GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS

# **GEOPHYSICAL**

## ASSESSMENT REPORT

DATE RECEIVED NOV 2 4 1995

#### on the

# RAINBOW CLAIM GROUP OKANAGAN FALLS AREA OSOYOOS MINING DIVISION

by

#### MURRAY S. MORRISON, B.Sc.

<u>CLAIMS</u> :	Rainbow 1-6 (6 units).		
LOCATION:	The Rainbow Claim Group is situated near the headwaters		
	of Vaseux Creek, 24 km southeast of Okanagan Falls, B.C.		
	Lat. 49°17'; Long. 119°17';		
	N.T.S. Map 82-E-6W.		
OWNER:	M. S. Morrison		
<b>OPERATOR</b> :	M. S. Morrison		
DATE STARTED:	June 18, 1995		
DATE COMPLETED:	June 22, 1995 FILMED		

# SSESSMENT REPOR

24,105

Kelowna, B.C.

September 20, 1995

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#### **SUMMARY**

The Rainbow Claim Group is comprised of 6, 2-post mineral claims located near the headwaters of Vaseux Creek 24 km southeast of Okanagan Falls, B.C. The property, owned by the writer, M. Morrison, of Kelowna, B.C., covers the eastern end of a Tertiary age outlier that is known to host an epithermal precious metal deposit 1<sup>1</sup>/<sub>2</sub> km to the west of the Rainbow property at the AU prospect.

Similar Tertiary age rocks host epithermal precious metal values at the well-known Dusty Mac and Vault properties located near Okanagan Falls. A total of 93,653 tonnes of ore with an average grade of 6.29 g/tonne gold and 146.49 g/tonne silver were mined from the Dusty Mac open pit mine during 1975-76. One persistent composite epithermal vein on the Vault property has a reserve of 152,000 tonnes of 14 g/tonne gold plus minor silver values and a large epithermal deposit on the same property may contain an additional one million tonnes of 3.5 g/tonne gold.

Drill intercepts as high as 300 g/tonne gold over 15 cm have been reported from the AU prospect which lies at the boundary between the Venner and Golden 2 mineral claim.

The Rainbow property lying 1<sup>1</sup>/<sub>2</sub> km east of the Venner claim and directly north of the Golden 2 mineral claim covers ground previously covered by the Venner 3 & 5 mineral claims owned by Lacana Corporation.

The Tertiary rocks underlying the Rainbow property are conglomerates comprised predominantly of Tertiary volcanic clasts. It is thought that the Tertiary outlier is separated from "basement rocks" of the Pre-Permian Monashee gneiss and Cretaceous (?) Valhalla intrusions by a strong fault. It is speculated that the fault has allowed for the passage of epithermal solutions that have brought about the deposition of precious metals into the overlying Tertiary rocks (at least at the AU prospect).

#### SUMMARY continued

It is considered that the permeable conglomerates of the Rainbow property would provide a good host for the deposition of epithermal precious metal values adjacent the basement fault.

This year's magnetometer survey conducted over the Rainbow 1 & 2 mineral claims yielded results that are of limited value in advancing the exploration of the property. The results suggest that the conglomerate underlying the property is magnetically homogeneous. The results are also of some use in estimating overburden depths.

A program of soil geochemical sampling is recommended for areas of the property with shallow overburden. It is suggested that these soils be tested for precious metals and epithermal indicator elements.

A follow-up Reverse Circulation Percussion drilling program is recommended to test any geochemical anomalies. It is also recommended that the basement fault/conglomerate contact area be tested with a drilling program.



## **INTRODUCTION**

This report, written for government assessment work requirements, discusses the results of a ground magnetometer survey carried out over the Rainbow 1 & 2 mineral claims by the writer during June, 1995.

The Rainbow Claim Group is comprised of 6 contiguous 2-post mineral claims which are located near the headwaters of Vaseux Creek, 24 km southeast of Okanagan Falls, B.C. The mineral claims were staked by the writer, M. Morrison, of Kelowna, B.C. in June, 1994.

