GEOPHYSICAL
ASSESSMENT REPORT

on the

VENT CLAIM GROUP

SUMMERLAND AREA

OSOYOOS MINING DIVISION

by

MURRAY S. MORRISON, B.Sc.

CLAIMS: VENT 1-5 (34 units)

LOCATION: The Vent property is situated at Riddle Creek, 16 km southwest of Summerland, B.C. Lat. 49°33'; Long. 119°53'; N.T.S. 82-E-12W.

OWNER: M.S. Morrison

OPERATOR: M.S. Morrison

DATE STARTED: September 27, 1992

DATE COMPLETED: November 16, 1992

Kelowna, B.C. January 30, 1993

TABLE OF CONTENTS

ILLUSTRATIONS

SUMMARY

The Vent property is situated at Riddle Creek, 16 km southwest of Summerland in the Osoyoos Mining Division of British Columbia. The property, consisting of the Vent 1-5 mineral claims (34 units) was staked by the writer in 1986 to cover an assemblage of volcanic and sedimentary rocks occurring within a Tertiary Basin lying 30 km northwest of the White Lake Basin at Okanagan Falls.

The silicified and altered Eocene pyroclastic rocks identified on the Vent property were recognized as favourable host rocks for epithermal precious metal deposits, particularly in light of the successful exploration programs conducted in the late 1980's on the Vault and Brett gold prospects of the Okanagan region which were also found to be hosted by Eocene volcanic rocks.

Geological and geochemical surveying on the Vent property, financed by Zygote Resources Ltd. of Vancouver, in 1987, were followed-up with the drilling of 8 Reverse Circulation Percussion Drill Holes, totalling 492 metres, in 1989. Although five of the 8 drill holes intercepted highly faulted, clay altered and silicified Marron Formation trachytic flows and tuffs and four of these five drill holes also intersected considerable intercepts (33 to 43 metres) of pyrite enriched (5 to 10%) clay alteration zones, only negligible precious metal values were found and Zygote Resources returned the property to the writer.

The drilling did prove the existence of late faults cutting through the Marron Formation volcanics on the property. These faults are thought to be the conduits for the vast volumes of low temperature hydrothermal solutions which have brought about the high degree of clay alteration and silicification of the volcanics on the south side of the property.

The silica replacement of the volcanics is recognized as low temperature silica (chalcedony) in most drill holes and vein quartz was found to be entirely lacking.

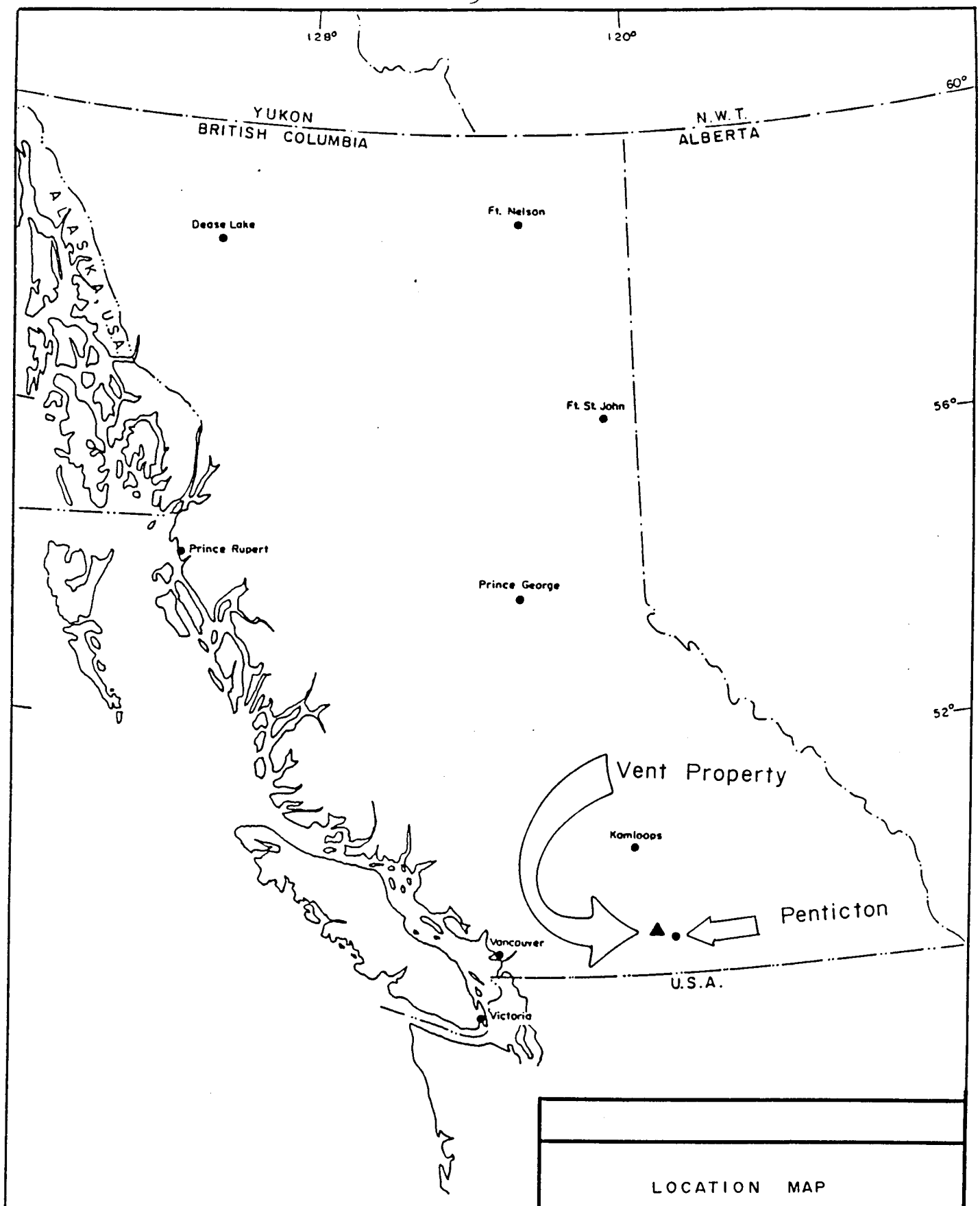
Continued . . .

