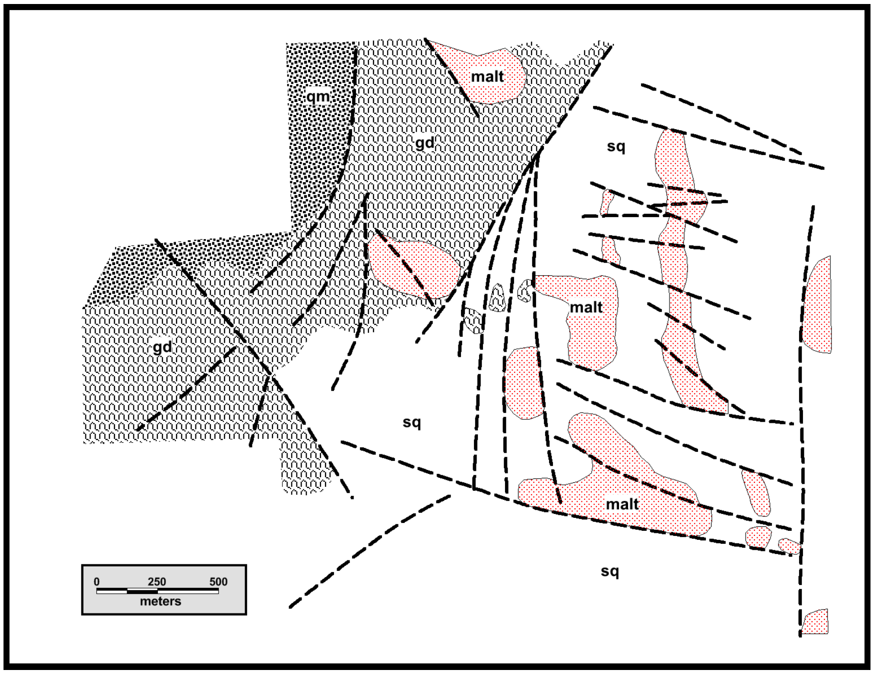
COPPER KING PROPERTY
GROUND MAGNETIC SURVEY
GIS DATABASE



Ground Magnetic Survey Preliminary Interpretation

James L. Wright M.Sc.

July 18, 2017

TABLE OF CONTENTS

INTRODUCTION

In June of 2017 a ground magnetic survey was completed over a portion of the Copper King property controlled by U. S. Gold Corporation. Primary objective was to delineate magnetite concentrations related to gold mineralization at the historic Copper King mine; as well as lithologic, alteration and structural delineation. The survey follows-up on an earlier magnetic survey reported upon by Garland (1997). Survey procedure is reviewed first followed by a description of data processing and an interpretation, and finally conclusions / recommendations. The interpretation incorporates geologic and topographic data. Results of the survey are presented in both digital map form and GIS MAPINFO / ARCGIS files. The GIS files are contained on a DVD located in a folder at the rear of the report. Map products are also located on the DVD as SURFER SRF map files and listed in the Table of Contents.

Figure 1 shows the property's location within the state of Wyoming relative to topography, major roads and cities.

