TABLE OF CONTENTS

INTRODUCTION:

The Ivanhoe Creek property is located approximately 80 kilometers northwest if Elko, Nevada. Details concerning the location are tabulated below.

Township / Range:	T38N / R47E, 48E
UTM Limits (NAD 27):	532950 – 536200 mE / 4555670m- 4557800 mN
County:	Elko

Figure 1 shows the property outline and constitutive claims overlying topography.

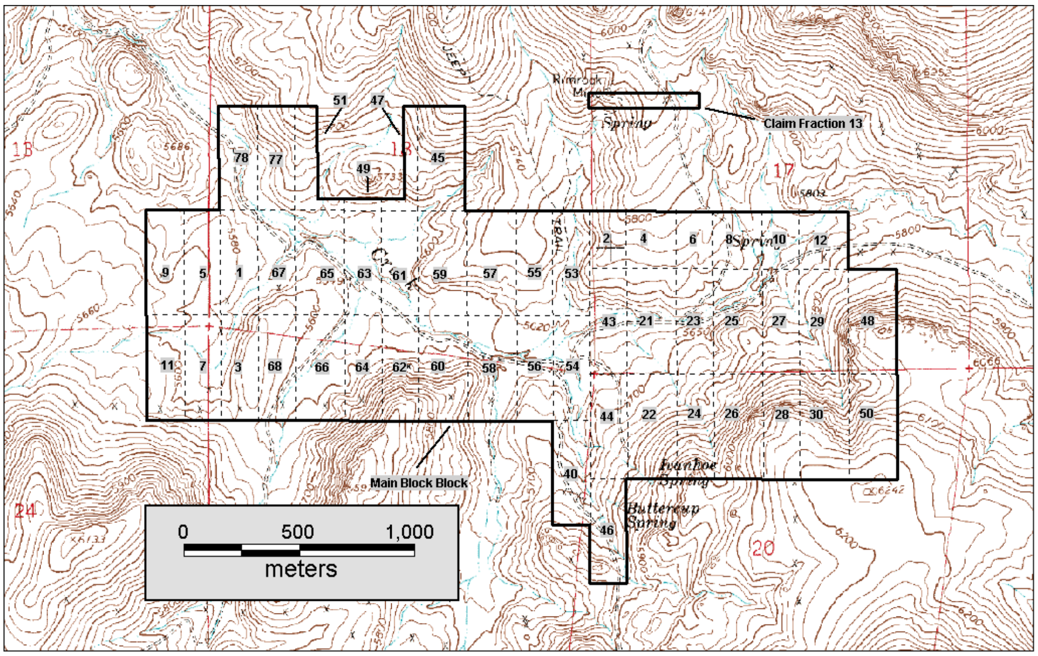


FIGURE 1: Ivanhoe Creek Property Location

This report reviews results generated by three geophysical surveys conducted in 2004: ground magnetic, gravity, and controlled source audiomagnetotellurics (CSAMT). As well, a regional review of the property is presented in order to place these property scale surveys into a larger context. The regional review utilizes USGS airborne magnetic and gravity data, as well as topographic and digital elevation data. An area 40 km east – west by 30 km north – south, centered on the property, had data compiled for the regional dataset. These data plus the property scale survey data are contained on a compact disk (CD) located at the rear of the report. A README.DOC file on the CD reviews the file structure. In addition to these digital data, a number of plots are located in map pockets at the rear of the report. Listed below are the map products.

COMBINED CSAMT, MAGNETIC, GRAVITY SECTIONS (6)	1:5000
RTP GROUND MAGNETIC SURVEY MAP	1:10000
CBA GRAVITY SURVEY MAP	1:10000
INTERPRETATION SUMMARY MAP	1:10000

Appendices at the rear of the report present contractor logistic summaries, proposed drill hole sections, and author qualifications. A second CD contains raw data files provided by Geophysical and Geodetic Services for the magnetic and gravity surveys.

The digital files contained on the CD include GIS MAPINFO files for all data sets, both regional and property scale. Also included are MAPINFO files for property positions, geology, topography, deposits, and drill proposals. These data constitute the GIS database, which is readily expandable as more data is accumulated. The volume of data is best analyzed within a GIS platform, such as MAPINFO.

A regional setting for the property will be developed, followed by a review of the three property scale surveys. Next a composite interpretation is presented leading to conclusions and recommendations.

REGIONAL REVIEW:

Figure 2 presents USGS regional gravity data in the vicinity of the Ivanhoe Creek property.