SUMMARY - Continued

The type of silicification indicates that only the uppermost horizons of the strong epithermal systems on the Vent property have been penetrated by the 1989 drilling. Deeper drilling of these late fault structures is, therefore, highly recommended in order to seek out the higher temperature quartz stockworks that may form the "roots" of these large epithermal systems. If precious metal values exist on the property they would be expected to be associated with the quartz stockworks.

This year's (1992) ground magnetometer and VLF-EM surveys expanded the area of the property believed to be underlain by the highly altered tuff unit. One VLF-EM conductor is coincident with an elongate magnetic low and is considered a particularly good exploration target.

An Induced Polarization Survey is recommended for two-thirds of this year's grid area. It is believed that the survey would outline the large pyrite and clay zones that are believed to be associated with the major fault zones crossing the property. Once delineated, it is recommended that some of these fault zones be tested to depths of 150 to 300 metres by diamond drilling.



LOCATION MAP
VENT PROPERTY
SUMMERLAND AREA
OSOYOOS M. D., B. C.

Drawn by A. H.	N.T.S. 82-E-12
January 1993	FIGURE NO. 1

INTRODUCTION

This report, written for government assessment report requirements, discusses the results of ground magnetometer and VLF-EM surveys conducted over portions of the Vent 1, 2 & 5 mineral claims by the writer during September-November, 1992.

The Vent Claim Group, owned by the writer, is comprised of the Vent 1-5 mineral claims, totalling 34 units. The property covers a small Tertiary basin located 16 km southwest of Summerland, B.C. The Tertiary basin was staked as an epithermal precious metal prospect in 1986, following the announcement of encouraging exploration results from the well-known Vault precious metal property. The Vault property (staked by the writer in 1982) is located within the White Lake Tertiary Basin at Okanagan Falls, 30 km southeast of the Vent property.

Preliminary geological and geochemical surveys conducted on the Vent property in 1987 (Morrison, 1987) were followed by a Reverse Circulation Percussion Drilling Program in 1989 (Morrison, 1990). Eight drill holes, totalling 492 metres, tested an area measuring 300 by 600 metres near the southeastern corner of the Vent 2 mineral claim. The work was financed by Zygote Resources Ltd. of Vancouver which had an option on the property.

Although all of the drill holes returned negligible precious metal values, five of the 8 drill holes of the 1989 season intercepted highly faulted, clay altered, and silicified Marron Formation trachytic flows and tuffs. Four of these five drill holes also intersected considerable intercepts (33 to 43 metres) of pyrite-enriched (5 to 15%) clay alteration.

It is thought that the 1989 drilling program tested the upper portions of large epithermal systems that could host precious metal deposits at some moderate depth below surface.

Continued . . .

