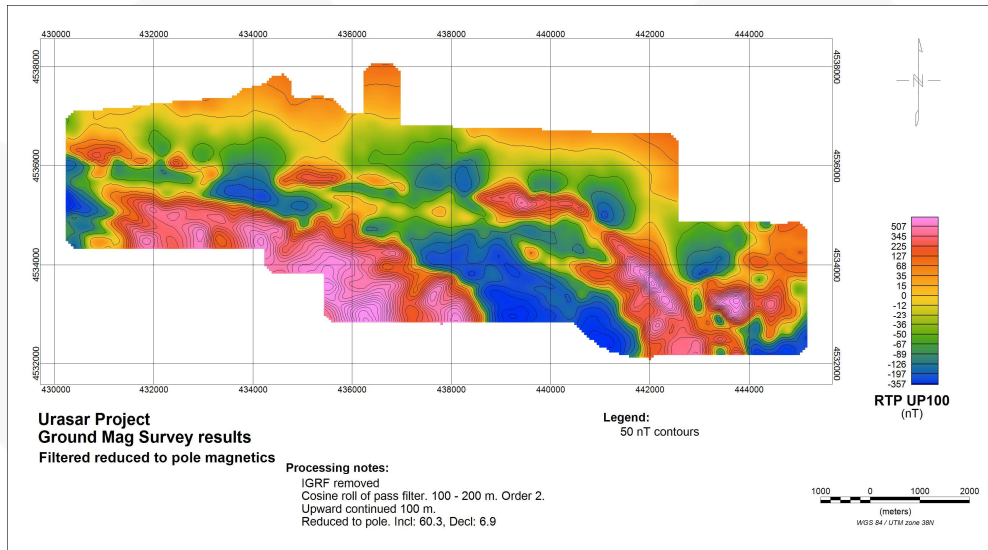
2VD RTP UP100m



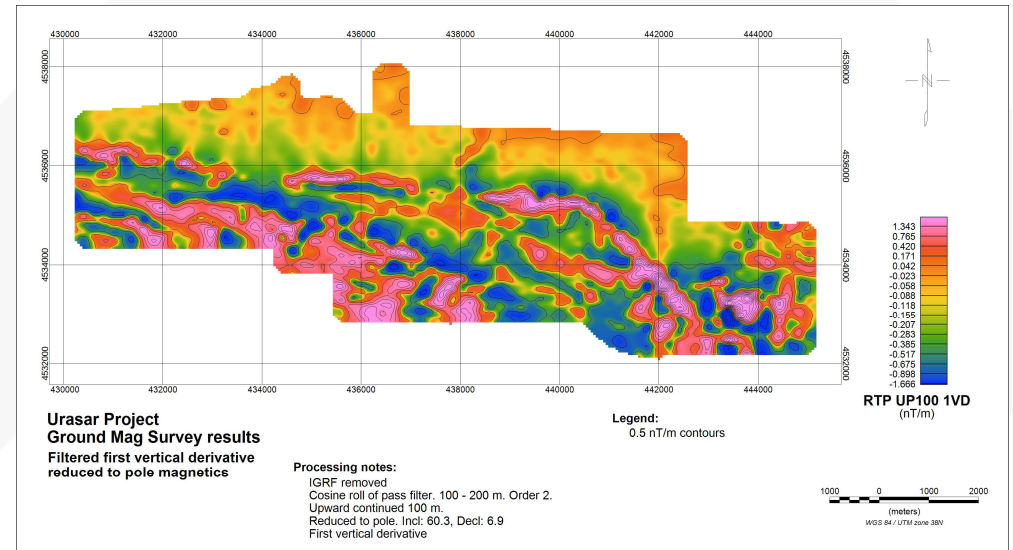
- The data was collected at 200 m line spacing.
- The terrain clearance for gridding and derivative calculation should be $\frac{1}{2}$ the line spacing (100 m).
- The grid on the left shows the second vertical derivative with no filtering applied
- The left has been upward continued by 100 m and had a light smoothing filter applied.