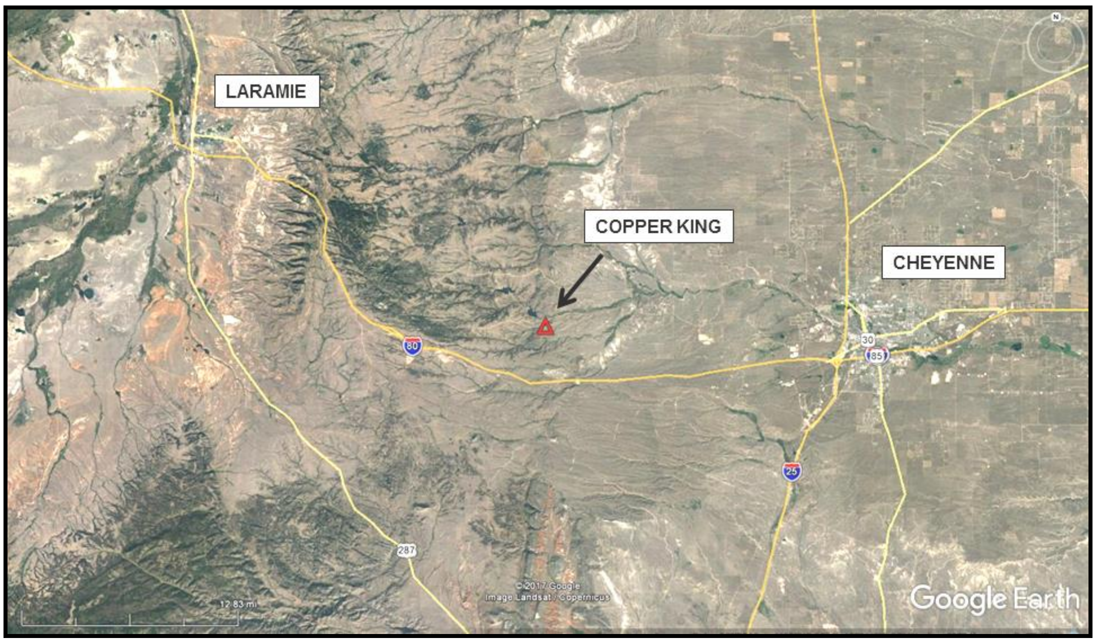


FIGURE 1: Copper King Property Location over Satellite Image

SURVEY PROCEDURE

The survey was conducted during the period of June 16 - 22, 2017. A total of 112.7 line kilometers of magnetic data were acquired using Geometrics Model G-858 magnetometers. Real-time differentially-corrected GPS was used for positioning. Measurements of the total magnetic intensity were taken in the continuous mode at two-second intervals along lines spaced 50 meters apart and oriented 030°. A base magnetometer was operated during all periods of data acquisition and recorded readings every two seconds. Figure 2 presents a station posting over topography.

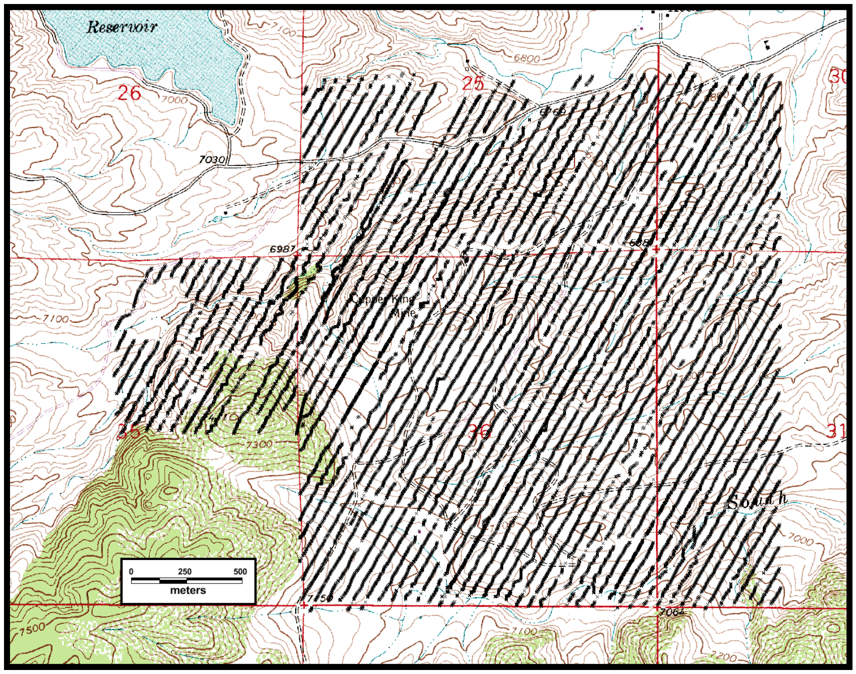


FIGURE 2: Station Posting over Topography

Geometrics G-858 Cesium Vapor magnetometers were used on this project. The magnetometer sensors were mounted on aluminum poles attached to backpacks with a sensor height of about 2.9 meters above ground level. Heading error with this system is on the order of one nT. The magnetometers were set-up to record the total intensity of the magnetic field every two seconds resulting in an average sample spacing of two to three meters or less. A Geometrics Model G-858 magnetometers was also used as a base magnetometer to record diurnal changes in the Earth's magnetic field. The base magnetometer was set up in an area where the gradient of the magnetic field is low as determined by a quick site survey that was performed. The base magnetometer sensor was secured to a 6-foot staff and the unit set-up to automatically record a total field measurement every 2 seconds. The NAD27 / UTM Zone 13 North coordinates (in meters) of the base magnetometer location are 485386.8 East and 45555088.1 North with an elevation of 2125.3 m. A value of 52540 nT was assigned to the base magnetometer. The base magnetometer was operated at all times that magnetic data were being acquired with the roving magnetometer.

Trimble Model GeoExplorer XT and XH GPS receivers were used to provide navigation and positioning. The receivers were configured to receive differential corrections in real-time from WAAS (Wide Area Augmentation System) geo-stationery satellites. The resulting positions usually have an accuracy of about two meters. The positions of the magnetic readings were recorded on the G-858 magnetometer in WGS-84 latitude and longitude.