INTRODUCTION - Continued

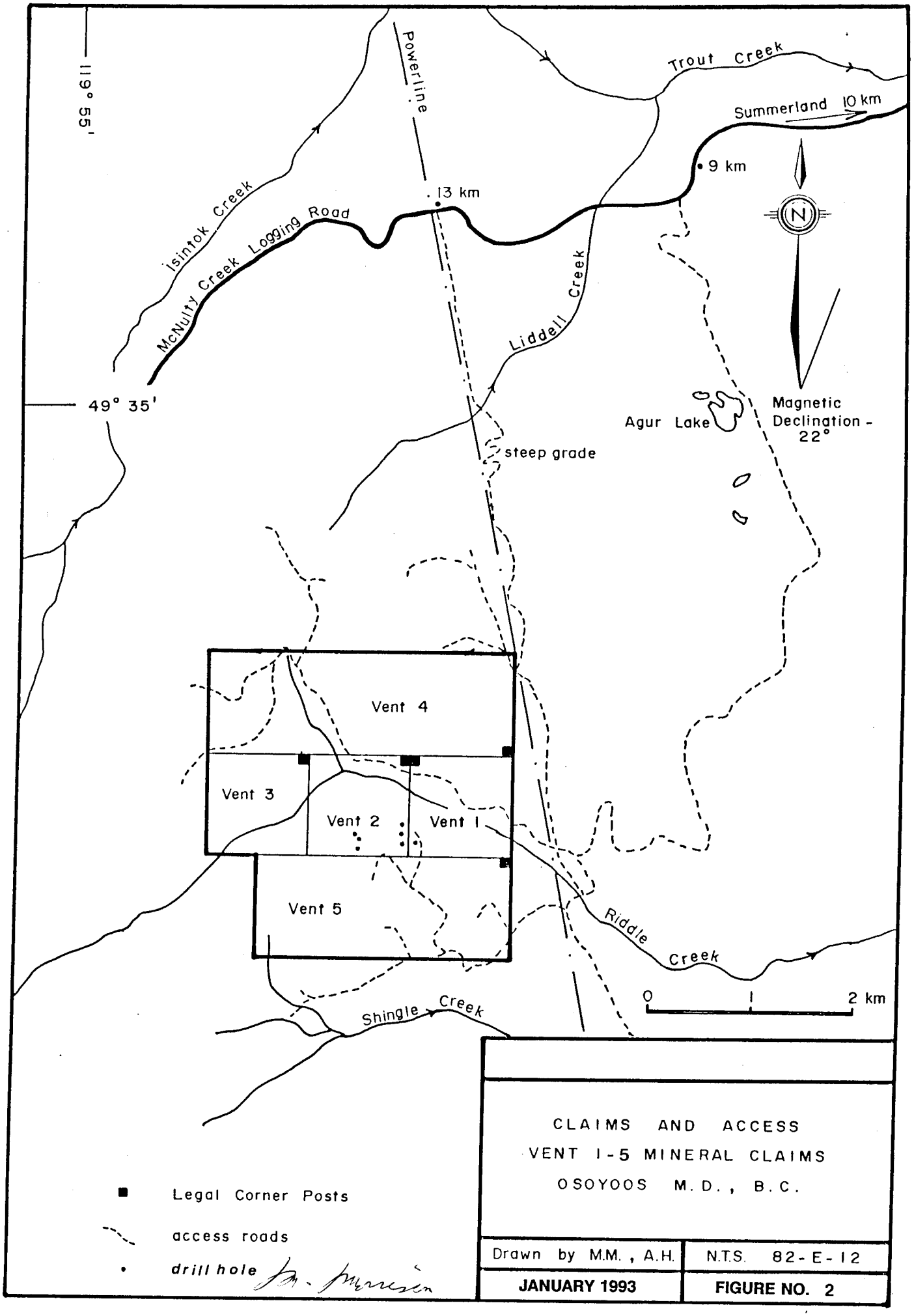
This year's (1992) geophysical surveys were conducted in the vicinity of the 1989 drill holes to delineate Late Tertiary fault systems and the large clay alteration zones that are often associated with these faults. It was considered, going into the program, that the ground VLF-EM survey would be useful in tracing fault structures, and that the ground magnetometer survey would be useful in outlining the magnetite-depleted clay alteration zones.

The values obtained during the magnetometer survey are displayed and contoured on Map V-93-1 accompanying this report. The VLF-EM survey data is also contoured and presented on maps accompanying this report. The VLF-EM Dip Angle and Field Strength data is illustrated on Map V-93-2, while the Fraser Filtered Dip Angle data is displayed on Map V-93-3.

LOCATION AND ACCESS

The Vent property is situated at Riddle Creek, 16 km southwest of Summerland, or 22 km northwest of Penticton, B.C. (Lat. 49° 31'; Long. 119°53'; N.T.S. Map 82-E-12W). The property may be reached by logging roads from either community. Access from Penticton is via the Shingle Creek logging road (45 minute drive), while access from Summerland is by way of the McNulty Creek logging road, and hence, via a dirt, all-weather road which leaves the logging road at 9.4 km and passes near Agur Lake enroute to the property as shown on Figure 2. A shorter, but steeper, seasonal road follows the 500 kv powerline to the property. The Agur Lake route requires 45 minutes driving from Summerland.

Recently built logging roads give access to most parts of the property as illustrated on Figure 2.


119° 55'
Powerline
Trout Creek
Summerland 10 km
9 km
13 km
Isintok Creek
McNulty Creek Logging Road
Liddell Creek
49° 35'
Agur Lake
Magnetic Declination - 22°
steep grade
Vent 4
Vent 3
Vent 2
Vent 1
Vent 5
Riddle Creek
Shingle Creek
0
1
2 km
Legal Corner Posts
access roads
drill hole
CLAIMS AND ACCESS
VENT 1-5 MINERAL CLAIMS
OSOYOOS M.D., B.C.
Drawn by M.M., A.H.
N.T.S. 82-E-12
JANUARY 1993
FIGURE NO. 2

PHYSICAL FEATURES AND CLIMATE

The Vent property lies near the southern edge of the Thompson Plateau. The plateau with elevations ranging from 1500 to 1700 metres has been deeply incised towards the Okanagan Valley by drainage flowing into Okanagan Lake (elevation 340 metres). The entire region was glaciated during the Pleistocene resulting in rounded-off ridges and in-filled valleys.

The Vent property, centred over the upper drainage basin of Riddle Creek, 18 km west of Okanagan Lake, covers an area of subdued relief typical of the Thompson Plateau. Elevations on the property range from 1340 to 1680 metres. Rock exposures are restricted to the tops of ridges or steep creek banks. Elsewhere, there is a general cover of glacial till that reaches depths in excess of 30 metres on some portions of the property.