RTP and 1VD (UP100)

RTP UP100



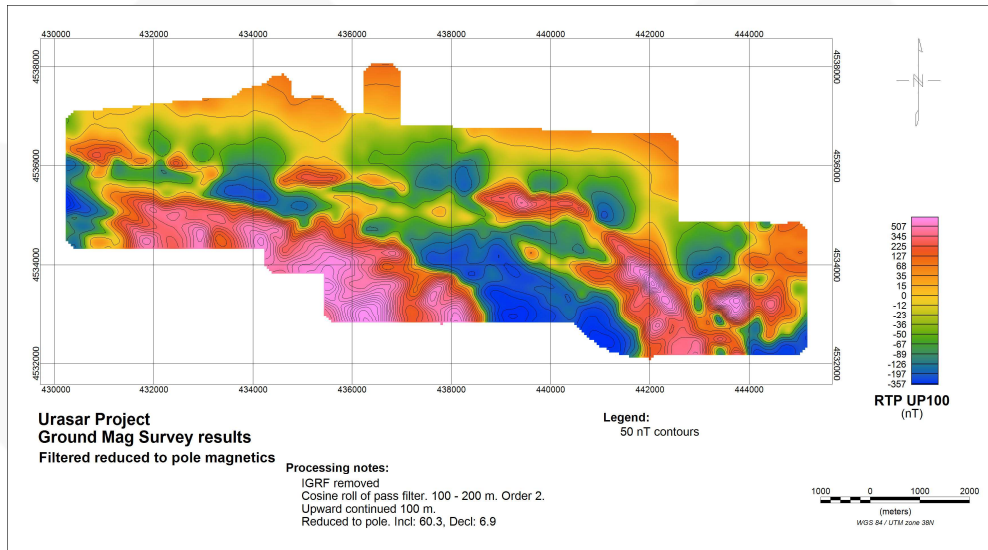
1VD RTP UP100



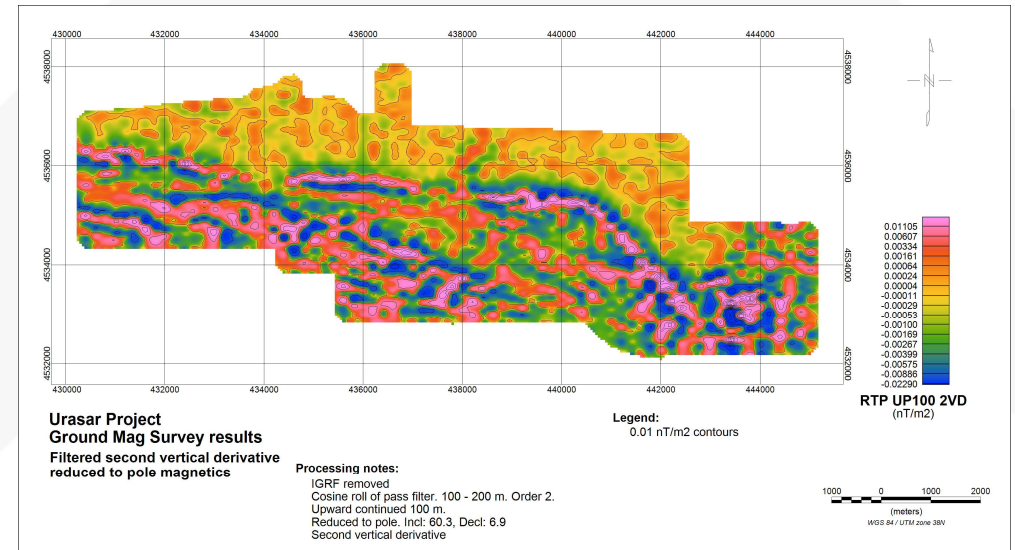
- The RTP shows a magnetic body in the south-west of the survey area. There is a gap between this zone and a discontinuous east-west magnetic trend that appears to trend to the south east at the eastern end of the survey area.
- The 1VD indicates that the gap is more magnetically complex than the area to the north.

