GEOPHYSICAL ACTION

ASSESSMENT REPORT

on the FILE NO:

J CLAIM GROUP

CACHE CREEK AREA

KAMLOOPS MINING DIVISION

bу

MURRAY S. MORRISON, B.Sc.

CLAIMS:

J 1-5 (20 units)

LOCATION:

The J property is situated on Highway 97,

15 km southeast of Clinton, B.C., or 23

km northwest of Cache Creek, B.C.

Lat. 50°59'; Long. 121°09';

N.T.S. 92-I-13E & 14W.

OWNER:

M.S. Morrison

OPERATOR:

M.S. Morrison

DATE STARTED:

March 10, 1992

DATE COMPLETED:

March 23, 1992

Kelowna, B.C.

May 20, 1992

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,386

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SUMMARY

The J property, owned by the writer, is located on Hart Ridge, immediately north of Highway 97, 22 km northwest of Cache Creek, B.C.

The 20-unit property covers a succession of Permian Cache Creek Group sediments that strike northwest and dip moderately to steeply southwest.

Immediately north of the highway a large (700 metre by 50 metre) interbed of mafic tuff has been selectively replaced by quartz, carbonate and mariposite. Locally, the replacement zone has been disrupted by faulting and mended with late quartz, ankerite and dolomite veinlets. The rock contains anomalous values of arsenic (up to 1155 parts per million) and antimony (up to 16 ppm).

Two kilometres northwest of the Highway Showing a drill hole drilled by Cordilleran Engineering on the Paw/Ranger mineral claims of Peyto Oil Ltd. in 1973 returned 15 grams of gold per ton from a 3 metre intersection of quartz-carbonate replaced rock. A program of follow-up drilling conducted by Cordilleran Engineering in 1974 failed to locate the gold-bearing quartz-carbonate unit in three widely-spaced drill holes drilled between the 1973 discovery hole and the Highway Showing.

A review of the 1973 & 74 data by the writer in 1985 suggested that the 1974 follow-up drill holes may have all been drilled too far to the east to intercept the gold-bearing unit. In February of 1985 a VLF-EM 16 survey was conducted by the writer in an attempt to trace graphitic argillite units of the Cache Creek Group across the drift covered J property in the vicinity of the previous drilling.

Continued . . .

SUMMARY - Continued

Later in 1985, Esso Minerals optioned the property to conduct a diamond drilling program in the immediate vicinity of the 1973 gold discovery (Percussion Drill Hole 73-7). A total of 186.5 metres were drilled in three vertical diamond drill holes and one of the drill holes, DDH85-1, of 68.3 metres length, "twinned" PDH73-7.

The twinned drill hole, DDH85-1, returned 430 parts per billion gold over 2.4 metres from 44.8 to 47.2 metres (presumably the same zone intercepted in PDH 73-7). The core recoveries were not good (35%) for DDH 85-1 and no sludge was collected for assaying, and therefore, the test was not conclusive in this writer's opinion. The other two diamond drill holes, DDH85-2&3 were drilled 50 metres northwest and 50 metres southeast of DDH 85-1, respectively. These two drill holes returned negligible amounts of gold and Esso Minerals terminated their option.

This year's magnetometer survey over the central portion of the J 5 mineral claim was another indirect attempt to trace the bedrock geology across the property. However, the results of the survey proved to be too "flat" to be useful for a geological interpretation. Lack of magnetic relief on the property is attributed to the heavy mantle of drift that is (apparently) masking the magnetic character of the underlying bedrock.

Although deep drift has greatly hampered all geochemical, geophysical and geological efforts to explore the property it is recognized that valid exploration targets remain. The widely divergent drill results returned from PDH 73-7 and DDH 85-1 from the same replacement zone suggest that yet a third drill hole will be required to properly test this target. A second 1973 percussion drill hole, PDH 73-8, located 435 metres northwest

SUMMARY - Continued

of PDH 73-7 also warrants further testing. This drill hole returned an average of 23 ppb gold over the 76 metre bedrock interval analyzed.

A large diameter Reverse Circulation Drilling Program is recommended to test the PDH 73-7 & 8 zones on the J property. Three drill holes are recommended to test each target for gold mineralization.