The mineral claims were positioned to cover the eastern end of a Tertiary Age outlier of conglomerate. Similar rock is known to host epithermal precious metal mineralization just 1.5 km west of the Rainbow property on the boundary of the Gold and Venner Mineral Claims. The well-known Dusty Mac and Vault properties, located near Okanagan Falls, B.C. also host epithermal precious metals in Tertiary Age rocks.

This year's ground magnetometer survey was conducted over the western portion of the Rainbow Claim Group where overburden was thought to be shallow.

It was expected that the survey might be useful:

- (a) in making distinctions between the various sedimentary/volcanic units of the Tertiary outlier;
- (b) in identifying the more highly magnetic pre-Tertiary "basement" gneisses and intrusives and thus indirectly define the outline and thickness of the outlier;
- (c) in tracing late dykes that might possibly cut across the outlier; and
- (d) in giving an indication of the depth of overburden in the survey area.

The magnetic values obtained during this year's survey are displayed and contoured on Map R-95-1 accompanying this report.



#### LOCATION AND ACCESS

The Rainbow property is located near the headwaters of Vaseux Creek, 24 km southeast of Okanagan Falls, B.C. (Lat. 49°17'; Long. 119°17'; N.T.S. Map 82-E-6W).

Access to the property from Okanagan Falls is via the Weyerhauser Sawmill Road to the Allendale Lake Road which by-passes the sawmill and then continues beyond the millsite as the Okanagan Falls Forest Service Road. The road climbs the mountain on the south side of Shuttleworth Creek as the main haulage road. A secondary logging road branches to the right at kilometre 12.3 and continues southeast to 27.3 km where an old logging road runs northerly 1.3 km to the property (see Figure 2).

The main logging roads are gravelled and maintained year-round.

#### PHYSICAL FEATURES AND CLIMATE

The Rainbow property is situated on a rolling uplifted region known geographically as the Okanagan Highland. Elevations on the Highland generally range from 1400 to 1800 metres with some ridges reaching 2100 metres. Mount Baldy, located 11 km due south of the Rainbow property, is the highest point of land in the region at 2300 metres.

The Rainbow property is centred over a small tributary of Vaseux Creek near the 1520 m elevation. The relief on the property is gentle with a small knoll rising to 1630 m on the western side of the property west of the creek and the flank of a mountain rising to the same elevation on the eastern side of the claim group east of the creek.

The Okanagan Highland is deeply incised by Shuttleworth and Vaseux Creeks which drain into the Okanagan River at the 330 metre elevation just 13 km west of the property.

## PHYSICAL FEATURES AND CLIMATE continued

Pleistocene ice has cleaned debris from the knoll on the western side of the Rainbow property, and deposited till and gravel terraces in the vicinity of the creek crossing the property. As a result, the overburden conditions on the property are highly variable ranging from 0 to 20 metres deep.

A new pine forest is well established on the western side of the Rainbow property in an old clear-cut plot. East of the creek on the gentle flank of a mountain a mature forest of lodgepole pine has not yet been cut.

The tributary of Vaseux Creek running through the centre of the property provides ample drinking water for cattle using the summer rangeland.

The Okanagan Highland receives considerably more precipitation than the arid Okanagan Valley. Annual precipitation on the Rainbow property probably equals 60 cm - half of it in the form of snow. The snow begins to accumulate around the first of November and generally lingers on shaded slopes until mid-April.

Summer temperatures can reach as high as 30°C in the upland country while winter minimums can drop to -30°C.

#### **CLAIM STATUS**

The Rainbow 1-6, 2-post mineral claims, were staked on June 26, 1994 by the writer, M. Morrison, of Kelowna, B.C. and recorded, July 6, 1994 in the Osoyoos Mining Division.