RTP and 2VD (UP100)

RTP UP100



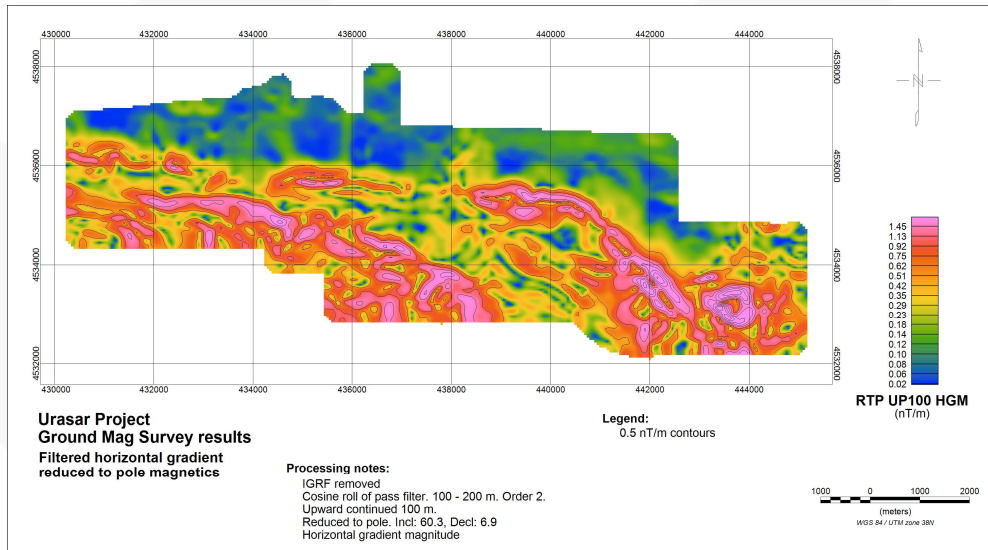
2VD RTP UP100



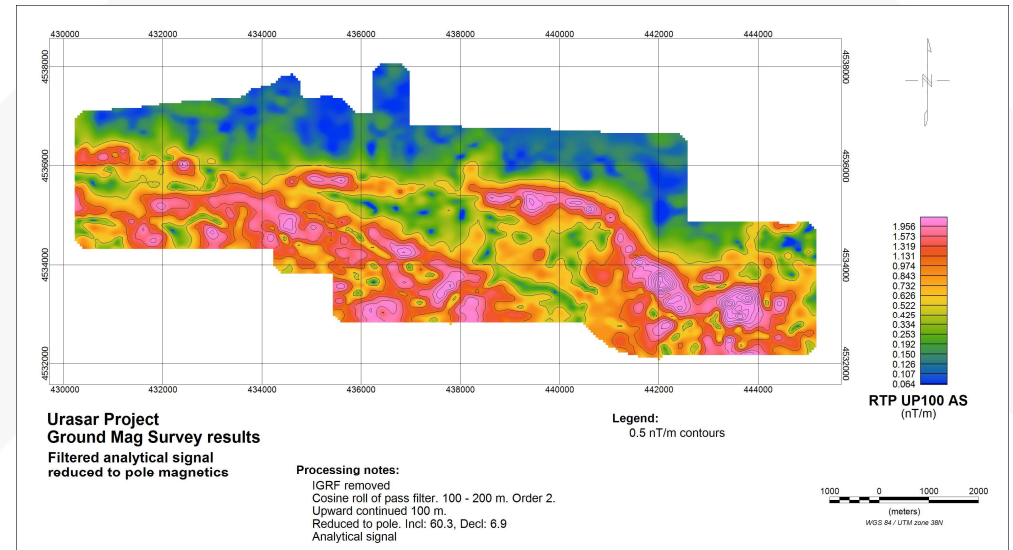
- The 2VD image is useful in identifying different magnetic domains within the survey area. These will likely correlate with different geological units and/or variations within geological units.