INTRODUCTION:

This report, written for government assessment work requirements, discusses the results of a ground magnetometer survey conducted over the central portion of the J5 mineral claim by the writer during March, 1992.

The J5 modified-grid mineral claim is comprised of 16 units, and is contiguous with the J1-4, 2-post mineral claims which lie to the south. The five mineral claims, all owned by the writer, M. Morrison of Kelowna, B.C., make up the J Claim Group.

The property lies immediately north of Highway 97, 22 km north-west of Cache Creek, B.C. and covers a gossan that is clearly visible from the highway.

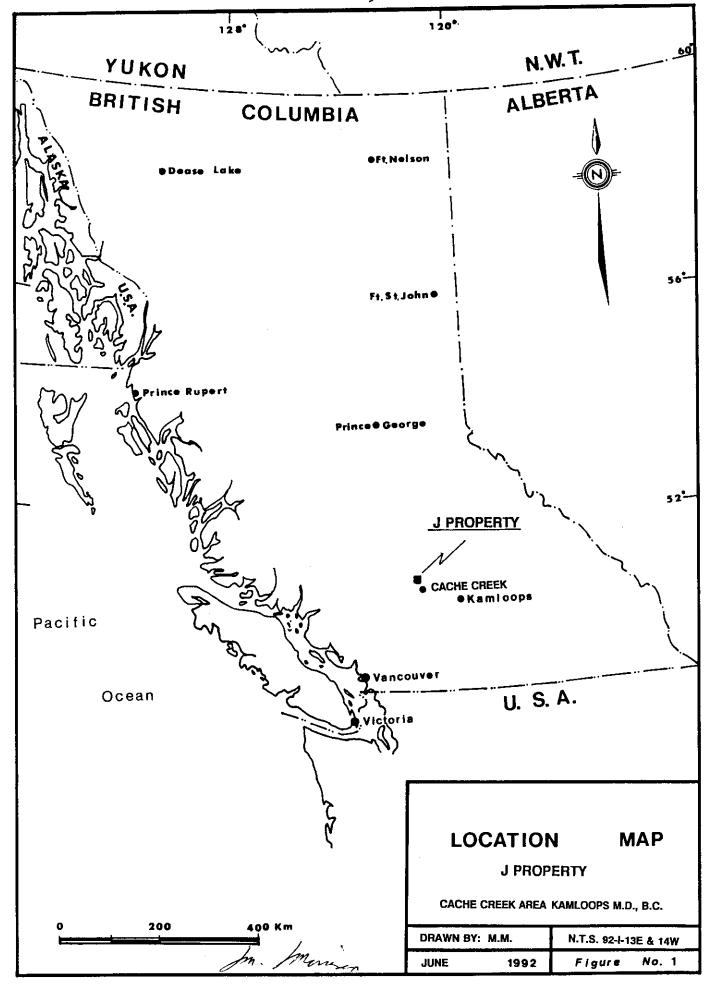
The gossan is coincident with a strong zone of quartz-carbonate replacement in Permian Age Cache Creek Group rocks. A similar (hidden) replacement zone, located 2 km to the northwest of the Highway Zone, was discovered by Cordilleran Engineering of Vancouver during a 1973 percussion drill program. The new zone, buried beneath 30 metres of overburden, returned 15 grams of gold per tonne from a drill intercept of 3 metres.

Esso Minerals "twinned" the 1973 percussion drill hole with a diamond drill hole in 1985. The diamond drill hole returned only 430 parts per billion gold from the same interval (2.4 metres) but core recovery was poor and no sludge was collected. In this writer's opinion the test was inconclusive.

It has come to the writer's attention in recent years that the quartz-carbonate replacement zones on the J property could be listwanites (carbonatized ultramafics)*and that as such could represent sizeable targets for gold exploration. Therefore,

Continued . . .

^{*}Listwanites are recognized around the world as favorable host rocks for gold mineralization.