The dominant forest cover on the property is lodgepole pine which ranges from a jungle of "bean-pole" second-growth in old burn areas near Riddle Creek to mature stands of timber elsewhere on the property. Several stands of the mature timber have been strip-logged in recent years. Douglas fir is the more common forest species found on the upper rocky ridges on the northern half of the property.

Although the Okanagan Valley is semi-arid the Thompson Plateau to the west receives upwards of 50 cm of precipitation annually; half of it in the form of snow. A winter snow pack of 1 to 2 metres begins to accumulate on the Vent property in November, and can be expected to last until mid-May on shaded slopes.

Riddle Creek flows year-round providing water for grazing cattle in the region.

CLAIM STATUS

The Vent property is made up of the Vent 1-5 mineral claims, totalling 34 units. The claims were staked by the writer, M. Morrison, of Kelowna, B.C. during November-December, 1986, and were recorded in the Osoyoos Mining Division.

The mineral claims making up the property are listed below:

CLAIM NAME	UNITS	DATE OF RECORDING	TENURE NO.	EXPIRY DATE*
Vent 1	4	Dec.11/86	246668	Dec.11/93
Vent 2	4	Dec.11/86	246669	Dec.11/93
Vent 3	4	Dec.11/86	246670	Dec.11/93
Vent 4	12	Dec.11/86	246671	Dec.11/93
Vent 5	10	Dec.11/86	246672	Dec.11/93

* The Expiry Date is based on the acceptance of this report for Assessment Work Credits.

The property is 100% owned by the writer, M. Morrison, of Kelowna, B.C.

HISTORY

The Riddle Creek Tertiary basin was staked by British Newfoundland Exploration Ltd. as an uranium-thorium prospect in 1977. During the 1977 season radiometric and reconnaissance silt and soil geochemical surveys were carried out in conjunction with preliminary geological mapping on the property, comprised of the Agur and Ash mineral claims. In 1978, seven diamond drill holes, totalling approximately 270 metres, were completed. Five of the holes were drilled directly into a syenite intrusive, while two of the holes penetrated ash flows and basal conglomerates up to 30 metres in thickness within the Tertiary basin (Church, 1981). No significant uranium or thorium was discovered and the claims were allowed to lapse.

The Vent property now includes ground formerly covered by the Ash 2 & 3 mineral claims.

Continued . . .

HISTORY - Continued

The Vent property was optioned to Zygote Resources Ltd. of Kelowna, B.C. in August, 1987. Zygote Resources provided funds for the preliminary geological and geochemical surveys carried out in 1987 (M. Morrison, 1987), and for the Reverse Circulation Percussion Drill program of 1989. The property was returned to the writer following an appraisal of the geochemical results from the drilling program.

REGIONAL GEOLOGY AND MINERALIZATION

The regional geology of the Southern Okanagan is illustrated on Map 15-1961 entitled "Geology of the Kettle River (West Half)" by H.W. Little of the Geological Survey of Canada. The map outlines several basins or outliers of Eocene rock. The most noteable basins in the immediate area of the Okanagan Valley are the White Lake, Westbank-Rutland, and Summerland Eocene basins. They are infilled with thick accumulations of poorly sorted sediments, pyroclastics and volcanic flows of trachyte, trachyandesite, dacite and rhyodacite composition. There is local evidence of volcanic venting in each basin.

A fourth, smaller, Tertiary basin, lying 13 km west of the Summerland basin, or 10 km northwest of the northernmost portion of the White Lake basin, is centred over Riddle Creek. This basin, referred to as the "Riddle Creek Tertiary Basin" in this report, also features a volcanic centre with a sequence of flow rocks and pyroclastics of suspected local origin. (Although the rocks are believed to be of local origin, they do correlate with the Eocene Marron Formation of the White Lake basin (Church, 1981)).

The Riddle Creek Eocene Volcanic Centre has many characteristics in common with the gold-bearing Eocene volcanic centres recently discovered at Okanagan Falls (Vault property), 30 km to the southeast, and at Whiteman Creek (Gold Star and Brett properties),

Continued . . .

REGIONAL GEOLOGY AND MINERALIZATION - Continued

77 km to the northeast. Gold-bearing silica solutions, emanating from late fissures (which cut the volcanic piles at both Okanagan Falls and Whiteman Creek), flood out into thick, porous, sedimentary and tuffaceous horizons that are capped by impermeable flow rocks. The loosely consolidated sediments and tuffs exceed 100 metres in thickness on the Vault property and 30 metres on the Whiteman Creek properties. The best gold values occur near the fissures (shear zones), but significant values also occur within the porous rock units for some distance from the shear zones. Alteration of the porous rock extends hundreds of metres from the hydrothermal conduits.

During the late 1980's aggressive exploration programs were carried out on at least five Tertiary epithermal gold properties in the Okanagan region:

(1) In 1989, Inco Gold Co. announced reserves of 150,000 tons of 14 g/Tonne gold for the "North Vein" on the Vault property.

(2) Corona Corp. working on the Whiteman Creek Brett property reported 26 g/Tonne gold over 5 metres in 1987 from a mineralized shear zone. This discovery prompted ambitious drill programs during 1988 and 1989 by Corona Corp.