After downloading the magnetic data from the magnetometers onto a notebook PC, diurnal corrections were applied by assigning an appropriate value to the base magnetometer location using the Geometrics software package, *MagMap2000*. The editing mostly consists of deleting readings affected by cultural noise and deleting dropouts which are large-amplitude negative spikes that occur when the magnetometer sensor is tilted too far from a vertical orientation.

Data quality appears to be good and additional details concerning survey logistics are located in the Appendix.

DATA PROCESSING

As noted, the field data were edited to remove cultural features such as fences and metallic junk. The upper image of Figure 3 presents a station posting where removal of such features is evident, particularly fence lines.

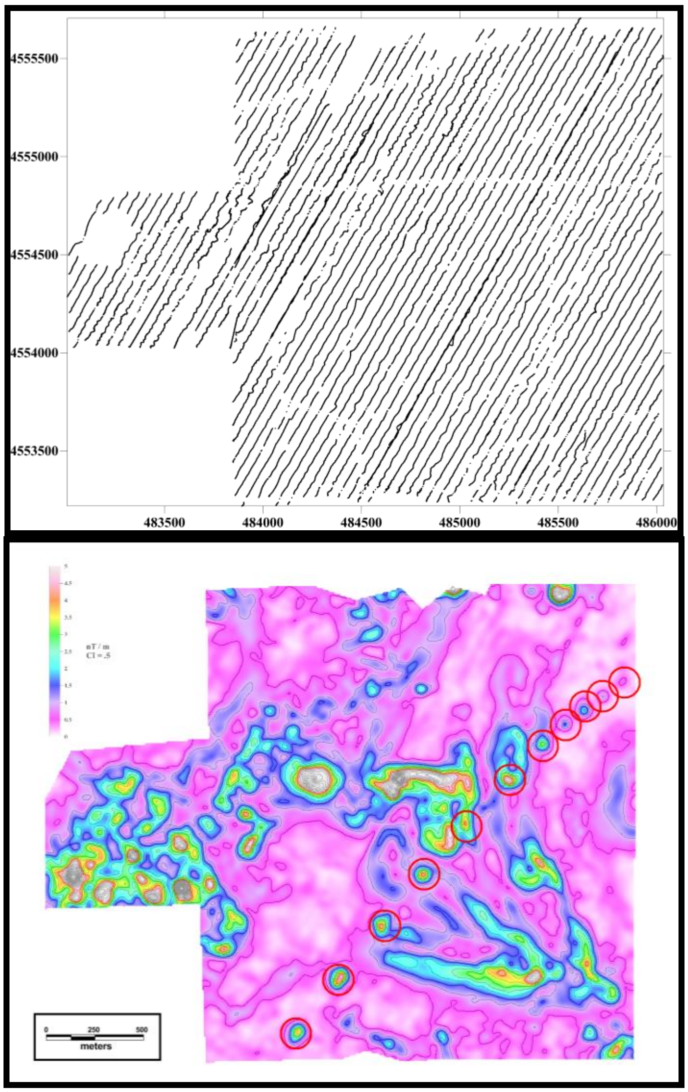


FIGURE 3: Station Posting (Upper) and RTP Horizontal Gradient (Lower)

The lower image of Figure 3 is the reduced-to-pole (RTP) total horizontal gradient. Marked on the image as red circles are line intercepts with a pipeline which angles across the survey. The pipeline produced sharp magnetic highs which were not removed in the cultural editing. However, once recognized, the responses pose no problem for interpretation of the results.

The diurnally corrected total field data were gridded with a kriging algorithm at a spacing of 10 m or 20% of the line spacing. The resulting grid was then filtered with a nine point Gaussian filter to yield the final total field (TF/TMI) product. This product was reduced to the pole (RTP) with a USGS algorithm. From the RTP grid a residual (RES) was extracted by upward continuation (UC) 300 m and subtracting from the RTP to produce the RES, which also received some low pass filtering. In addition, a first vertical derivative (VD) and total horizontal gradient were computed directly from the RTP. The six (6) grids (i.e. TF, RTP, RTP_UC, RTP_RES, RTP_HG and RTP_VD) were mask to the data limits and imaged / contoured for import into MAPINFO / ARCGIS as separate file sets for the images and corresponding contours. Color bars with data units and contour interval were embedded directly into the various GIS images.