The mineral claims making up the Rainbow Claim Group are listed below:

CLAIM <u>NAME</u>	<u>UNITS</u>	TENURE <u>NO.</u>	DATE OF <u>RECORD</u>	EXPIRY* DATE
Rainbow 1	1	327074	June 26, 1994	June 26, 1998
Rainbow 2	1	327075	June 26, 1994	June 26, 1998
Rainbow 3	1	327076	June 26, 1994	June 26, 1998
Rainbow 4	1	327077	June 26, 1994	June 26, 1998
Rainbow 5	1	327078	June 26, 1994	June 26, 1997
Rainbow 6	1	327079	June 26, 1994	June 26, 1997

\*(The Expiry Date is based on the acceptance of this report for assessment work credits).

It should be noted that the southern sides of the Rainbow 2 & 4 mineral claims may overlap the northeastern corner of the pre-existing Golden 2 mineral claim by as much as 100 metres as illustrated on Figure 3.

The Golden 2 mineral claim is not owned by the writer.



## **HISTORY**

The Tertiary Age rocks of the Okanagan Falls area were not seriously explored for precious metal deposits until the late 1960's when Noranda Mines Ltd. discovered silver and gold mineralization within a silicified outcrop of Tertiary rock 2 1/2 km northeast of Okanagan Falls on the Dusty Mac property.

Extensive drilling by Noranda proved that the deposit was too small considering the low metal prices of the day and the property was returned to the vendor, Dusty Mac Mines Ltd., in 1970. Shortly thereafter, precious metal prices increased dramatically and Dusty Mac extracted the deposit with a profitable open pit operation during 1975-76. In all, 93,653 tonnes of ore grading 6.29 g/tonne gold and 146.59 g/tonne silver were mined.

The principals associated with Dusty Mac Mines Ltd. also discovered gold mineralization within Tertiary Age rocks 22 km southeast of Okanagan Falls, or 1 1/2 km east of Venner Meadows, in the early 1970's. The AU property was staked and optioned to Teck Corporation Ltd. which conducted preliminary exploration programs on the ground.

In 1982, the writer discovered a large silicified zone within Tertiary rocks 4 km northwest of Okanagan Falls and staked the Vault property. The Vault property was explored extensively by Riocanex Inc. (1982-83), Dome Exploration Ltd. (1984), Seven Mile High Resources Inc. (1985) and Inco Ltd. (1986-1990). Expenditures exceeding 4 1/2 million dollars went into exploration on the property in an effort to establish a precious metal reserve (see section on Regional Mineralization).

Also, in the 1980's, Esso Minerals and Minova Inc. each conducted further drilling on the Dusty Mac property, and Lacana Corp., Riocanex Inc. and Inco Ltd. all carried out exploration programs (including diamond drilling) on the AU gold prospect 1 1/2 km east of Venner Meadows (see section on Regional Mineralization).

## HISTORY continued

Lacana Corp. subsequently allowed their perimeter Venner 3-5 mineral claims to lapse and the Rainbow 1-6 mineral claims now cover portions of the old Venner 3 & 5 mineral claims 11/2 km east of the main AU prospect.

The extent of exploration carried out on the perimeter mineral claims by Lacana Corp. is unknown to the writer.

## **REGIONAL GEOLOGY**

Figure 4 accompanying this report outlines the regional geology of the Okanagan Falls area. The geology has been reproduced from G.S.C. Map 15-1961 by H.W. Little with some modifications.

The oldest rock illustrated on Figure 4 is a Pre-Permian Monashee gneiss. It underlies much of the country for 16 kilometres east and southeast of Okanagan Falls. The gneiss has been intruded by the Cretaceous(?) Nelson Intrusives northeast of Okanagan Falls. The Nelson Intrusives also occur at three sites on the eastern side of the map area. Later Cretaceous(?) Valhalla Plutonics intrude both the Monashee Group and Nelson Intrusives and underlie much of the eastern half of the map area.

Tertiary Age sediments and volcanics rest uncomfortably over all earlier rock formations and occur within fault-bounded basins at Okanagan Falls and at Venner Meadows, 20 kilometres to the southeast, as illustrated on Figure 4. The Tertiary rocks have been folded and cut by late faulting.