(3) Brican Resources Ltd. carried on extensive exploration programs on the Gold Star property, adjacent the Brett property at Whiteman Creek in 1987-88. Alteration zones are extensive on the property, but good gold values have, so far, eluded the drill.

(4) Minnova Incorp. carried out work on the Dusty Mac property at Okanagan Falls, drilling deep holes on the old gold producing property.

(5) Inco Gold Co. also drilled the Venner Meadows Tigris property, 22 km southeast of Okanagan Falls in 1989.

The Riddle Creek Tertiary Basin contains a thick (up to 30 m) tuffaceous unit that is intensely hydrothermally altered like the tuffaceous rocks at the Vault and Whiteman Creek properties. This faulted, altered tuffaceous unit was the target for the 1989 drill program on the Vent property.

PROPERTY GEOLOGY

The property geology was mapped by the writer in 1987 (M. Morrison, 1987). A brief summary of the geology is given here based on the 1987 mapping with slight revisions resulting from the 1989 drilling.

Summary

The Tertiary basin at Riddle Creek, like others in the district, is infilled with an assemblage of sediments, and volcanic flows and pyroclastics. A basal conglomerate directly overlies granodiorite of the Nelson Intrusions (Cretaceous?). The conglomerate is in part covered by a series of andesite flows, which are in turn covered by widespread phonolite flows. The phonolite flows are covered by a thick sequence of Eocene Marron Formation trachyte flows, and at least one thick tuff unit lies interbedded within the trachyte flows near the top of the volcanic pile. A syenite plug at the southwestern margin of the Riddle Creek basin is thought to be contemporaneous with the extrusive rocks.

The Tertiary rocks have been folded into asymmetrical folds which are reflected in the present topography of rounded ridges and valleys. The North Fork of Riddle Creek and Riddle Creek proper are subparallel to the axes of Tertiary plunging synclines striking southeast and east-southeast respectively.

Hydrothermal solutions have ascended late fault zones cutting the Marron Formation on the south half of the Vent property resulting in widespread clay alteration and silicification of the tuff unit.

A window in the Upper Trachyte Flow at the crest of a gentle easterly plunging anticline was selected as the target for the 1989 drilling program. The window measures up to 1200 metres long by 600 metres wide and straddles the southern border of the Vent 2 mineral claim. The readily accessible eastern half of the window was tested with the drill program.

Continued . . .

PROPERTY GEOLOGY - Continued

Summary - Continued

The 1989 drilling program encountered wide fault zones, thick zones of intensely clay-altered lapilli tuff, wide intercepts of silicification (chalcedony) and strong pyritization. Negligible precious metal values and only slightly elevated arsenic values were found during analyses.

The geological interpretation of the drilling data is that only the uppermost, lower temperature horizons of very strong epithermal systems were penetrated during the 1989 drilling program, and that drill holes of 150 to 300 metres might be required to reach the potential precious metal horizons of these systems.

GROUND MAGNETOMETER AND VLF-EM SURVEYS

Grid

An 1100 metre Baseline was measured-out along a portion of the northern boundary of the Vent 5 mineral claim in a true west direction (270 degrees azimuth). Twelve grid lines of 1 kilometre each were then measured distances of 350 metres north and 650 south of the Baseline at 100 metre intervals. Intermediate grid lines of variable lengths were added at intervals of 50 metres to improve the geophysical survey coverage (see Maps V-93-1, 2 & 3). In total, 15.5 km of flagged grid line was established with a Silva Ranger Compass. A Topolite belt chain was used to mark 25 metre stations along each grid line. The grid was established in conjunction with the geophysical surveys.

Ground Magnetometer 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 2 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, V-93-1, accompanying this report. A constant value of 50,000 gammas has been subtracted from all of the values on the map for ease of plotting and clarity.

GROUND MAGNETOMETER AND VLF-EM SURVEYS - Continued

Ground Magnetometer Survey - Results

Note: The following discussion refers to the magnetic values plotted on Map V-93-1. As mentioned earlier, a constant value of 50,000 gammas has been subtracted from all field readings for easier plotting on the map.

The survey area, as illustrated on Map V-93-1, is one of moderate magnetic relief. Magnetic values range from a low of -610 gammas to a high of 2840 gammas. The geology underlying the survey area is made up of two key rock units with contrasting magnetics. One unit is comprised of intensely altered trachytic tuff in which the magnetite crystals have been entirely destroyed, and the other unit is made up of relatively fresh trachytic flow rocks in which the magnetite crystals are believed to be intact.

There is a good correlation between the magnetic results illustrated on Map V-93-1, and the geology of the property as it is presently understood. The altered tuffs predictably occur where the magnetic intensity is low and the contour lines are widely spaced. The unaltered trachyte flow rocks, on the other hand, yield higher magnetic values and complex contour patterns. The correlation between the magnetics and the bedrock geology will be pointed out in more detail in the following paragraphs.

A broad zone of altered tuff occurring up to 150 metres north and south of the Baseline is represented on Map V-93-1 by low magnetic values ranging from -600 to +500 gammas.

Higher magnetic values (500 to 1800 gammas), which occur from 150 to 350 metres north of the Baseline from L9W to L17W, represent a "lower" trachyte flow unit that has been mapped on the property.

Continued . . .