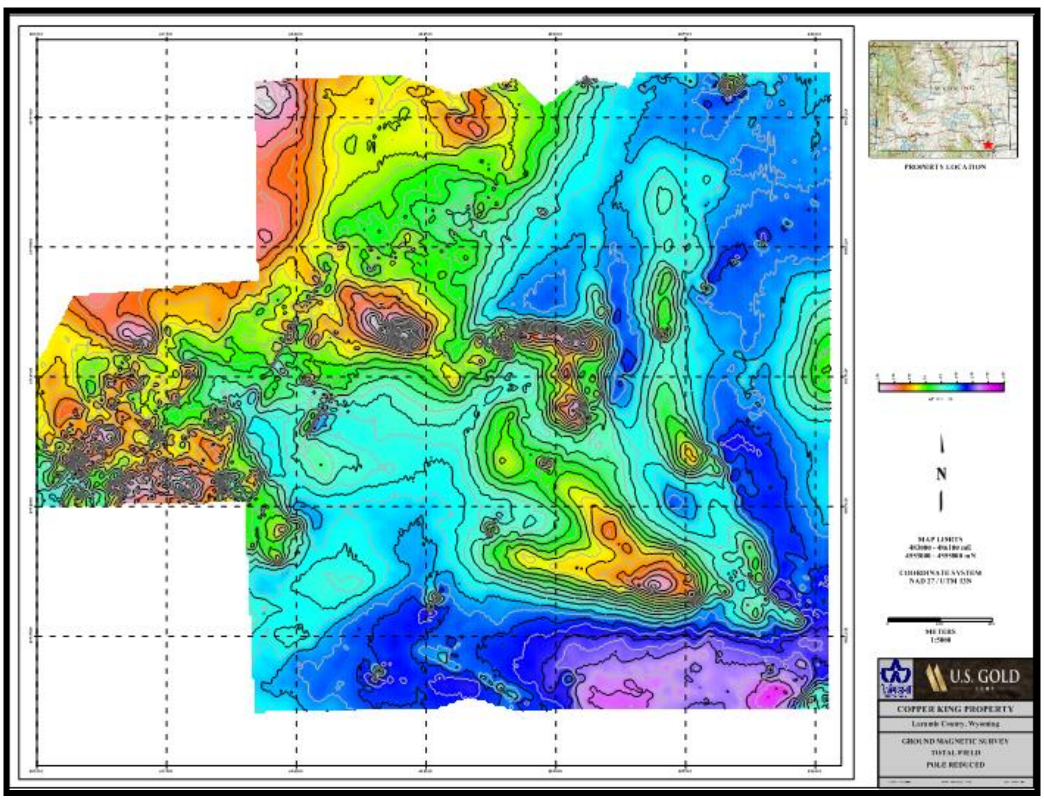


FIGURE 4: Example Plot

As noted previously, SURFER SRF plot files at 1:5000 scale are provided on the DVD for a variety of data products listed in the Table of Contents. Figure 4 shows and example plot from the SRF file.

INTERPRETATION

Figure 5 shows the three primary magnetic field data products over topography.