INTRODUCTION - Continued

the first objective of this year's magnetometer survey was to distinguish listwanites from unaltered ultramafics, taking advantage of the lower magnetite content of the altered rocks. A second goal of the survey was to attempt to differentiate the magnetite-rich components (mafic tuffs?) of the Cache Creek Group rocks from the magnetite-poor units (argillites and limestones) through the heavy mantle of drift on the property.

The values obtained during the survey are displayed and contoured on Map J-92-1 accompanying this report.

LOCATION AND ACCESS

The J property lies immediately north of Highway 97, 22 km north-west of Cache Creek, or 15 km southeast of Clinton, B.C. (Lat. 50°59'; Long. 121°29'; N.T.S. Maps 92-I-13E&14W).

Access to the J5 mineral claim is via a dirt logging road which leaves Highway 97 at a Rest Area 3.8 km west of the Loon Lake road turn-off (please see Figure 2).

The 1973%74 and 1985 drill sites on the J5 mineral claim were accessed via trails extending southeasterly along the ridge top from the dirt logging road.

PHYSICAL FEATURES AND CLIMATE

The J property straddles the southern end of Hart Ridge - a spur of land that separates the Bonaparte River Valley on the east from the valley of Maiden Creek on the southwest.

The upland surface of Hart Ridge is covered with deep glacial drift and most of the rock exposures on the J property are restricted to the flanks of the ridge adjacent the two main valleys.

ACCESS ROAD

KEY CLAIM POSTS

5 0 1 2 KM

J PROPERTY
CACHE CREEK AREA

KAMLOOPS M.D., B.C.

DRAWN BY: M.M. N.T.S. 92-I-13E & 14W

JUNE 1992 FIGURE NO. 2

PHYSICAL FEATURES AND CLIMATE - Continued

The J property lies near the northern end of the Cache Creek-Ashcroft desert. The sagebrush of the Bonaparte River Valley at 580 metres elevation gives way to a forest of Douglas fir along Highway 97 as it climbs away from the valley towards Clinton. The J property lying just north of the highway is forested with Douglas fir. (The mean elevation of the property is 900 metres above sea level).

The Douglas fir has been selectively logged from portions of the property. Elsewhere, a severe caterpillar infestation of several years ago has killed half of the forest. Some of the dead forest stands, but much of it has fallen in recent years to create a tangle of deadfall.

The property receives approximately 40 cm of precipitation annually. Winter snow generally covers the property from early November until mid-March and can reach up to 70 cm in depth.

CLAIN STATUS

The J property is made up of the J 1-4, 2-post mineral claims, and the J 5, modified-grid mineral cliam, all staked by the writer, M. Morrison. Particulars on the J claims are given below:

Claim <u>Name</u>	<u>Units</u>	Date of <u>Recording</u>	Tenure No.	Mining <u>Division</u>	Expiry* <u>Date</u>
J 1	1	May 11/82	217043	Kamloops	May 11/94
J 2	1	May 11/82	217044	Kamloops	May 11/95
J 3	1	May 11/82	217045	Kamloops	May 11/95
J 4	1	May 11/82	217046	Kamloops	May 11/95
J 5	16	Apr 03/84	217303	Kamloops	Apr 03/93

^{*} New Expiry Date based on the acceptance of this report for Assessment Work Credits.

HISTORY

The discovery of the Maggie Mine copper-molybdenum porphyry deposit by Bethlehem Copper Corporation in 1970, 15 km northwest of Cache Creek, B.C., sparked a staking rush that extended for several kilometres north and south of the discovery. The southern spur of Hart Ridge, now covered by the J 1-5 mineral claims, was covered during the Maggie staking rush by the Ranger and Paw mineral claims owned by Calgary-based Peyto Oil Ltd.

The large Ranger-Paw property, consisting of 159, 2-post mineral claims, was explored for its porphyry copper-molybdenum potential from 1970 until 1973 in the wake of the Maggie discovery. Exploration surveys included: geological mapping, geochemical soil sampling (for copper and molybdenum only), magnetometer surveying and induced polarization surveying carried out under the direction of Cordilleran Engineering and others. The geochemical results were negligible, but in 1973, fifteen percussion drill holes were drilled to test several of the induced polarization survey anomalies. No significant copper-molybdenum mineralization was discovered, but percussion drill hole 73-7 did intercept 3 metres of 15 grams of gold per tonne from 42.7 to 45.7 metres. The gold occurred with pyritic, quartz-carbonate material.