GROUND MAGNETOMETER AND VLF-EM SURVEYS - Continued

Ground Magnetometer Survey - Results - Continued

Magnetic values of 500 to 2690 gammas extending from 8N to the limits of the survey at 3+50N, south of the Baseline, represent an "upper" trachyte flow unit that has been mapped on the property. The 1500 gamma contour generally outlines regions of trachyte outcrop south of the Baseline, while the highest magnetic values correlate with distinct outcroppings of trachyte (eg. 2470 gammas on L17+50W at 7+75N; 2330 gammas on L19W at 3+75N; 2690 gammas on L16W at 4+25N, and 2180 gammas on L10W at 5+10N).

The irregular magnetic contour patterns lying between L9W and L12W from 6N to 11N represent an area where the "upper" trachyte flow covering the underlying altered tuff is either thin or missing entirely. Areas of less than 500 gammas are believed to represent windows in the trachyte flow cover, while regions of greater than 1000 gammas are thought to represent thickening of the trachyte flow rocks.

A magnetic "high" of 2840 gammas on L14W at 9+30N occurs in an area of overburden, but it is believed to represent an outlier of trachyte flow rock.

The elongate magnetic "low" (-200 to 400 gammas) on L14W that extends from grid 4+50N to 8+50N is thought to represent a window in the trachyte flow rock. The elongate window could, in turn, represent a fault structure.

The low magnetic values (less than 500 gammas) at the northwest corner of the grid may simply reflect the magnetics of the deep drift cover in the region rather than the magnetics of the bedrock geology.

West of L16W there are very few rock exposures for 200 metres on either side of the Baseline, but the magnetic survey data would suggest that the highly altered tuffs observed east of L16W also extend west of L16W at least as far as the limits of the survey.

GROUND MAGNETOMETER AND VLF-EM SURVEYS - Continued

VLF-EM Survey - Program

The VLF (very low frequency) exploration method makes use of high-powered electromagnetic transmissions broadcast by naval radio communication stations distributed around the world. These transmissions induce electric currents in conductive bodies. The induced current produces secondary magnetic fields which can be detected by measuring deviations in the normal VLF fields. VLF-EM instruments are designed to detect these deviations.

A Sabre, Model 27, VLF-EM instrument was used to conduct the survey over 14.7 km of grid on the Vent property. The Seattle, Washington, VLF signal (24.8kHz) was received strongly from a direction of 230 degrees, azimuth, and was used for the entire survey.

In-Phase Tilt Angle readings were taken facing a direction of 50 degrees at each survey station. North tilts were recorded as positive (+) and south tilts were recorded as negative (-). Field Strength readings were also recorded at each survey station with the instrument facing 130 degrees, azimuth, perpendicular to the Signal Station.

Field Strength readings were taken along the Baseline and all grid station readings were then corrected for diurnal variation using the Base Stations along the Baseline in much the same manner as was previously described for the magnetometer survey. The corrected Field Strength values have been contoured on Map V-93-2, which also displays the In-Phase Tilt Angles.

The In-Phase Tilt Angle values have been Fraser Filtered and contoured on Map V-93-3. The Fraser Filtering of VLF-EM data has

Continued . . .

GROUND MAGNETOMETER AND VLF-EM SURVEYS - Continued

VLF-EM Survey - Program

had widespread use for several years, and a full explanation of the technique is given in the geophysical papers by Fraser, Peterson and Ronka that are listed with references at the end of this report.

The Fraser filtering technique may be briefly summarized as follows: by means of simple mathematical operations the tilt data can be transformed into contourable form, and the effects of noise and topography can be filtered from data. By averaging pairs of stations and taking differences between pairs separated by the appropriate distance, values may be plotted and contoured in plan that transform cross-overs into peaks, and a low-pass smoothing mathematical operator reduces noise.

VLF-EM Ground Survey - Results

The contoured Fraser Filtered In-Phase data on Map V-93-3 defines 8 conductors of weak to moderate strength that strike east to northeast across the survey area.

The conductors identified as A to H on the map are listed in the following table:

Conductor	Length Metres	Grid From	To	Conductor Strength	Field Strength Correlation	Interpretation
A	100	11+50W	12+50W	Moderate	good	small, near surface feature
B	500	13W	18W	Weak to moderate	good	possible fault
C	250	15W	18W	Weak to moderate	fair	possible fault
D	250	17W	20W	Moderate	good	possible fault
E	300	13W	15+50W	Moderate	good	possible fault
F	1100	9W	20W	Weak to moderate	some	possible fault
G	250	13W	15W	Moderate	fair	local feature
H	500	9W	14W	Weak to moderate	some	local feature

GROUND MAGNETOMETER AND VLF-EM SURVEYS - Continued

VLF-EM Ground Survey - Results - Continued

There is generally a good correlation between the Fraser Filtered Conductor Axes on Map V-93-3 and the Field Strength contoured "highs" on Map V-93-2.

Conductor D coincides with a linear magnetic low on Map V-93-1 and may well represent a fault zone with highly altered rock.

DISCUSSION

Geological mapping (1987) and a percussion drilling program (1989) confirmed that a thick (up to 30 metres) highly altered trachytic tuff unit occurs between a series of "lower" and "upper" trachyte flows in the vicinity of this year's Baseline on the Vent property. The trachytic tuff unit was found to be particularly clay-altered, silicified and pyritized near strong Late Tertiary faulting.