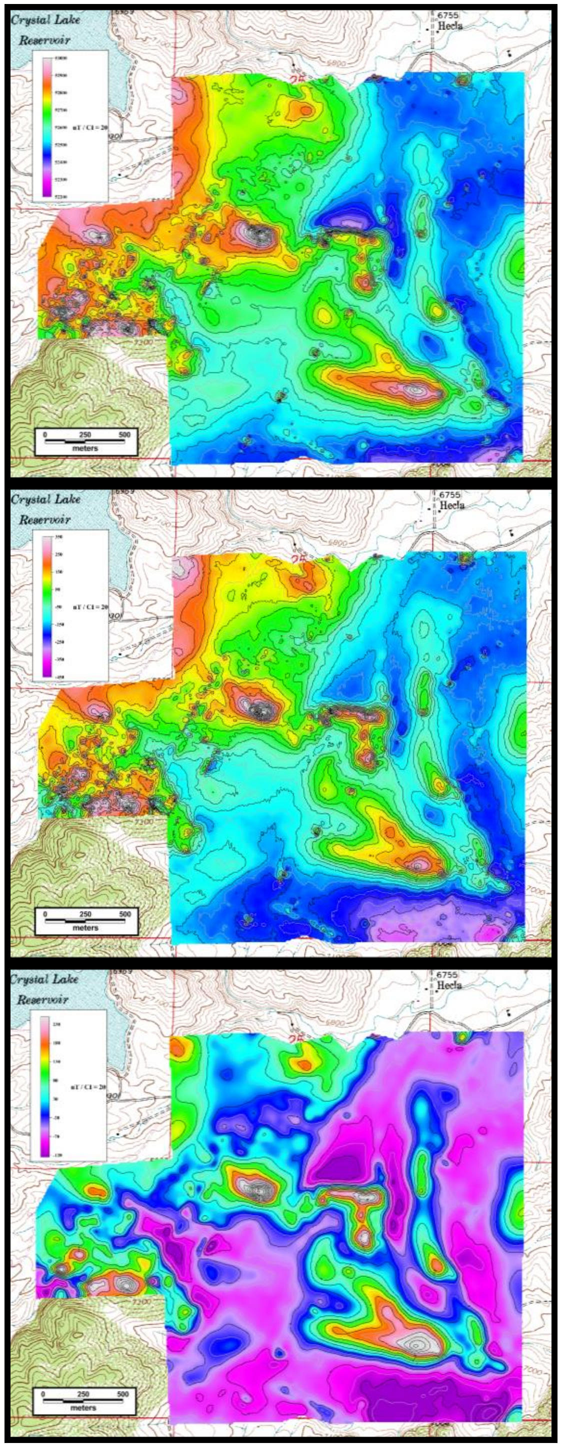


FIGURE 5: TF, RTP and RTP_RES over Topography (Top to Bottom)

The data shown in Figure 5 agrees well with the earlier work of Garland (1997). However, the currents survey is more detailed (50 m lines) and more expansive. In addition, the data is in digital form which permits computation of secondary products, unlike the sole image of the Garland (1997) survey's total field map.