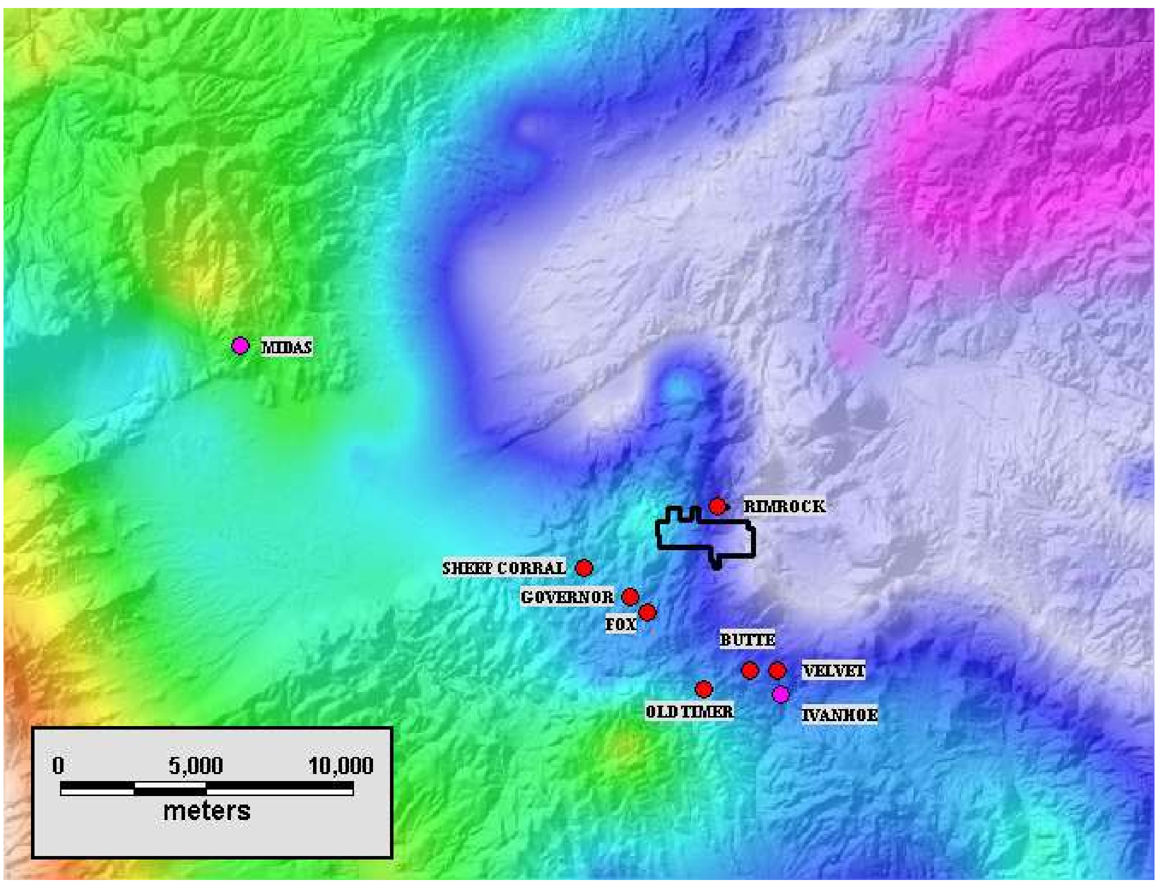


FIGURE 2: Regional Gravity, Deposits, Gray Shade Topography (Mercury Deposits – red / Gold Deposits – magenta)

Gold and mercury deposits fall along the flanks (gradients) of gravity highs. The Ivanhoe Creek property straddles a prominent north-south gravity gradient, with a localized high immediate west of the property. This north-south gravity gradient is also reflected in the topography. These gravity gradients reflect the juxtaposition of volcanic units against Paleozoic basement. This juxtaposition often occurs along deep structures, providing conduits for hydrothermal flow and deposition of mineralization, thus the tendency for both mercury and gold deposits to cluster along gravity gradients. On the property scale, north – south structures will tend to be of deep seated origin.

Figure 3 presents USGS regional airborne magnetic data in the vicinity of the property.

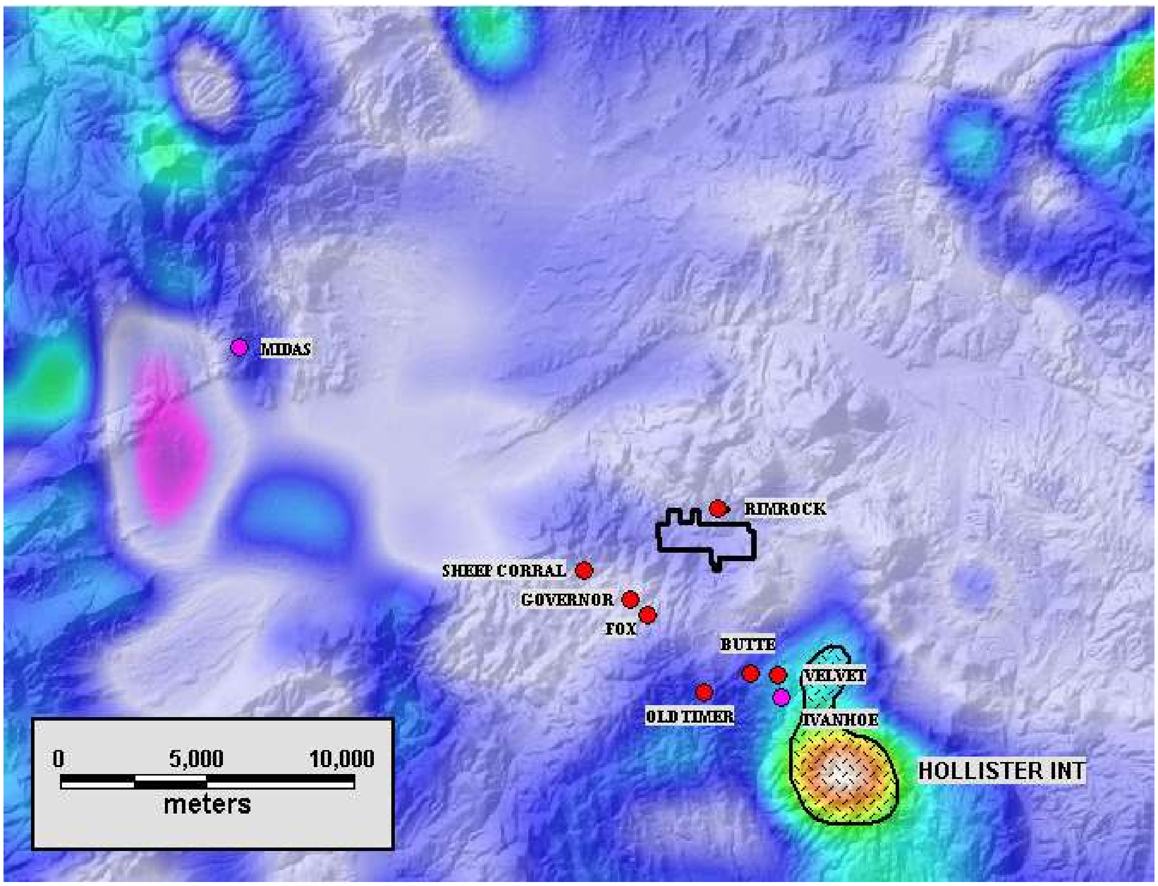


FIGURE 3: Regional Airborne Magnetics, Deposits, Gray Shade Topography (Mercury Deposits – red / Gold Deposits – magenta)

Most prominent in the airborne magnetics is the Eocene Hollister intrusion. A weak magnetic high is situated two kilometers west of the property, roughly coincident with gravity high noted previously. This coincidence is the result of Eocene volcanic units immediately above the Paleozoic basement being exposed in the area. Figure 4 shows geology extracted from Wallace (2003) and superimposed on the airborne magnetics.