Although only negligible precious metal values were discovered during the 1989 drilling program the intense clay alteration, low temperature silicification (chalcedony) and strong pyritization all indicated that only the upper horizons of strong epithermal systems had been penetrated. There is, therefore, a need to test these systems at greater depth for their precious metal pontential.

This year's magnetometer survey confirmed the presence of large amounts of altered tuff for 200 metres on either side of the Baseline from L9W to L20W. Previous geological mapping and drilling had outlined large zones of altered tuff as far west as L16W, but beyond that only a few scattered rock exposures indicated that the altered tuff unit might extend as far west as L20W.

The VLF-EM survey data suggests that several east to northeast-striking faults may cross the property. Conductor D (L20W, 8+75N

Continued . . .

DISCUSSION - Continued

to L17+50W, 9+25N) deserves particular attention in that it coincides with an elongate magnetic low that is indicative of intense clay alteration associated with a fault structure.

An Induced Polarization (I.P.) Survey is recommended for an area extending from 200 metres north of the Baseline to 500 metres south of the Baseline with particular attention given to VLF-EM Conductor D. An Induced Polarization survey would be useful in outlining zones of strong clay alteration and pyritization and would thus delineate major fault zones crossing the property. These fault zones could later be tested to depths of 150 to 300 metres for precious metal values by diamond drilling.

CONCLUSIONS AND RECOMMENDATIONS

The ground magnetometer and VLF-EM surveys conducted over portions of the Vent 1, 2 & 5 mineral claims in 1992 provide data that enhances the epithermal precious metal exploration model that is being used to explore the property.

The magnetic data has doubled the area of the property that is believed to be underlain by highly altered tuff which occurs at shallow depth. The area is now believed to extend approximately 200 metres north and south of the Baseline from L9W to L20W. The alteration of the bedrock appears to intensify to the west based on the low magnetic values recorded in that region.

One VLF-EM Conductor (D) extending from L20W, 8+75N to L17+50W, 9+25N coincides with an elongate magnetic low, and quite probably represents a fault structure.

Continued . . .

CONCLUSIONS AND RECOMMENDATIONS - Continued

The Statement made in the 1990 Assessment Report (Morrison, 1990) as follows is still valid today:

The 1989 drilling program demonstrated that large fault systems occur on the Vent property, and that vast volumes of low temperature hydrothermal solutions have passed through these fault systems. The lack of precious metal values in drill intervals is attributed to the fact that only the uppermost, low temperature horizons of the strong epithermal systems were penetrated during the drill program. Exploration efforts should now be directed towards finding the quartz-stockwork "roots" of these large epithermal systems. It is believed that economic precious metal values might be found with these "roots".

An Induced Polarization (I.P.) Survey should be conducted over the grid area with particular coverage over VLF-EM conductor "D". The I.P. Survey should be useful in outlining the clay alteration and pyritized zones associated with the upper levels of the large fault systems that are believed to cross the property.

Once delineated by the I.P. survey some of the fault zones should be drilled to depths of 150 to 300 metres to test for precious metal values.

January 30, 1993
Kelowna, B.C.

Murray Morrison, B.Sc.

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G.S.C. = Geological Survey of Canada.

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-two years.

3. During the past twenty-two 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-two years.

5. I conducted the geophysical surveys outlined in this report.

6. I own a 100% interest in the Vent 1-5 mineral claims.

January 30, 1993
Kelowna, B.C.

Murray Morrison - B.Sc.

APPENDIX B

STATEMENT OF EXPENDITURES - ON THE VENT CLAIM GROUP

Statement of Expenditures in connection with Ground Magnetometer and VLF-EM Surveys carried out on the Vent Claim Group, located 16 km southwest of Summerland, B.C. (N.T.S. Map 82-E-12W) for the year 1992.

MAGNETOMETER SURVEY (15.5 km)

M. Morrison, geologist	12 days @ $250.00/day	$ 3000.
Truck, 4x4 (including gasoline and insurance)	12 days @ $ 75.00/day	900.
Meals and Lodging	no cost	-
Flagging and belt chain thread		44.
Magnetometer rental	12 days @ $ 25.00/day	300.
	sub-total:	$ 4244.

VLF-EM SURVEY (14.7 km)

M. Morrison, geologist	5 days @ $250.00/day	$ 1250.
Truck, 4x4 (including gasoline and insurance)	5 days @ $ 75.00/day	375.
Meals and Lodging	no cost	-
VLF-EM instrument rental	5 days @ $ 25.00/day	125.
	sub-total:	$ 1750.

REPORT PREPARATION COSTS

M. Morrison, geologist	3 days @ $250.00/day	$ 750.

(correcting magnetometer readings for diurnal variation; plotting and contouring magnetometer readings; Fraser filtering of VLF-EM values; plotting and contouring VLF-EM readings; analyzing all material and writing report.

Continued . . .

APPENDIX B - Continued

STATEMENT OF EXPENDITURES - ON THE VENT CLAIM GROUP - Continued

REPORT PREPARATION COSTS - Continued

Drafting		$ 53.
Typing		70.
Copying reports		30.
	sub-total:	$ 903.
	GRAND TOTAL:	$ 6897.