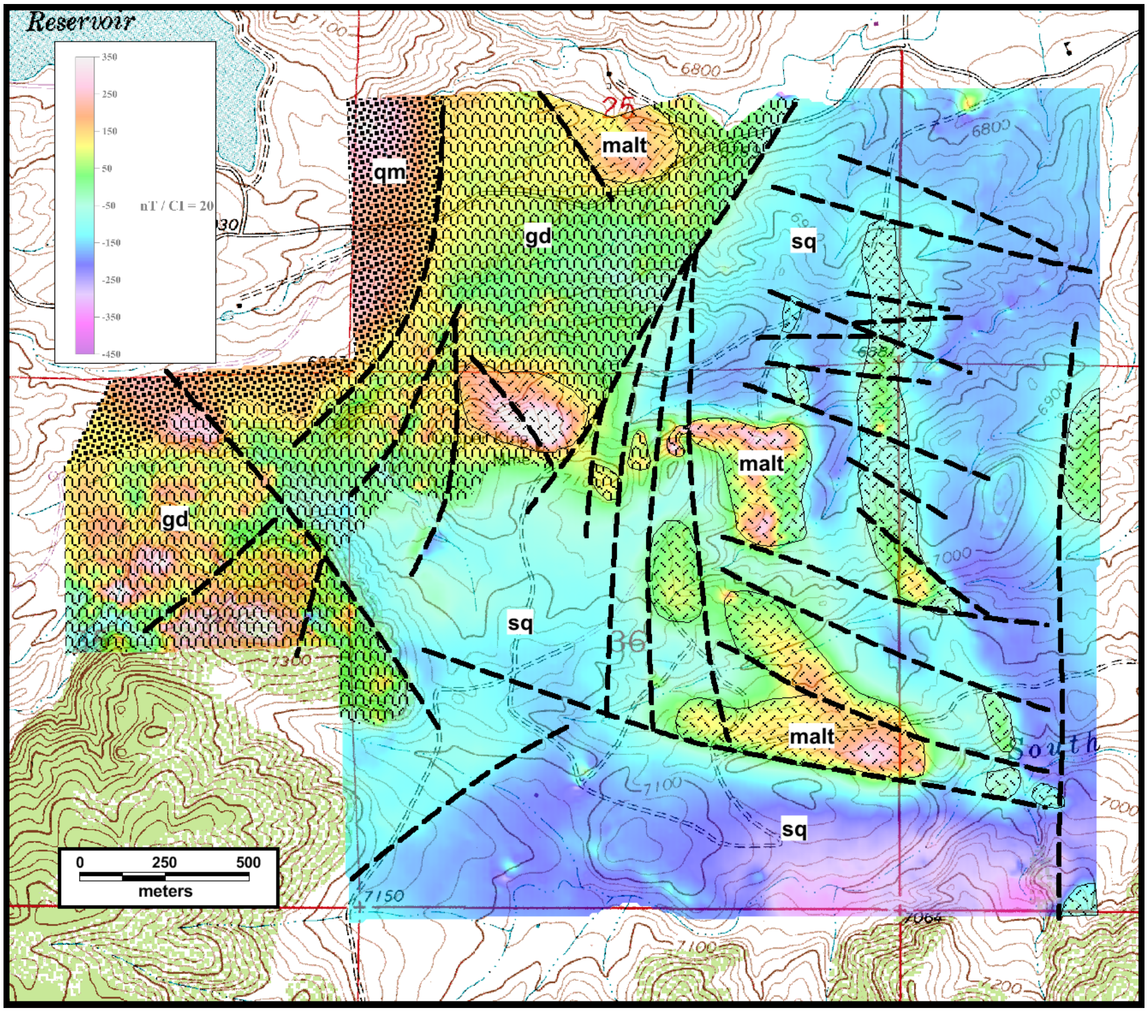


FIGURE 6: RTP Magnetics, Interpretation over Topography

Figure 6 presents a preliminary interpretation over the RTP magnetics and topography. Abbreviations for rock units in the interpretive overlay are **qm** – quartz monzonite, **gd** – granodiorite, **sq** – sandstone/quartzite and **malt** – magnetite alteration. These are sourced from a geologic map presented in Figure 7 with the interpretation overlain. The **gd** produces elevated erratic magnetic responses, while the **sq** to the east produces smooth low amplitude responses. The contact between the two is interpreted to be fault contact which horsetails into five faults immediately east of the Copper King mine. Along the northwest margin of the survey are elevated magnetic values associated with a smoother texture relative to the **gd**. This area is interpreted to be dominated by **qm**, possibly intermixed with **gd**.

A prominent magnetic high correlates directly with the Copper King mine and is known to be produced by magnetite in close associated with the copper / gold mineralization. Numerous other magnetic highs of similar character occur to the east of the mine in the **sq** rocks. For clarity, these **malt** areas are shown in Figure 8 in red. At this time, these magnetic highs are interpreted to be produced by magnetite related to some form of alteration process, thus the **malt** label.