HGM and AS (UP100)

HGM RTP UP100



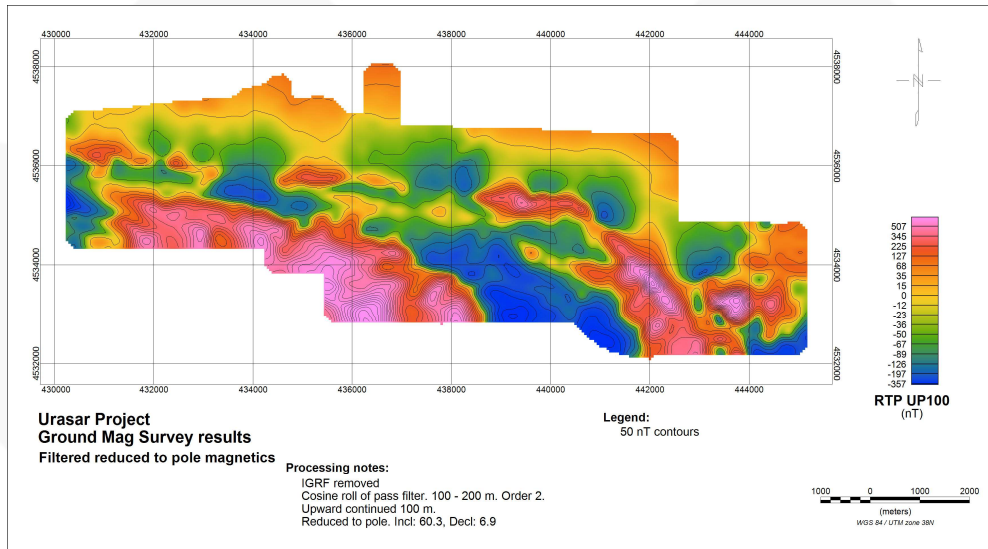
AS RTP UP100



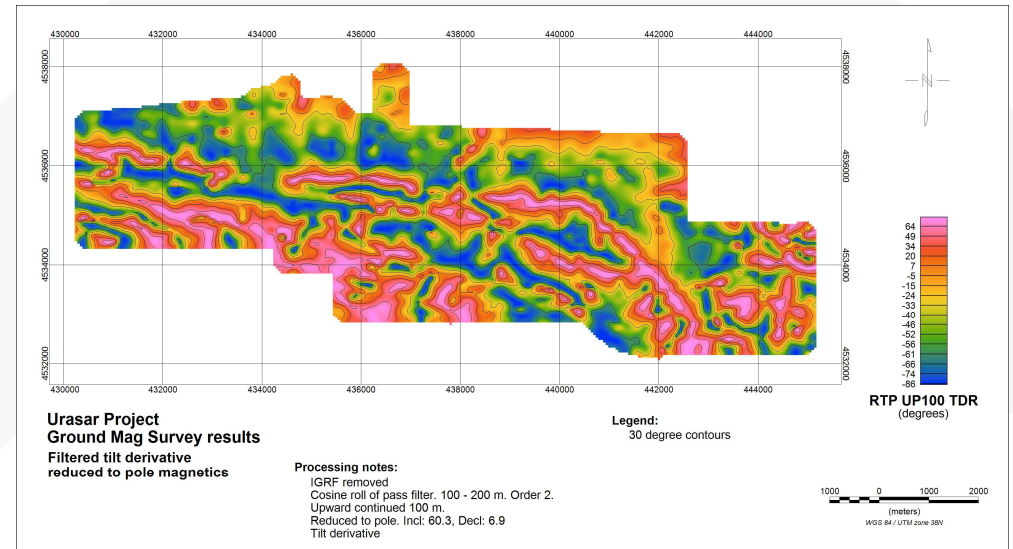
- The horizontal gradient magnitude (HGM) and analytical signal (AS) highlight magnetic domains within the survey area. These will likely correlate with different geological units and/or variations within geological units.