In 1974 the original 159 claim property was reduced to 17 claims (covering much of the same country that is now covered by the J 1-5 mineral claims). Four widely separated percussion drill holes were drilled in an attempt to extend the gold zone discovered in PDH 73-7. No gold was found and the property was allowed to lapse. (Sanguinetti, 1974).

The ground remained open until 1982 when the J 1-4 mineral claims were staked by the writer. A prospecting survey accompanied by some lithogeochemical sampling was carried out on

HISTORY - Continued

the J 1-4 mineral claims in 1983 (Morrison, 1983). In 1984 the J 5 mineral claim was added to the property.

A VLF-EM ground survey was conducted over the central portion of the J 5 mineral claim in early 1985 (Morrison, 1985) and later the same year Esso Minerals drilled 3 diamond drill holes, totalling 186.5 metres, in the vicinity of PDH-73-7 - with one of the diamond drill holes "twinning" the 1973 drill hole. The best intercept was only 430 parts per billion gold over 2.4 metres from the "twinned" drill hole. Core recoveries were poor and no sludge was collected, but the drill test was considered negative by Esso Minerals and they returned the property to the writer (Melnyk, 1985).

The property had remained dormant until this spring's (1992) magnetometer survey.

REGIONAL GEOLOGY

The Geological Survey of Canada, 1" = 4 mile scale geological maps, 1010A - Ashcroft Area and 1278A - Bonaparte Area by Duffell and McTaggart (1952) and Campbell and Tipper (1971), respectively, outline a 10 by 75 km belt of Permian Cache Creek Group rock which is centred at Cache Creek and extends south to Martel and north to Clinton. The sedimentary and volcanic rocks of the Cache Creek Group are highly faulted and generally disrupted throughout much of the belt, and they are locally intruded by small bodies of ultrabasic intrusions which are serpentinized.

The J property, located near the northern end of the belt, covers highly disrupted Cache Creek Group sediments and meta-volcanics 7 km northwest of the well-known Maggie coppermolybdenum deposit.

REGIONAL GEOLOGY - Continued

The Maggie deposit, with published reserves of 200 million Tons of 0.23% copper and 0.029% molybdenum, is associated with an elongate Tertiary intrusive of biotite-quartz monzonite porphyry which strikes 143 degrees and intrudes the Cache Creek Group rocks.

The quartz-carbonate replacement zone at the J property Highway Showing strikes 150 degrees; semi-conformable with the general shearing/bedding in the district.

PROPERTY GEOLOGY

The J property is believed to be underlain by a succession of Permian Cache Creek Group sedimentary rocks which include interbedded pyroclastic rocks. The general bedding appears to strike at 150 degrees and dip 60 to 70 degrees southwest although on the bluffs north of Highway 97(on the J 1-4 mineral claims) the rocks are locally warped, drag-folded and generally dislocated by strong faulting and a wide range of bedding attitudes are displayed

The dominant rock unit north of the highway is a black, thin-bedded argillite which is sometimes cherty and often graphitic. The argillite is highly foliated and erodes easily. Limestone is known to be interbedded with the argillites and at grid 26+50N, 17+65W a mass of limestone 30 metres thick is exposed.

Dacitic to andesitic tuff is locally interbedded with the argillites also, and at the Highway Showing these tuffs have been selectively replaced with quartz, carbonate and mariposite.

The main carbonate replacement zone north of the highway was traced for 700 metres during a 1983 prospecting program

PROPERTY GEOLOGY - Continued

(Morrison, 1983). The central part of the lense-shaped zone has been particularly disrupted by drag-folding and over a distance of a few metres the original rock is brecciated and entirely replaced with ankerite/dolomite (65%), quartz (30%) and mariposite (5%). A sample of this rock was found to contain 1155 parts per million arsenic in 1983.

Two kilometres northwest of the Highway Showing a second quartz-carbonate replacement zone was found within Cache Creek Group argillites at a depth of 42.7 metres in a percussion drill hole drilled in 1973. PDH 73-7, drilled by Cordilleran Engineering, returned 15 grams of gold per tonne from the 3 metre quartz-carbonate zone.