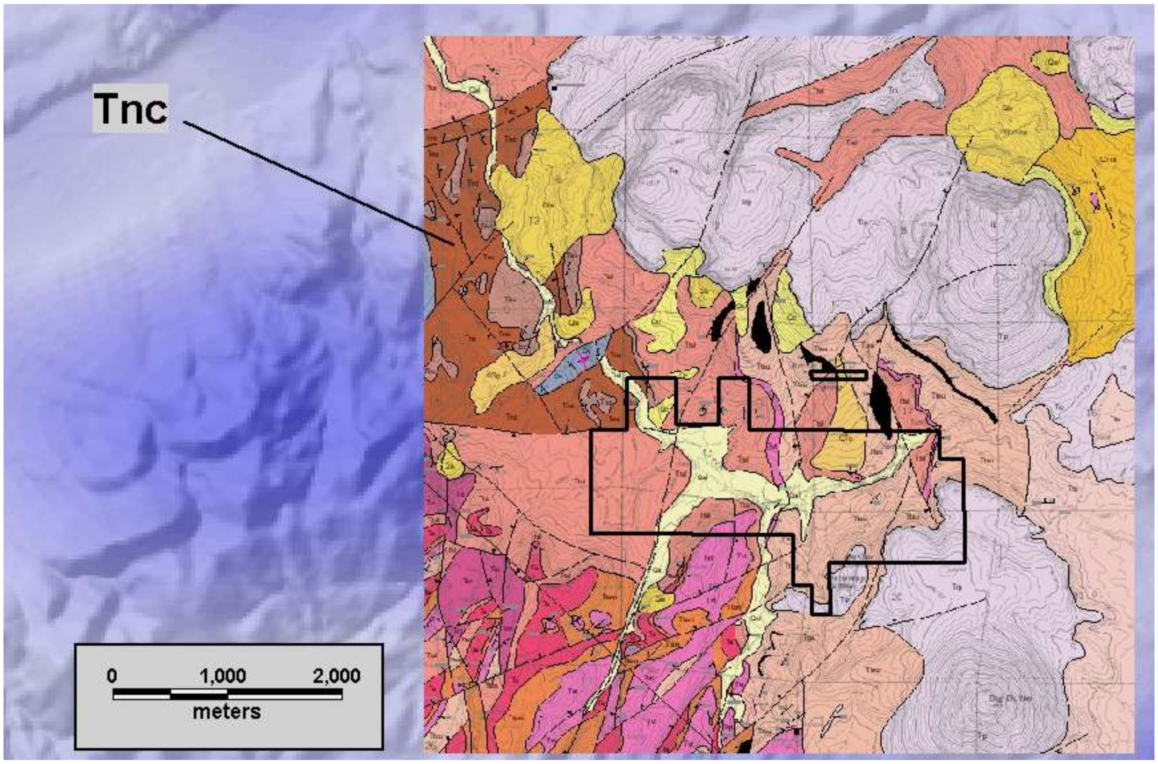


FIGURE 4: Geology (Wallace, 2003), Regional Airborne Magnetics

The weak airborne magnetic high correlates with the Tnc unit as mapped by Wallace (2003). Tnc is the Nelson Creek tuff of rhyolitic to trachydacitic composition. Referring to Figure 3, the weak magnetic high fades to the east beneath the property, which is consistent with a deepening of the basement and overlying Tnc.

The regional analysis indicates a prominent north – south, deep seated, structural zone cuts the property with elevated basement to the west. Both the gravity and airborne magnetic data support this interpretation. Northeast oriented structures are well reflected in the topography (see Figure 2); however, these do not appear to be of deep seated origin. Gold and mercury deposits, as would be expected, cluster along the gravity gradients.

GRAVITY SURVEY:

Geophysical and Geodetic Services with offices in Reno, Nevada gathered 93 stations along six N75E bearing profiles across the property. In addition, a number of stations were acquired along three roads surrounding the property. Figure 5 presents the gravity stations locations over topography. Station spacing along the profiles is 150m and 500m on the roads. Profile spacing is 300m. Logistical details concerning the survey are presented in Appendix A.