It is believed that precious metal bearing epithermal solutions have ascended late fault structures within the Tertiary rocks, and that at some mineral prospects repeated faulting and the introduction of several phases of epithermal solutions have upgraded the precious metal content of the Tertiary rocks to ore grade values. Important precious metal deposits in the district are illustrated on Figure 4. They include the Vault, Dusty Mac and AU occurrences. The geology and mineralogy of these interesting occurrences will be discussed more fully in the section that follows.

It is thought that the Rainbow Claim Group covers the eastern end of the Venner Meadows Tertiary outlier.



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## **REGIONAL MINERALIZATION**

#### **Introduction**

Two distinct types of precious metal bearing epithermal deposits are recognized in the Okanagan Falls area and these will be referred to as Type 1 and Type 2 deposits in the discussion that follows.

#### **Type 1 Precious Metal Bearing Epithermal Deposits**

Composite veins comprised of quartz-calcite  $\pm$  adularia filling shears in brittle rocks are characteristic of Type 1 precious metal bearing epithermal deposits in the district. The veins are generally narrow, but are persistent in strike and in depth. The veins often carry gold (electrum) and silver minerals throughout although values can be highly variable.

The Vault property North Vein and the AU prospect Main Vein are examples of Type 1 precious metal bearing epithermal deposits in the Okanagan Falls district.

#### Vault Property - North Vein

The North Vein on the Vault property is a precious metal bearing epithermal composite vein comprised of quartz, calcite and adularia. The vein cuts through the brittle Eocene Marron Formation trachyandesites underlying the Vault property. The vein is exceedingly persistent and extends at least 1100 metres along strike and at least 200 metres in depth. The vein averages 55 cm in width. That portion of the vein drilled to date is reported to contain 152,000 tonnes of 14 g/tonne gold plus minor values in silver.

#### **REGIONAL MINERALIZATION** continued

#### Type 1 Precious Metal Bearing Epithermal Deposits continued

#### AU Prospect

The main vein at the AU prospect is reported to be a composite vein comprised of quartz and carbonate. Some drill intercepts have returned gold values as high as 30 g/tonne over one metre intercepts. The vein is believed to fit the Type 1 deposit model, but it has been severely disrupted by late faulting, and no mineral reserve has been calculated.

#### **Type 2 Precious Metal Bearing Epithermal Deposits**

The main characteristics of Type 2 precious metal bearing epithermal deposits in the district are large size, irregular dimensions, and erratic distribution of precious metal values. The size and form of Type 2 deposits are controlled by the permeability of the Tertiary host rocks which the epithermal solutions invade. Most often the host rock is a very porous lahar or lapilli tuff that is overlain by an impervious rock unit such as a mudstone or volcanic flow. Epithermal solutions invading the porous rock units are confined by the impervious cover rock. The Type 2 deposits contain abundant silica which carries gold + silver values. Repeat brecciation and the introduction of multiphase veining upgrades the precious metal content of Type 2 deposits.

#### **Dusty Mac Deposit**

The open pit mine on the Dusty Mac property allows for a good view of a Type 2 deposit. A lahar unit made up of Eocene andesite has been flooded with silica, brecciated, and flooded again. The lahar unit lies directly below a mudstone unit of the White Lake Formation. It is believed that the mudstone unit provided an

#### **REGIONAL MINERALIZATION** continued

#### **Type 2 Precious Metal Bearing Epithermal Deposits**

#### **Dusty Mac Deposit**

impervious cap for ascending epithermal solutions. The gold and silver mineralization is disseminated throughout the silica breccia. The Dusty Mac open pit mine yielded 93,653 tonnes of ore grading 6.89 g/tonne gold and 146.59 g/tonne silver during operations conducted in 1975-1976.

#### Vault Property - Main Epithermal Precious Metal Deposit

The Main Epithermal Precious Metal Deposit on the Vault property has been penetrated by more than 60 diamond drill holes. The deposit displays all of the characteristics of Type 2 deposits. The main host rocks are lahars and lapilli tuffs of the Eocene Marama Formation. The mineralized zones are flooded with silica and the precious metal values are erratic. Intercalated mudstones and flow rocks appear to act as "dams" to epithermal solutions ascending the porous lahar and tuff units. Repeat brecciation and multiphase veinlets are characteristic of portions of the deposit.