Attempts by Cordilleran Engineering to trace the PDH 73-7 gold-bearing replacement zone back towards the Highway Showing with a series of three widely spaced drill holes along Hart Ridge in 1974 failed. The 1974 drill program was hampered by overburden and this writer believes that the follow-up drill holes were all drilled east of the projected strike of the replacement zone. The 1974 drill holes intercepted interbedded argillites and cherts of the Cache Creek Group.

Another drill hole of the 1973 program, PDH 73-8, located 435 metres northwest of PDH 73-7, returned an average of 23 parts per billion gold over the 76 metre bedrock interval of the drill hole. None of the 1974 follow-up drilling was conducted in the vicinity of PDH 73-8 by Crodilleran Engineering.

The thick cover of drift continues to impede exploration on the central portion of the property. Geology can be mapped on the flanks of Hart Ridge, but due to the high degree of faulting can-

PROPERTY GEOLGY - Continued

not with any certainty be projected to the centre of the property. As an example, a large outcrop of Limestone mapped at grid 26+50N, 17+65W has a 010/vertical foliation, which is at odds with other bedding/foliation measurements on the property.

An attempt to geophysically trace the Cache Creek Group geology across the drift covered J 5 mineral claim was made in 1985 by the writer (Morrison, 1985). A VLF-EM survey was carried out to trace conductive graphitic argillite units. The survey did identify several conductors crossing the property at 150 to 160 degrees - a direction that could represent the strike of the underlying Cache Creek Group rocks.

Mapping on the bluffs north of Highway 97 reveals that late northeast and northwest transverse faults offset beds of the Cache Creek Group a few metres here and there across the property.

Badly broken, thin-bedded, sandstones and grits of Jurassic(?) Age are in fault contact with Cache Creek Group rocks on the western side of the J 5 mineral claim.

GROUND MAGNETOMETER SURVEY - 1992

Portions of the 1985 VLF-EM grid were re-established for this year's magnetometer survey. The Baseline was re-measured and re-flagged for 1900 metres across the centre of the J 5 mineral claim at 330 degrees azimuth. Twenty grid lines at 100 metre intervals were then run perpendicular to the Baseline for distances of 400 metres to the northeast and 300 metres to the southwest of the Baseline as illustrated on Map J-92-1. Stations were marked at each 25 metre measure along the grid lines.

GROUND MAGNETOMETER SURVEY - 1992 - (Continued)

A Topolite belt chain and a Silva Ranger Compass were used to establish the 14 km of flagged grid lines. The grid was laid-out in conjunction with the ground magnetometer survey.

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 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 (1992) 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, J-92-1, accompanying this report. A constant value of 50,500 gammas has been subtracted from all of the values on the map for ease of plotting and clarity.

DISCUSSION

Note: The following discussion refers to the magnetic values plotted on Map J-92-1. As mentioned earlier, a constant value of 50,500 gammas has been subtracted from all field readings for easier plotting on the map.

Surficial features on the top of Hart Ridge indicate that the glacial drift overlying the central portion of the J 5 mineral claim is deep. This observation is backed-up by data obtained

DISCUSSION - Continued

from the 1973 & 74 drill hole programs which proved that 10 to 30 metres of drift mantle the bedrock.

In spite of the expected general cover of deep drift over the survey area it was hoped that the magnetometer would be able to distinguish listwanites from non-altered ultrabasics and dacitic or andesitic tuff units from argillites and limestones (in each case taking advantage of the different magnetite content of each rock type).

During the survey however, it was discovered that the Cache Creek Group rocks displayed little magnetic variation. A foliated andesite tuff(?) occurring at scattered locations along grid line 12N from 20+25W to 23+00W yielded magnetometer values of 80 to 90 gammas. These readings were only marginally higher than the 0 to 50 gamma values recorded over a large limestone exposure at grid 26+50N, 17+65W. The expected 400 to 500 gamma range between different rock types, therefore, doesn't exist on the property.