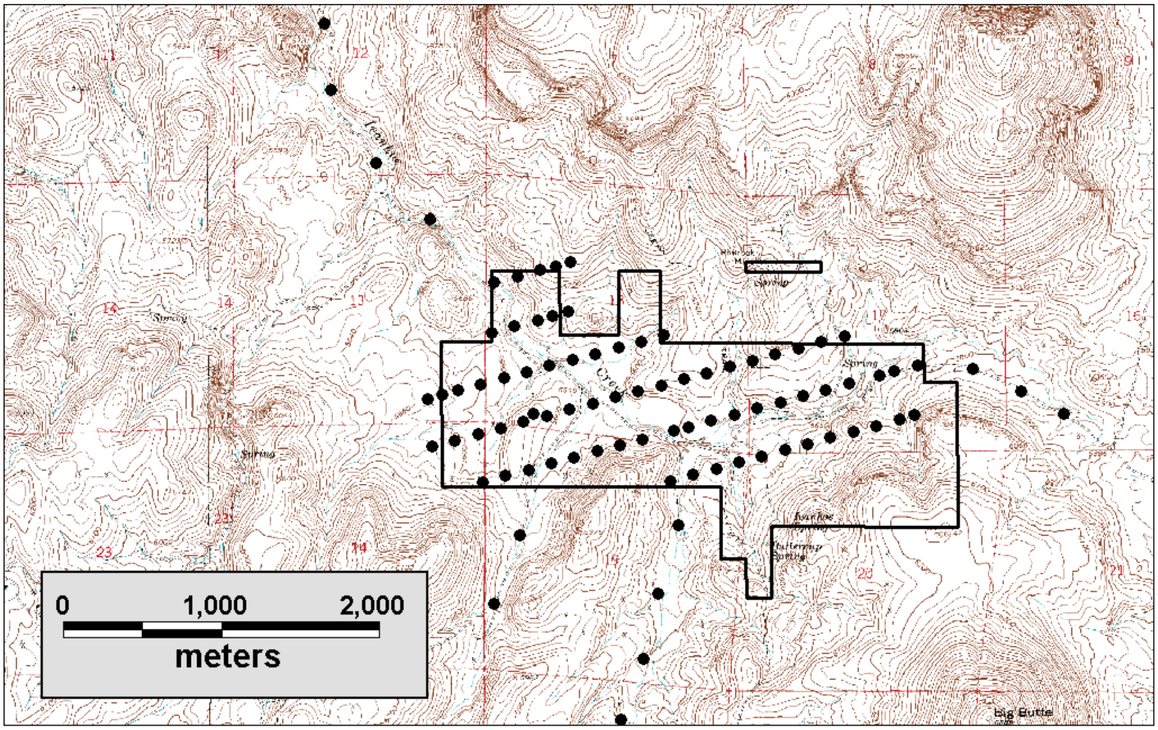


FIGURE 5: Gravity Station Location, Topography

The primary objective of the survey is to map basement geometries beneath the volcanic cover. Rapid basement variations along linear trends map structures offsetting the basement.

Figure 6 presents the complete bouguer gravity anomaly at a density of 2.40 g/cc overlying a windowed portion of the quadrangle geology by Wallace (2003). Outcropping Paleozoic Vinini Formation (Ov) is noted on the figure. This coincides with elevated gravity values. In fact, a localized high is noted over an exposed wedge of Ov on the survey's northwest extreme. Using gravity to map siliciclastic basement rocks beneath volcanic lithologies is a well established practice in northern Nevada. Several primary structural elements are noted on the figure. Most prominent is a basement high occupying the western quarter of the property and extending to the west. Immediately east of this, a basin filled with Miocene volcanic material occurs. Depth of the basin is extensive, being on the order of 500m or more. A prominent horst block, elongated north – south terminates the basin to the east. The horst is on the order of 300m in width. East of the horst volcanic cover again thickens. Finally, an east-northeast trending graben is noted south of property. This graben, or trough, parallels the Midas Trough located to the north, and is an expected structural element. Several bounding structures are shown, which were interpreted primarily from the CSAMT data to be discussed later; however, they are fully supported by the gravity. As well, Wallace (2003) has mapped faults which agree with these structures at many locals.

As noted in the regional analysis, this north – south structural texture is to be expected. Furthermore, these structures are deep seated and likely conduits for hydrothermal fluids.

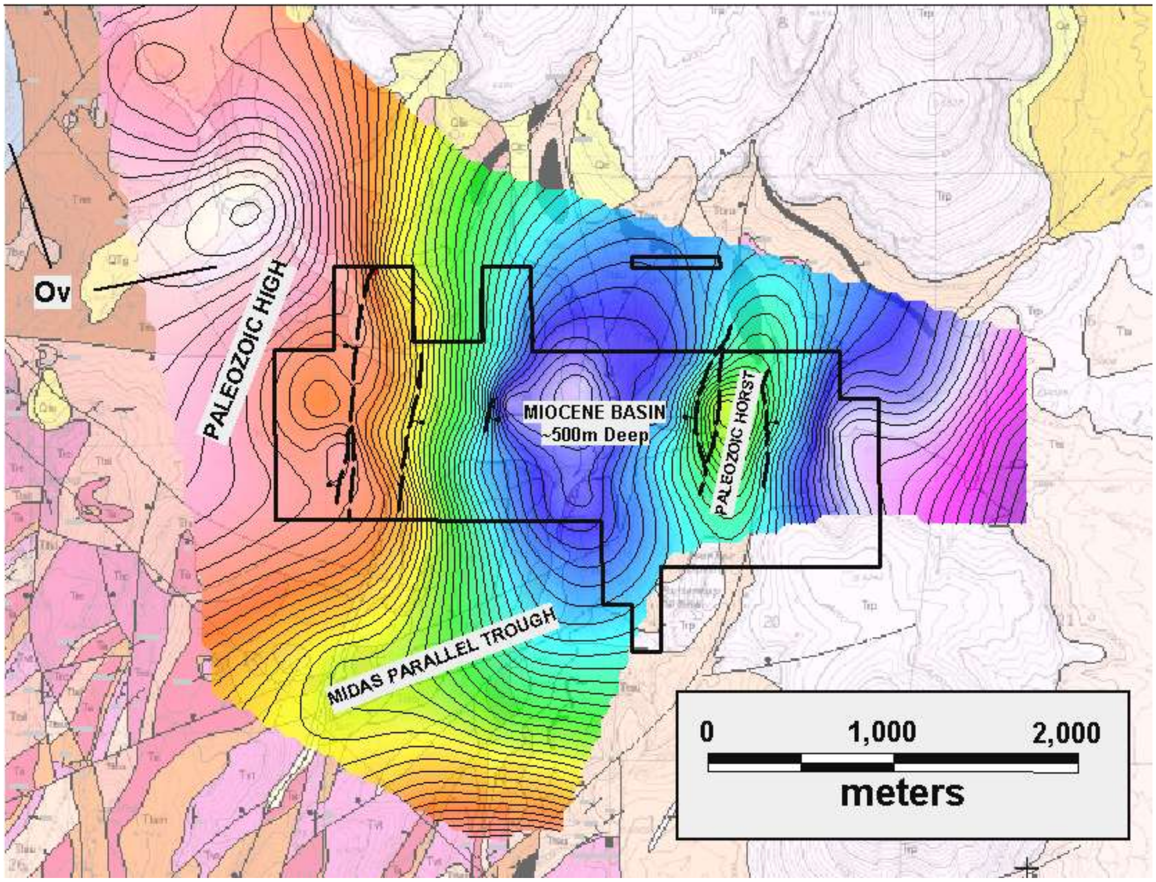


FIGURE 6: CBA Gravity @ 2.40 g/cc, Geology (Wallace, 2003)

GROUND MAGNETIC SURVEY:

Geophysical and Geodetic Services with offices in Reno, Nevada gathered approximately 21.9 line-km of ground magnetic data on 150m spaced lines oriented N75E. Station spacing was variable, but on the order of 3m. Logistical details concerning the survey are located in Appendix A.