The erratic distribution of gold in the Main Epithermal Deposit has made it difficult to calculate a mineral reserve, but it is estimated that one million tonnes of 3.5 g/tonne gold may occur in the deposit. One of the best drill intercepts on the property assayed 15.0 g/tonne over 8.8 metres.

#### **Rainbow Claim Group**

It is thought that the Rainbow Claim Group could host either a Type 1 or Type 2 precious metal bearing epithermal deposit.

#### PROPERTY GEOLOGY

The Rainbow Claim Group covers the eastern end of a large outlier comprised of sediments and volcanics of Tertiary Age. It is thought that the eastern edge of the fault-bounded outlier could coincide with the creek that flows through the centre of the property.

The writer has not yet prospected for bedrock on the eastern side of the creek, but during the course of this year's magnetometer survey several rock exposures were seen west of the creek.

The rock observed at several scattered locations across the Rainbow 1 & 2 mineral claims is a conglomerate comprised predominantly of subrounded pebbles and cobbles of Tertiary volcanic rocks. The volcanic clasts are of a great variety of colours and types, but most are porphyritic and of intermediate chemical composition (andesites, trachyandesites and dacites).

The clasts are set in a matrix of 20% sand and there appears to be little sorting. In general, the conglomerate appears to be homogeneous and massive and no bedding attitudes were determined.

Most outcrop exposures are small, but it was noted that locally the conglomerate is fractured and stained with limonite. Near the southern end of line 6E a road cut exposes conglomerate that is highly faulted, heavily limonite stained and clay altered. A trace of late quartz veinlets occur within the faulted rock at this location.

It is thought that the Tertiary conglomerate sits as a thick wedge unconformably overlying Monashee gneisses and Valhalla intrusives. The conglomerate wedge could measure up to a few hundred metres in thickness on parts of the property.

# **PROPERTY GEOLOGY** continued

It has been suggested that the precious metal values occurring at the AU and Fort properties (located 1<sup>1</sup>/<sub>2</sub> km and 5 km west of the Rainbow Property, respectively) have been introduced into the Tertiary outlier by epithermal solutions ascending a basement fault from the north (Morrison, 1995). It is believed that the quartz veinlets ocurring near the southern end of L6E on the Rainbow property could have originated from epithermal solutions ascending this basement fault.

#### **GROUND MAGNETOMETER SURVEY**

#### <u>Grid</u>

A Baseline of 600 metres was measured across the survey area at 090 azimuth, sub-parallel to the Location Line of the Rainbow 1 & 2 mineral claims. Flagged grid lines were then run perpendicular to the Baseline at 50 to 100 metre intervals across the Rainbow 1 & 2 mineral claims as illustrated on Map R-95-1. Stations were flagged at each 25 metre measure along grid lines. A Topolite belt chain and Silva Ranger compass were used to establish the 6.8 km of grid which was laid-out in conjunction with the ground magnetometer survey.

The Initial and Final claim posts of the Rainbow 1 & 2 mineral claims were tied into the grid during the survey.

#### **Program**

A Scintrex MF-2 Portable Fluxgate Magnetometer was used to survey the property. The magnetometer with a resolution of 5 gammas was considered suitable for the survey.

Baseline station values were established by making a double traverse along the baseline on a day of slight diurnal variation. The baseline stations were then corrected for diurnal variations, and the corrected values were used during the survey.

Looped traverses were made along pairs of grid lines, starting and ending at baseline stations (usually within 1 to 1½ hours), and corrections were made to all values for diurnal variations. During this year's survey, intermediate readings were taken midway between all flagged grid stations in addition to the grid station readings to increase the detail of the survey. All of the corrected readings are plotted on the contoured magnetometer map, R-95-1, accompanying this report. A constant value of 50,000 gammas has been subtracted from all of the values on the maps for ease of plotting and clarity.