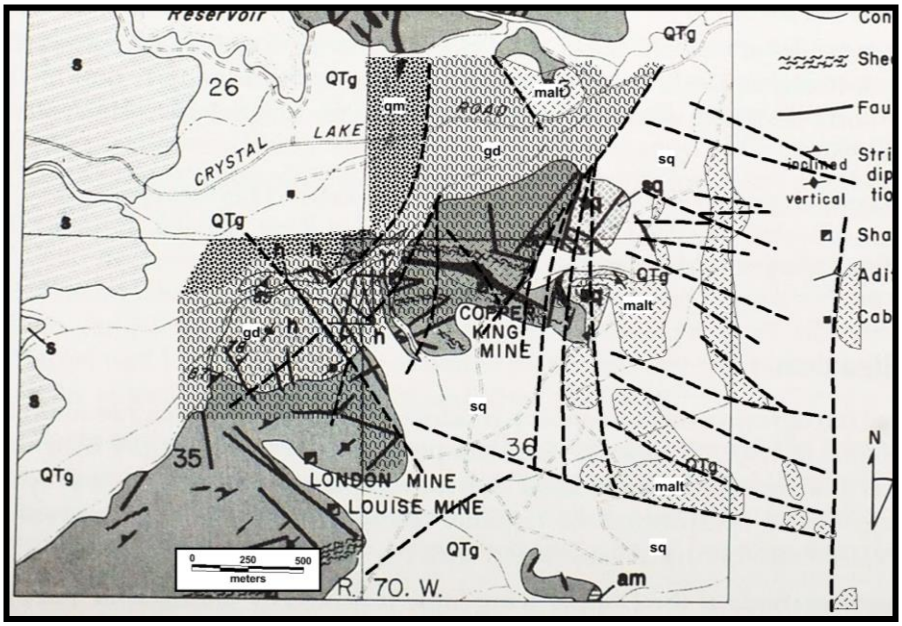


FIGURE 7: Geology with Interpretation

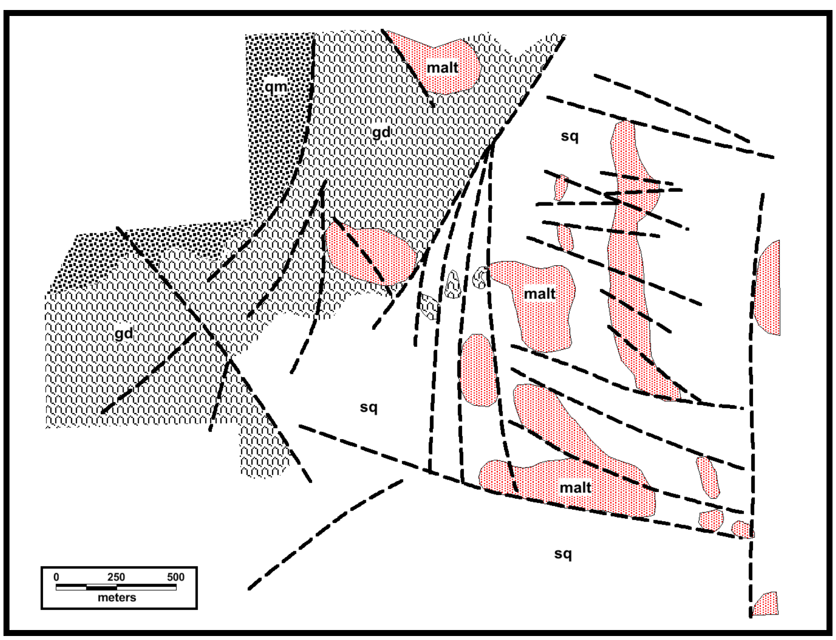


FIGURE 8: Malt Magnetic Highs

Structures appear to follow two main orientations: north-south and west-northwest. The major north-south structures are likely related to the range front system, which bounds the east side of the Laramie mountains. The various **malt** anomalies are cut, offset and facetted by the various east-west structures. In addition, other major north-south structures, not shown, could well play a role in controlling the **malt** distribution.

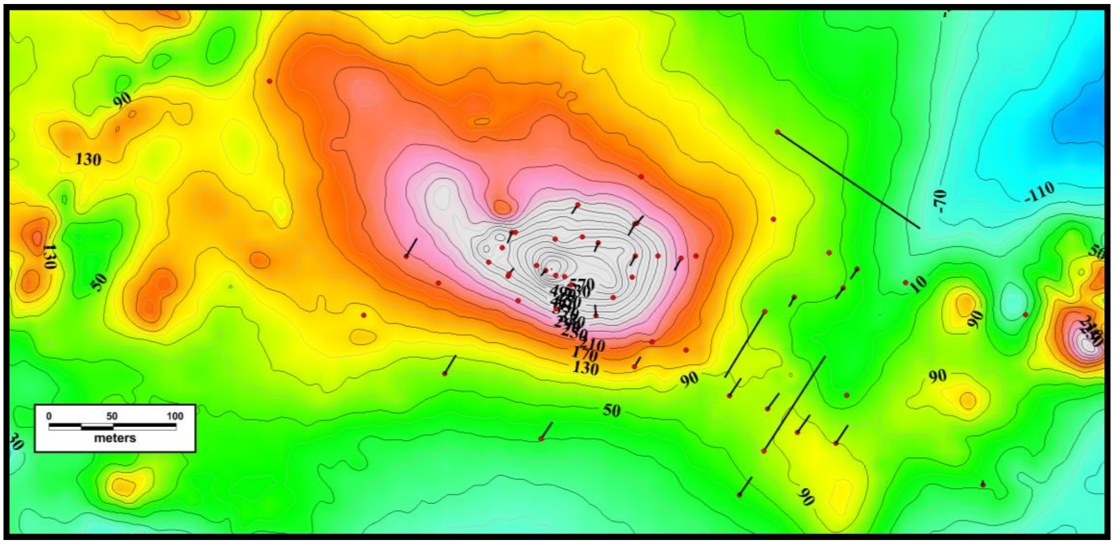


FIGURE 9: RTP Magnetics and Copper King Mine Drill Collars / Traces

Drill collars and traces in the vicinity of the Copper King mine are shown over the RTP magnetics in Figure 9. Clearly drilling and mine working correlate with the highest magnetic response. Exploratory drilling extends to the southeast into the major north-south structural corridor. It appears the main magnetic anomaly extends a considerable distance to the northwest and has not been drill tested. The reduction in magnitude suggests the magnetic body could well be plunging to the northwest. **If the drill plot is up to date, then considerable exploration potential exists along this northwest extension.**

CONCLUSIONS AND RECOMMENDATIONS

The ground magnetic survey agrees with earlier magnetic work and defines a complex lithologic / structural setting with two major fault sets. The north-south set is a major feature related to the eastern range front of the Laramie Mountains. Numerous magnetic anomalies, with character similar to the magnetic response of the Copper King mineralization, are offset by the structures. An obvious northwest extension of the magnetic response at the Copper King mine appears to not have been explored. This is considered a prime exploration target.

The pending induced polarization (IP) survey should be completed as well as a complete compilation of any historic drilling. The compilation is critical to verifying the northwest extension target.

REFERENCES

Garland, R. F., 1997, Ground magnetometer & VLF-EM geophysical survey results, Copper King mine area, Laramie county, Wyoming: Mountain Lake Resources Inc. company report.