Ground magnetic data are capable of delineating alteration such as argillization and silicification, provided the surrounding rock units are somewhat magnetic. Also, structures can be revealed as linear features in the data. Again, a magnetic contrast must be present to observe these phenomena.

Figure 7 presents pole reduced total field data for the survey overlying Wallace's (2003) geology. Shown on the figure are structures and structural elements reviewed in conjunction with the gravity survey. Also shown are hatched polygons defining areas of interpreted alteration. The selection of alteration responses is somewhat subjective. Reduced magnetic response is the primary characteristic, preferably correlating with

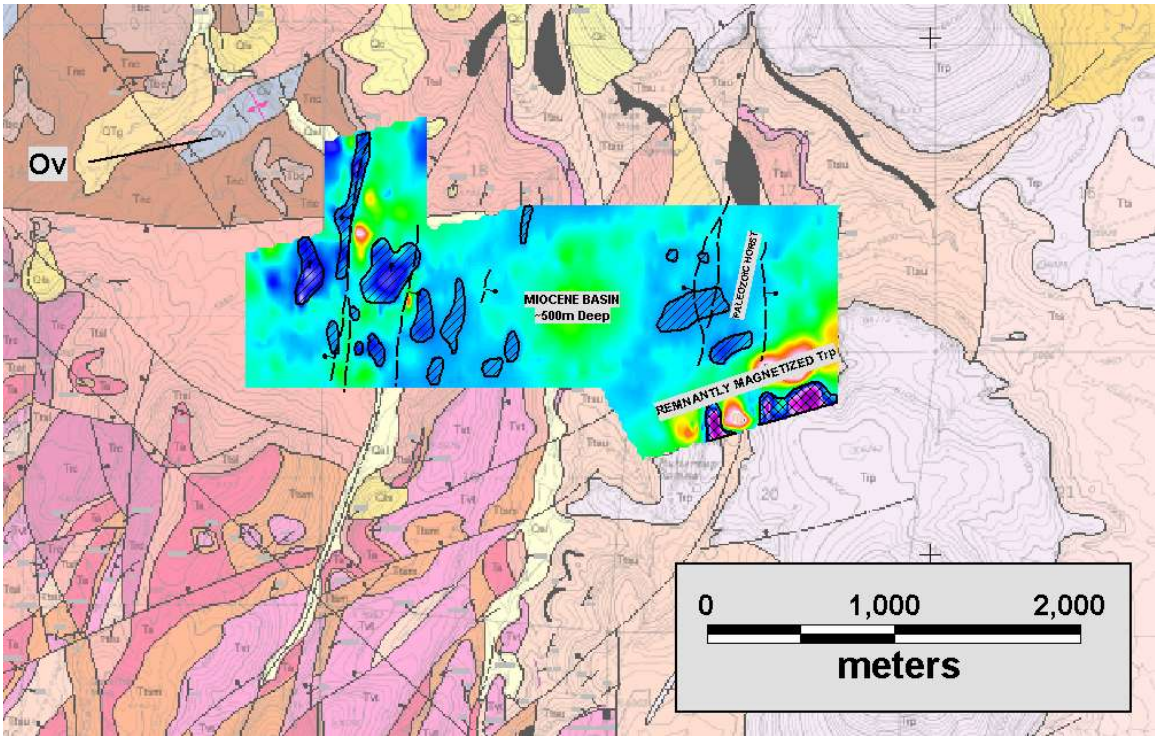


FIGURE 7: RTP Ground Magnetic Survey, Geology (Wallace, 2003)

known structures or structural fabrics. However, the magnetic response should not drop significantly below background. Argillization and silicification remove the magnetic constituent of the rock rendering the altered area none magnetic. Strong negatives are produced by magnetic units exhibiting reversed remnant magnetization. A good example is noted on the survey's southeast corner, where reversely magnetized Trp produces strong anomalously low readings. Flanking highs indicate these units to be thin and tabular, which is consistent with the geology. Two regions identified as possible alteration are tagged with question marks (**?**) due to the slightly larger magnitude of the lows. In addition, these correlate with weak gravity lows, suggesting small pockets of reversely magnetized volcanics sitting on Paleozoic basement. Significantly, a number of the interpreted alteration zones correlate directly with structures defined by the gravity and CSAMT. The Miocene basin defined by the gravity correlates very well with a weak magnetic high. This correlation is well demonstrated on the CSAMT sections located at the rear of the report.

CSAMT SURVEY:

The foregoing regional and property scale surveys yield a consistent picture of north – south oriented structures modulating the basement beneath Eocene / Miocene volcanic cover. Several structures and areas of possible alteration are defined. The CSAMT technique, which maps resistivity variations, is capable of confirming and defining in greater detail this interpretation. Interestingly, the magnetic and gravity techniques measure variations in magnetic susceptibility and density respectively. Thus the three techniques measure different bulk parameters of the rock mass. Correlation between these different parameters is a strong indicator of an interpretation's correctness.

Zonge Geosciences of Reno, Nevada acquired data on six lines oriented N75E. These are the same lines on which the gravity data were acquired (see Figure 5). An electric dipole spacing of 50m was employed on the 150m spaced lines. Dipole spacing determines the resolution of the survey, which on the order of half the dipole length - 25m. Additional details concerning the survey logistics are located in Appendix B.

Figure 8 presents stacked profiles of the inverted CSAMT sections overlying gravity and geology.