RTP and TDR (UP100)

RTP UP100



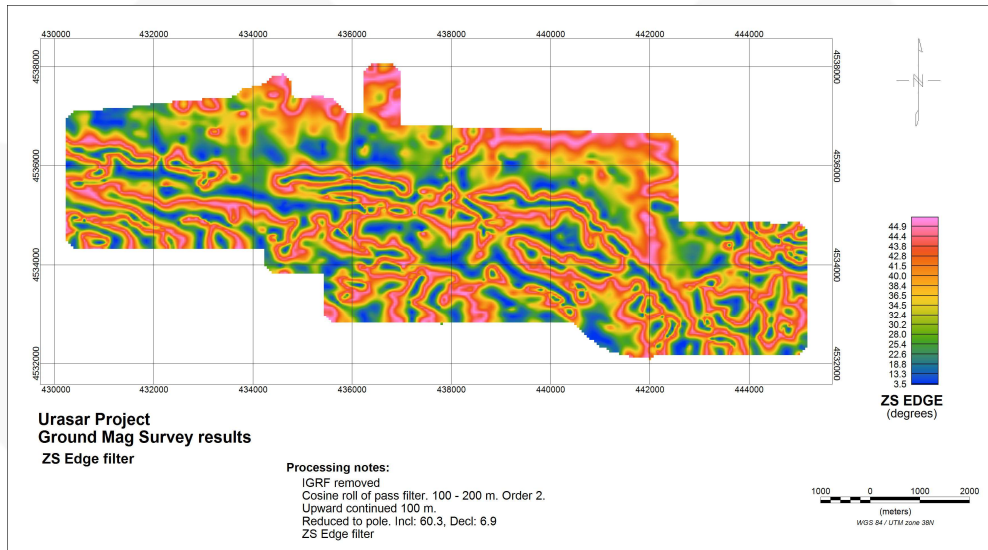
TDR RTP UP100



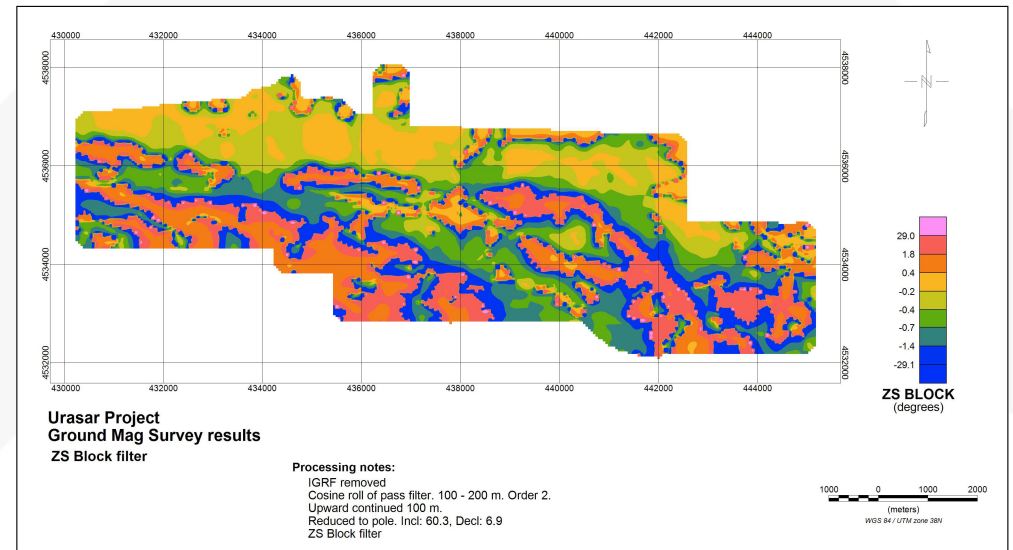
- The tilt derivative (TDR) acts as an automatic gain correction. It is useful for identifying subtle trends within the data and outlining magnetic bodies. The trends should be interpreted in conjunction with the RTP image.

ZS EDGE and BLOCK (UP100)