#### **GROUND MAGNETOMETER SURVEY** continued

#### **Results**

Note: The following discussion refers to the magnetic values plotted on Map R-95-1. As mentioned earlier, a constant value of 50,000 gammas has been subtracted from all field readings for easier plotting on the maps.

The magnetic values plotted on Map R-95-1 illustrate that the magnetic relief of the Rainbow 1 & 2 mineral claims is low. The magnetic values range from 60 to 540 gammas with the exception of one high value which occurs on L3E at 6+65N (1200 gammas).

The pattern of magnetic values in large measure reflects the topography of the survey area, which in turn, has played a part in the distribution of overburden.

The survey is centred over a topographic dome that slopes gently in all directions from a centre located near L3E, 6N. Pleistocene ice has removed most material from the top of the dome, exposing bedrock in several places. However, glacial till deepens on the flanks of the dome, and in places it is estimated to be 5 to 10 metres deep.

In detail, it was observed during the survey, that an area of very shallow overburden, occurring near the top of the dome on the Rainbow 1 mineral claim yielded the highest magnetic values (400 to 540 gammas). Much of the area of the Rainbow 2 mineral claim with values of 300 to 400 gammas is also believed to be overlain by only moderate overburden. It was further noted that some of the stations on lines 3E & 4E with magnetic values of greater than 400 gammas were bedrock stations.

On the other hand, magnetic values fall below 200 gammas on the flanks of the dome where till is estimated to range from 5 to 10 metres deep. In particular, there is a good correlation between low magnetic values (60 to 300 gammas) and deep glacial deposits observed at the southern and northern ends of lines 1E to 4E.

#### **GROUND MAGNETOMETER SURVEY** continued

#### **<u>Results</u>** continued

Magnetic values of 200 to 300 gammas on lines 5E & 6E on the eastern side of the survey area are believed to reflect the effects of intermediate depths of overburden (2 to 4 metres).

The one erratic magnetic high value of 1200 gammas on L3E at 6+65N could represent a small dyke cutting the Tertiary conglomerate at this site.

#### **Discussion**

After allowing for the effects of overburden there is very little character to the contoured magnetic values on Map R-95-1 that can contribute to a better understanding of the underlying geology on the property. The survey results suggest that the Tertiary conglomerate observed at several locations across the property is magnetically homogeneous and that the one and only high magnetic value recorded during the survey (1200 gammas at 3E, 6+65N) represents a small dyke cutting the conglomerate.

The data obtained within the survey area was not useful in defining the perimeters of the Tertiary outlier, and it is likely that the perimeters lie outside the region surveyed.

The most useful data gained from the survey is the correlation between higher magnetic values and light overburden cover. This data can be used to advantage in guiding a soil sampling program to areas of the property where it will be most effective.

#### **CONCLUSIONS AND RECOMMENDATIONS**

The Rainbow Claim Group covers the eastern end of the Venner Meadows Tertiary Outlier located 20 km southeast of Okanagan Falls, B.C. One noteable precious metal occurrence has been identified within the outlier, so far, and this is located on the Venner/Golden 2 mineral claim's border, 1<sup>1</sup>/<sub>2</sub> km west of the Rainbow property. Drill intercepts from this occurrence, known as the AU prospect, have been reported to be as high as 300 g/tonne gold over 15 cm.

Similar Tertiary age rocks host the well-known epithermal precious metal deposits at the Vault and Dusty Mac properties located a few kilometres northwest and northeast of Okanagan Falls, respectively.

The northern boundary of the Venner Meadows Tertiary outlier is believed to be coincident with a fault which dips at a moderate angle below the Tertiary rocks and separates them from "basement rocks" of Pre-Permian Monashee Gneiss or Cretaceous (?) Vahalla Intrusions.

It is thought that the underlying fault has provided a conduit for ascending epithermal solutions and that these solutions have deposited precious metal values (at least at the AU prospect) into the most receptive (permeable) rocks of the Tertiary outlier.