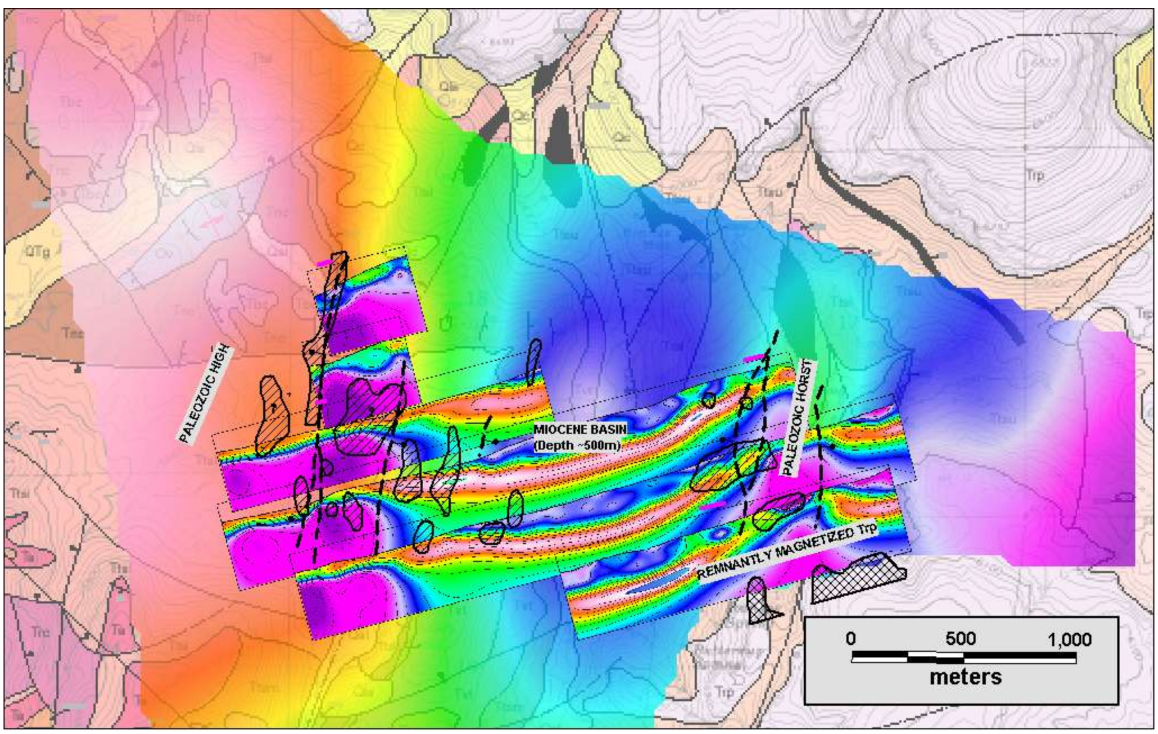
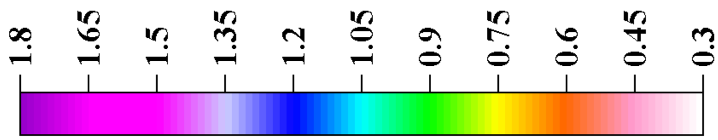


FIGURE 8: **Stacked CSAMT Sections, Gravity, Geology (Wallace, 2003) & Interpretive Overlay**

Vertical scale on the stacked CSAMT sections is 400m. Higher resistivities correspond to cooler colors and lower resistivities to hotter colors as the color bar below shows.



Log ohm-m

All sections are adjusted to this color scale, which ranges from approximately 2 to 60 ohm-m. These resistivities on an absolute scale are low, even for volcanic terrains in Nevada.

Clearly evident on the figure is the direct correlation of resistivity and gravity highs, which are interpreted as basement. The Miocene basin is typified by a two layer resistivity section of high over low resistivities. Below this a return to higher resistivities is indicated. However, this is indeterminate due to penetration constrains imposed by the low resistivities. The layering appears very uniform, in contrast to the geology present by Wallace (2003). In the area of the basin, Wallace (2003) suggests a stacked sequence of Miocene volcanic units down faulted to the west and rotated producing a 20 degree easterly dip. The CSAMT shows a draped sequence of volcanics in-filling a basin with very little faulting internal to the basin. Gentle easterly dips to the units are indicated in the western portion of the basin. Gravity indicates a total depth of volcanic units within the basin exceeding 500m. This is in agreement with the CSAMT.

Figure 9 shows the CSAMT section from Line 300S in more detail, along with gravity and magnetic profiles.

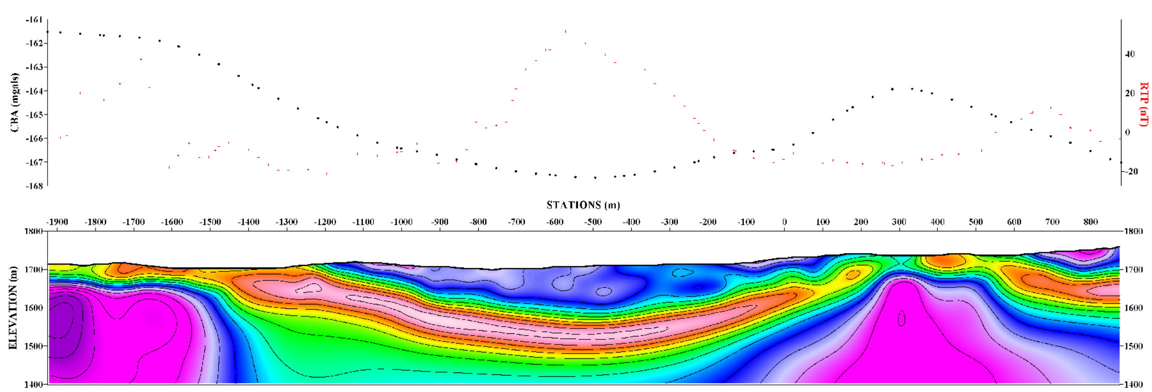


FIGURE 9: CSAMT Section Line 300S, Gravity & Magnetic Profiles

Figure 9 demonstrates the excellent correlation between gravity (black dots), ground magnetic (red crosses) and CSAMT data. Similar plots for all lines are located in the map pocket in the rear. The magnetic data show a modest 60 nT anomaly directly over the basin, clearly caused by the basin fill. Gravity shows a direct correlation with the deep resistive features. Again, these resisitivity and gravity highs are mapping areas of elevated basement (Ov).

Six (6) locals on the CSAMT section are identified as exhibiting responses possibly related to silicification. As with alteration mapping with magnetics, the identification of altered areas with CSAMT can be somewhat subjective. Tabulated below are line positions for the six areas.

Line 900N, 1425W
Line 300N, 1625W
Line 300S, 1825W
Line 600S, 25W
Line 600S, 250 – 400E

The last location exhibits a strong, tabular, near surface, response very characteristic of siliceous sinter. Figure 10 shows a windowed portion of Line 600S in the vicinity of both this anomaly and the one at 25W.