ZS Edge RTP UP100



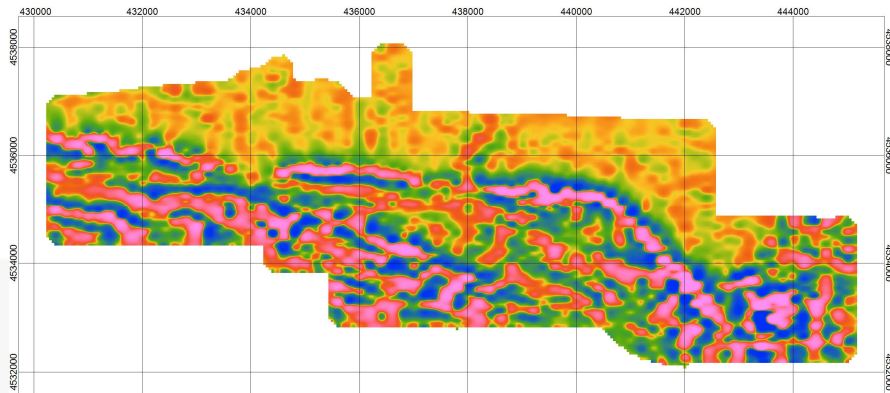
ZS Block RTP UP100



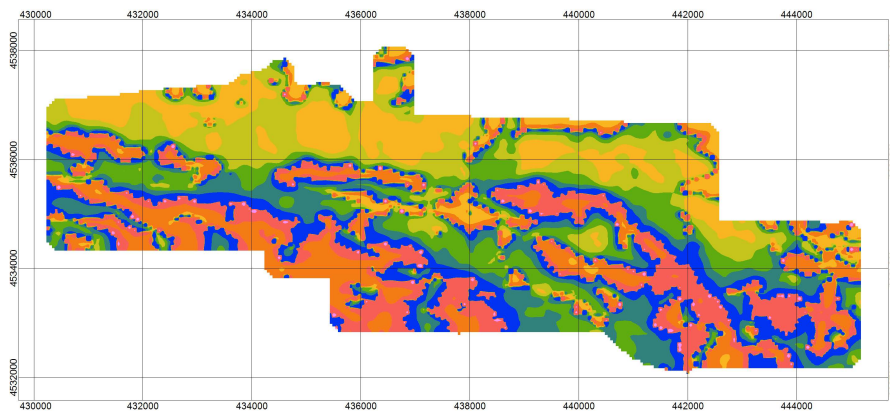
- The ZS filters apply mathematics similar to the TDR. The edge filter highlights the edges of magnetic bodies and the block filter isolates magnetic domains. Both are useful for qualitative interpretation.

Interpretation

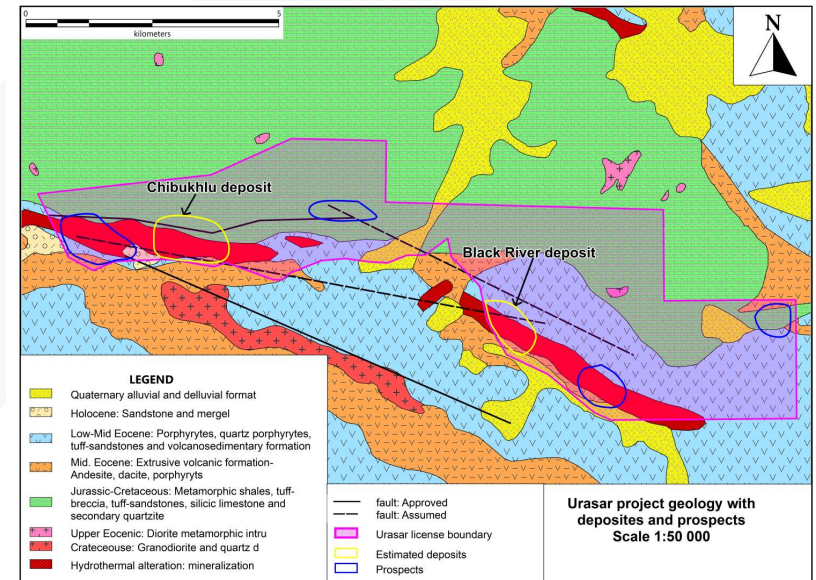
2VD RTP UP100



ZS Block RTP UP100



Geology



- The quiet zone to the north appears to correlate with the green unit.
- The more magnetic areas to the south appear to correlate with the different volcanic units

Conclusions

- The ground magnetic data collected over the Urasar project has produced a high-quality data set
- Derivative-based products have highlighted structures within the data
- The data show some correlations between features in the data and the mapped geology
- A thorough interpretation of the data along side the mapped geology should be completed
- Infill data at 100 m or 50 m line spacing should be collected in areas of interest