The Tertiary conglomerate that underlies the Rainbow 1 & 2 mineral claims is thought to be permeable and therefore, a very good host for invading precious metal bearing epithermal solutions. The quartz veinlets occurring at grid 6+10E, 0+50N may be an example of the introduction of silica from epithermal solutions.

This year's ground magnetometer survey carried out over the Rainbow 1 & 2 mineral claims of the Rainbow Claim Group appears to have been most effective in differentiating areas of light overburden from those of heavy cover.

#### CONCLUSIONS AND RECOMMENDATIONS continued

In general, the magnetic relief of the survey area is subtle and it allows for little interpretation. No distinct rock types were outlined, no faults were indicated, and the more magnetic "basement rocks" (gniesses and intrusives) that are thought to underlie the Tertiary outlier did not show in the data.

One interpretation of the data is: that the Rainbow 1 & 2 mineral claims are entirely underlain by a very homogeneous Tertiary conglomerate (observed at several sites); that no faults cut across the survey area; and that the perimeter of the Tertiary outlier lies beyond the limits of the survey area.

As already mentioned, the conglomerate underlying the property is considered a good host for epithermal precious metal deposits and further exploration of the property is warranted.

A soil geochemical survey should be conducted over portions of the Rainbow 1 & 2 mineral claims where the magnetometer survey results indicate shallow overburden. The faulted, quartz-veined conglomerate at grid 6+10E, 0+50N should also be tested. The samples should all be analyzed for gold and silver, and for the epithermal indicator elements, mercury, antimony and arsenic.

If the geochemical results are positive, a follow-up program of Reverse Circulation Percussion Drilling is recommended to test the conglomerate down to the "basement" fault.

The property is very accessible and water for drilling purposes is plentiful.

manag mining

September 20, 1995 Kelowna, B.C.

Murray Morrison, B.Sc.

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1995:	Geophysical & Geochemical Assessment Report, Fort Knox Claim Group, Okanagan Falls Area, Osoyoos Mining Division; Assessment Report on file with the Ministry of Energy, Mines and Petroleum Resources.

#### APPENDIX A

#### STATEMENT OF QUALIFICATIONS

I, Murray Morrison, of the City of Kelowna, in the Province of British Columbia, do hereby state that:

- 1. I graduated from the University of British Columbia in 1969 with a B.Sc. Degree in Geology.
- 2. I have been working in all phases of mining exploration in Canada for the past twenty-five years.
- 3. During the past twenty-five years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.
- 4. I have conducted several geological, geochemical, and geophysical surveys on mineral properties in Southern British Columbia during the past twenty-five years.
- 5. I conducted the ground magnetometer program outlined in this report.
- 6. I own 100% interest in the Rainbow 1-6 mineral claims.

September 20, 1995 Kelowna, B.C.

Murray Morrison - B.Sc.

# APPENDIX B

# STATEMENT OF EXPENDITURES - ON THE RAINBOW CLAIM GROUP

Statement of Expenditures in connection with a Ground Magnetometer Survey carried out on the Rainbow Claim Group, located 24 km southeast of Okanagan Falls, B.C. (N.T.S. Map 82-E-6W) for the year 1995.

#### **GROUND MAGNETOMETER SURVEY (6.8 km)**

M. Morrison, geologist	3½ days @ \$250.00/day	\$ 875
Truck, 4 x 4 (including gasoline and insurance)	31⁄2 days @ \$75.00/day	262
Meals and Lodging	no charge	-
Magnetometer rental	3½ days @ \$25.00/day	88
Flagging and belt chain thread		25
	Sub-total:	\$ 1,250
REPORT PREPARATION COSTS		
M. Morrison, geologist	1 day @ \$250.00/day	\$ 250
Drafting		54
Typing		1 <b>07</b>
Copying reports		20
	Sub-total:	\$ 431

Grand Total: \$ 1,681

I hereby certify that the preceding statement is a true statement of monies expended in

connection with the Ground Magnetometer Survey carried out June 18-22, 1995.

September 20, 1995 Kelowna, B.C.

men 1 Murray Morrison - Geologist