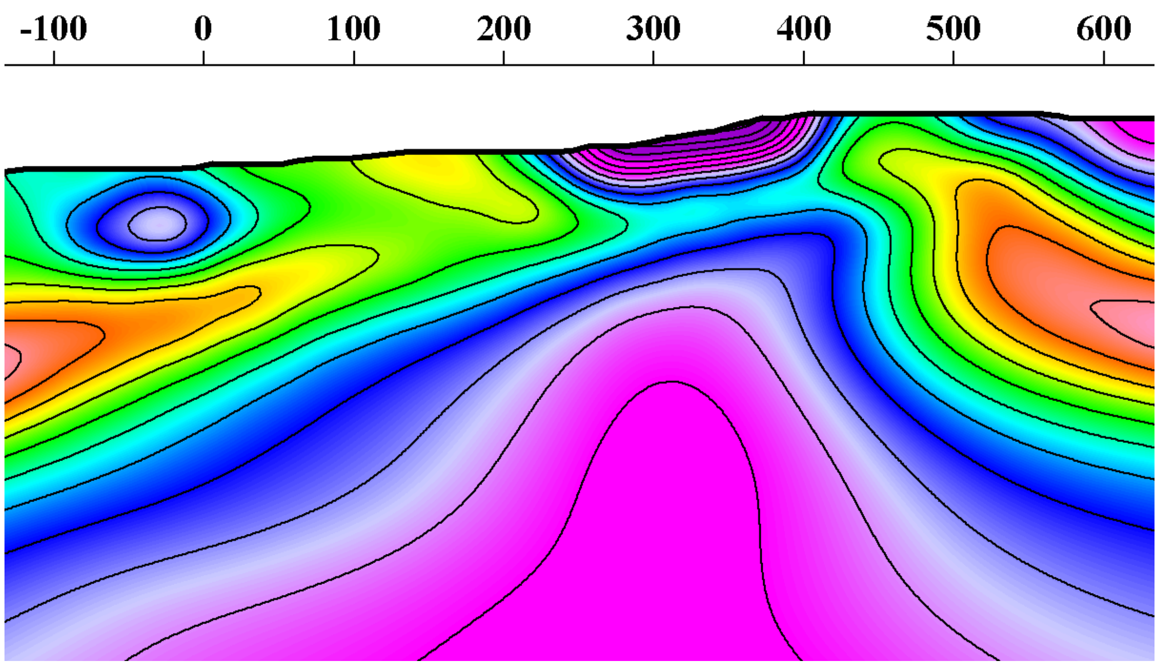


FIGURE 10: CSAMT Section Line 600S

The surface resistivity high from 250 – 400E is a classic silicification type anomaly. Interestingly, it is situated directly over the apex of the Paleozoic horst. Estimated depth to the Ov is approximately 100m. Harrington (2004) makes the following observation about an outcrop immediately north of station 300E – “cream colored very siliceous rhyolite ? very little original texture similar to zone near Rimrock mine”. Figure 11 presents an abstract of Figure 61 in LaPointe et. al. (1991) showing a section through the Velvet Deposit in the Ivanhoe District.

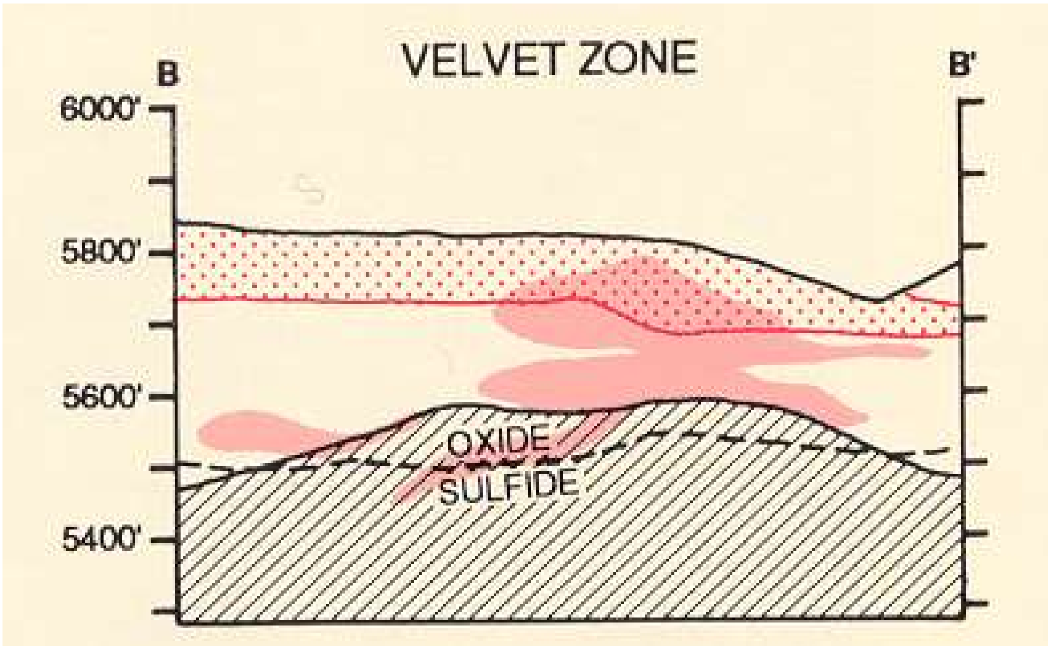


FIGURE 11: Velvet Deposit Section, Ivanhoe District, Elko County, Nevada

The basement Vinini Formation (Ov) is diagonally striped, overlying volcanics white, silicification red dots, and gold in solid red. As noted by LaPointe (1991), gold mineralization at Ivanhoe occurs along paleo-topographic ridges in the basement, as Figure 11 demonstrates. The resemblance between Figures 10 and 11 is compelling.

The six anomalous zones are marked with magenta bars on the accompanying Interpretation Summary map. As well, the associated MAPINFO file also designates these zones with magenta bars.