APPENDIX

GROUND MAGNETIC SURVEY

over the

COPPER KING PROSPECT
Laramie County, Wyoming

for

U.S. GOLD CORP.
JULY 2017

SUBMITTED BY

Magee Geophysical Services LLC
465 Leventina Canyon Rd
Reno, Nevada 89523 USA
TEL 775-742-8037
FAX 775-345-1715
Email: chris_magee@gravityandmag.com
Website: www.gravityandmag.com

INTRODUCTION

A ground magnetic survey was conducted over the Copper King Prospect in Laramie County, Wyoming for U.S. Gold Corp. during the period of June 16 through June 22, 2017. A total of approximately 112.7 line kilometers of magnetic data were acquired along profile lines orientated at N030E with 50m line spacing using Geometrics Model G-858 magnetometers. Real-time differentially-corrected GPS was used for positioning.

Measurements of the total magnetic intensity were taken in the continuous mode at two-second intervals. A base magnetometer was operated during all periods of data acquisition and recorded readings every two seconds. The field operations were based out of Cheyenne, Wyoming.

Magnetic data from this survey have been diurnally corrected and forwarded to consulting geophysicist Jim Wright for further processing and interpretation.

DATA ACQUISITION

Survey Personnel
Matt Magee, Matt LaRiverie and Kyle Tjepkes acquired the ground magnetic data and operated the GPS for navigation and positioning. Christopher Magee supervised survey operations, performed quality-control analysis and processed all of the magnetic data.

Roving Magnetometers
Geometrics G-858 Cesium Vapor magnetometers were used on this project to measure the total magnetic field with a resolution of 0.001 nT. The magnetometer sensors were mounted on aluminum poles attached to backpacks with sensor heights of about 2.9 meters above ground level. The relatively high sensor heights are necessary to maximize the distance between the sensor and the GPS antenna and minimize the heading errors caused by the presence of the GPS antenna. The heading error with this system is on the order of one to two nT. The magnetometers were set up to record the total intensity of the magnetic field every two seconds resulting in an average sample spacing of two to three meters or less.

Base Magnetometer
A Geometrics Model G-858 magnetometer was also used as a base magnetometer to record diurnal changes in the Earth's magnetic field. The base magnetometer was set up in an area where the gradient of the magnetic field is low as determined by a quick site survey that was performed. The base magnetometer sensor was secured to a 6-foot staff and the unit was set up to automatically record a total field measurement every 2 seconds.

The NAD27 / UTM Zone 13 North coordinates (in meters) of the base magnetometer location are 485386.8 East and 45555088.1 North with an elevation of 2125.3m. A value of 52540 nT was assigned to the base magnetometer location on June16, 2017.

GPS Positioning
Trimble Model GeoExplorer XT and XH GPS receivers were used to provide navigation and

positioning. The receivers were configured to receive differential corrections in real-time from WAAS (Wide Area Augmentation System) geo-stationery satellites. This system is operated by the United States Government Federal Aviation Administration. The resulting positions usually have an XY accuracy of about two meters. The GPS receivers were set up to output a NMEA string of positional data to be recorded on the magnetometer along with the magnetic readings. The positions of the magnetic readings were recorded on the G-858 magnetometer in WGS-84 latitude and longitude.

Magnetic Profile Lines

A total of approximately 112.7 line kilometers were surveyed. On lines spaced 50m apart with variable lengths. Some lines had to be offset slightly or have small gaps in coverage due to the presence of barbed-wire fences. There are other small gaps in coverage where cultural objects such as old mining junk and houses were present. The survey was suspended before completing the initial program of about 118 line-kilometers due to access and private property issues.

DATA PROCESSING

Overview

After downloading the magnetic data from the magnetometers onto a notebook PC, diurnal corrections were applied (by assigning the appropriate value in nT to the base magnetometer location) using the Geometrics software package, *MagMap2000*. Geosoft compatible XYZ files were then generated with WGS-84 geographic coordinates for each magnetic measurement. After importing the XYZ files into a Geosoft Oasis montaj database, NAD27 UTM coordinates were projected, profiles were prepared, and additional editing was performed as necessary. The editing mostly consists of deleting readings affected by cultural noise and deleting dropouts which are large-amplitude negative spikes that occur when the magnetometer sensor is tilted too far from a vertical orientation.

DATA FILES

Raw Data Files

All of the raw data files for the project are included with the delivered data. Field and base magnetometer files are in binary format with the filename extension *.bin*. The *.bin* files are unedited. XYZ files are output from MAGMAP 2000 and contain the raw measurements, diurnal corrections, and WGS-84 latitude and longitude. Files are named with the date and operator initials.

Geosoft Database File and Final XYZ File

The Geosoft database file with the all of the processed and edited ground magnetic data included with the delivered data is named *copper_king_GMAG.gdb*. The Geosoft database file was also exported as an XYZ file and is named *Copper_King_GMAG_Jul_10_2017.XYZ*.

Grid File

The file name of the grid file used to create the map in this report is as follows and is included with the delivered data: *tmi.grd.*