I hereby certify that the preceding statement is a true statement of monies expended in connection with the Ground Magnetometer and VLF-EM Surveys carried out September 27 - November 16, 1992.

Murray Morrison - Geologist

600m NORTH to L.C.P. VENT 3 M.C.

14 N

VENT 3 M.C.

(4 UNITS)

12 N

10 N

8 N

6 N

4 N

2 N

20 W 19 W 18 W 17 W 16 W 15 W 14 W 13 W 12 W 11 W 10W 9 W

600m NORTH to L.C.P. VENT 1&2 M.C.s

VENT 2 M.C.

(4 UNITS)

VENT 1 M.C.

(4 UNITS)

500 m. EAST to L.C.P. VENT 5 M.C.

BASELINE ION

VENT 5 M.C.

(10 UNITS)

N

22°

MAGNETIC DECLINATION

ISOMAGNETIC CONTOURS (ADD 50,000 GAMMAS FOR VERTICAL FIELD)

500 GAMMAS

100 GAMMAS

INSTRUMENT - SCINTREX MF - 2 - 100 PORTABLE FLUXGATE MAGNETOMETER

ACCESS ROADS

4● R. C. DRILL HOLES - 1989

TO SUMMERLAND

LEGAL CORNER POSTS TIED-IN WITH COMPASS AND BELT CHAIN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,842

0 50 100 200 METRES

M. Morrison

TO ACCOMPANY A GEOPHYSICAL REPORT BY M. MORRISON

VENT PROPERTY

SUMMERLAND AREA, OSOYOOS M.D. B.C.

GROUND MAGNETOMETER SURVEY

VENT 1, 2 & 5 MINERAL CLAIMS

SURVEY BY : M.M.	JANUARY 1993	N.T.S. 82-E-12W
DRAWN BY : M.M.	SCALE 1:2500	MAP V-93-1

600m NORTH to L.C.P. VENT 3 M.C.

14 N

12 N

10 N

8 N

6 N

4 N

2 N

VENT 3 M.C.

(4 UNITS)

20 W 19 W 18 W 17 W 16 W 15 W 14 W 13 W 12 W 11 W 10W 9W

600m NORTH to L.C.P. VENT 1 & 2 M.C.s

VENT 2 M.C.

(4 UNITS)

VENT 1 M.C.

(4 UNITS)

BASELINE ION

500 m. EAST to L.C.P. VENT 5 M.C.

VENT 5 M.C.

(10 UNITS)

N

22°

MAGNETIC DECLINATION

IN-PHASE DIP ANGLE + 8 80 FIELD STRENGTH

FIELD STRENGTH CONTOUR INTERVAL - 10

SIGNAL STATION : SEATTLE, WASHINGTON

INSTRUMENT : SABRE, MODEL 27

SEE MAP V-93-3 FOR FRASER FILTERED IN-PHASE DATA

ACCESS ROADS

4● R.C. DRILL HOLES - 1989

TO SUMMERLAND

LEGAL CORNER POSTS TIED-IN WITH COMPASS AND BELT CHAIN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,842

0 50 100 200 METRES

M. Morrison

TO ACCOMPANY A GEOPHYSICAL REPORT BY M. MORRISON

VENT PROPERTY

SUMMERLAND AREA, OSOYOOS M.D. B.C.

VLF-EM16 GROUND SURVEY

IN-PHASE AND FIELD STRENGTH BASIC DATA

VENT 1, 2 & 5 MINERAL CLAIMS

SURVEY BY : M.M.	JANUARY 1993	N.T.S. 82-E-12W
DRAWN BY : M.M.	SCALE 1:2500	MAP V-93-2

600m NORTH to L.C.P. VENT 3 M.C.

600m NORTH to L.C.P. VENT 1 & 2 M.C.s

500 m. EAST to L.C.P. VENT 5 M.C.

14 N

12 N

10 N

8 N

6 N

4 N

2 N

20 W 19 W 18 W 17 W 16 W 15 W 14 W 13 W 12 W 11 W 10W 9W

VENT 3 M.C.

(4 UNITS)

VENT 2 M.C.

(4 UNITS)

VENT 1 M.C.

(4 UNITS)

VENT 5 M.C.

(10 UNITS)

A B C D E F G H

BASELINE 10N

N

22°

MAGNETIC DECLINATION

SEATTLE, WASHINGTON
SIGNAL STATION

230°

INSTRUMENT : SABRE, MODEL 27

0
10
20

CONTOUR INTERVAL - 10%

AXIS OF CONDUCTOR

ACCESS ROADS

4● R.C. DRILL HOLES - 1989.

TO SUMMERLAND

LEGAL CORNER POSTS TIED-IN WITH COMPASS AND BELT CHAIN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,842

0 50 100 200 METRES

TO ACCOMPANY A GEOPHYSICAL REPORT BY M. MORRISON

VENT PROPERTY

SUMMERLAND AREA, OSOYOOS M.D. B.C.

VLF-EM16 GROUND SURVEY
FRASER FILTERED DATA
VENT 1, 2 & 5 MINERAL CLAIMS

SURVEY BY : M.M.	JANUARY 1993	N.T.S. 82-E-12W
DRAWN BY : M.M.	SCALE 1:2500	MAP V-93-3