CONCLUSIONS AND RECOMMENDATIONS:

A coherent structural picture, supported by diverse data sets, has been developed. The picture is one of north – south oriented deep seated structures controlling basement topography and alteration in the overlying volcanics. The Paleozoic basement is overlain by predominately Miocene volcanic units, which appear to have been draped over the pre-existing Paleozoic basement. However, movement on the basement structures has offset the volcanic package to some extent. Four (4) major basement structures are identified with associated alteration.
Many volcanic hosted deposits in Nevada demonstrate a spatial and / or genetic relationship to variations in the underlying basement. For example, the Midway deposit in Nye County falls atop a basement high, as does the Ivanhoe Deposit (LaPointe, 1991) immediately to the south of the property. The Sleeper deposit in Humboldt County is

proximal to a major basement structure, which is interpreted as having served as the conduit for hydrothermal fluids responsible for the deposit's formation. In addition, recent discoveries at the Ivanhoe deposit have demonstrated that structures in the basement can host significant gold deposit. It is inferred these basement structures were feeders to the overlying volcanic hosted deposits. Both types of targets should be considered in any well planned drill campaign. Figure 12 presents proposed drill holes overlying the gravity and interpretation summary.

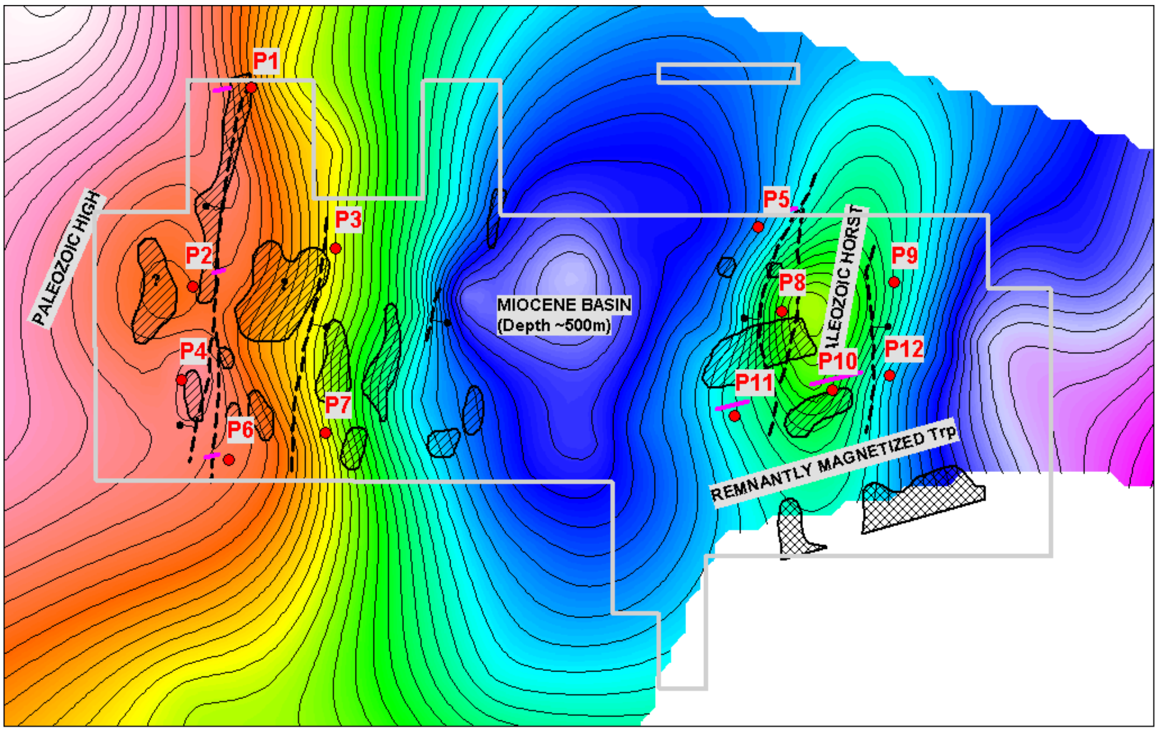


FIGURE 12: Gravity, Interpretation Summary & Proposed Drill Holes

Twelve (12) proposed drill holes are depicted in Figure 12. These target possible basement feeder structures and the overlying volcanics. The holes are positioned to intersect the volcanics proximal to the structure – volcanic intersection and continue downward to cut the feeder structure within the basement (Ov). This approach will test for both target types with a single hole. Proposed hole P10 is a direct test of the Velvet deposit model depicted in Figure 11. Table 1 gives specific details for the **collar** locations and hole geometries. **The holes should be spotted directly on the station stakes in the field to avoid possible costly location errors.** Appendix C contains interpretive sections for all holes showing the CSAMT data, interpreted structures, and hole projections.

HOLE	GRID N	GRID E	INCLINATION	DIRECTION	TD (m)
P1	900N	1325W	-60	GRID W	200
P2	300N	1700W	-60	GRID E	200
P3	300N	1200W	-60	GRID E	200

P4	0	1825W	-45	GRID E	200
P5	0	200E	-60	GRID E	300
P6	300S	1750W	-45	GRID W	200
P7	300S	1400W	-45	GRID W	200
P8	300S	200E	-60	GRID E	200
P9	300S	600E	-60	GRID W	200
P10	600S	300E	-90	-	200
P11	600S	50W	-60	GRID E	200
P12	600S	500E	-60	GRID W	200

TABLE 1: Proposed Hole Locations

The holes are based predominantly upon geophysical data with some supporting geologic input. No geochemical information was incorporated in the targeting exercise, nor was any detailed property scale geologic mapping. Both these data sets should be reviewed before proceeding with a drill program. Preferably these data should be incorporated into the MAPINFO database to facilitate the analysis.

REFERENCES

Harrington, E., 2004, Preliminary geologic map Ivanhoe Creek Property, Elko County, Nevada: Company Report.

LaPointe, D. D., Tingley, J. V., and Jones, R. B., 1991, Mineral resources of Elko County, Nevada: Nevada Bureau of Mine and Geology, Bulletin 106.

Wallace, A. R., 2003, Geology of the Willow Creek Reservoir Quadrangle, Elko County, Nevada: Nevada Bureau of Mines and Geology Map 135.