All of the magnetic values plotted on Map J-92-1 fall within a range of 200 gammas. The very low magnetic relief recorded over the property is attributed, in part, to the lack of magnetic character of the underlying Cache Creek Group rocks, and in large measure, to the extensive cover of drift which has masked the magnetics of the underlying rock.

Notes that were taken with regard to surficial geology at each site during the magnetometer survey reveal that several weak magnetic "highs" (30 to 60 gammas above background) correlate with morainal ridges, while magetic "lows" (30 to 60 gammas below background) correlate with ravines or depressions.

DISCUSSION - Continued

Some examples of magnetic "highs" that correlate with morainal ridges are:

L	13N,	19+65W	130	gammas	L	23N,	19+65W	125	gammas
L	14N,	19+15W	125	gammas	L	24N,	19+30W	160	gammas
L	22N,	17+50W	145	gammas	L	25N,	18+75W	180	gammas
L	22N,	18+60W	145	gammas	L	26N,	20+25W	155	gammas
L	22N,	19+40W	145	gammas	L	27N,	20+00W	160	gammas
L	2211,	19+85W	125	gammas					

Some examples of magnetic "lows" that correlate with ravines are:

L 23	N, 20+15W	40 gammas	L 26N, 18+00W	30 gammas
L 23	N, 19+40W	25 gammas	L 27N, 23+00W	10 gammas
L 24	N, 19+85W	50 gammas	L 28N, 17+75W	25 gammas
L 24	N, 18+00W	75 gammas		

The explanation for the magnetic variation between moraines and ravines lies in the make up of the drift underlying each. The moraines are comprised of cobbles and boulders imbedded in sand and silt, and some have boulder "tails". The ravines and depressions, on the other hand, contain more soil, silt and sand and fewer boulders. It is the greater amount of primary magnetite contained in boulders and cobbles, compared with that contained in soil, silt, or sand that is believed to account for the magnetic variation.

Three very broad areas of greater than 100 gammas are illustrated on Map J-92-1. The first area extends from 16+50W to 19+25W on L 18N and from 16+50W to 18+75W on L 19N. The second, very large and irregular area, extends across much of the surveyed territory from L 22N to L 25N. The third area covers the northwest corner of the survey grid from 17+75W on L 31N to 23+00W on L 30N.

DISCUSSION - Continued

The three regions of slightly elevated magnetometer readings could represent Cache Creek Group rock units with more mafic tuff interbeds than elsewhere, but the shape of the three areas does not conform with the general 150 degree strike of the Cache Creek Group.

In summary, very little confidence can be put into any interpretation of the magnetometer survey data with regard to subcrop geology, because of the low magnetic relief recorded within the survey area.

CONCLUSIONS AND RECOMMENDATIONS

The 1992 ground magnetometer survey conducted over the central portion of the J 5 mineral claim proved to be of little value in advancing exploration for gold on the property.

The magnetic contour map (J-92-1) produced from this year's data displays very little relief. Presumably the heavy glacial drift masks the magnetics of the underlying rock. No ultrabasic intrusives were outlined, and listwanites (if they exist?) were not distinguished from the other magnetite-poor rocks (argillites and limestones) that are believed to underlie the property.

In spite of the lack of useful data obtained during this year's survey, valid gold targets do occur on the property (see Property Geology). The two drill tests at site PDH 73-7 returned highly variable results (eg. PDH 73-7 yielded 15 grams per tonne gold over a 3 metre interval, while the "twinned" diamond drill hole, DDH 85-1, produced 430 parts per billion gold over 2.4 metres). The diamond drill hole suffered from poor core recoveries, and therefore did not provide a reliable test of the zone.

Continued . . .

CONCLUSIONS AND RECOMMENDATIONS - Continued

A second untested gold target occurs at PDH 73-8 located 435 metres northwest of PDH 73-7. PDH 73-8 returned an average of 23 parts per billion gold over the 76 metre bedrock interval of the drill hole. PDH 73-8 could fall on the projected extension of the Highway Showing and PDH 73-7 replacement zones.

It is recommended that both the PDH 73-7 and 73-8 zones be tested with a large diameter (10 cm) reverse criculation percussion drill. Three drill holes should be drilled in the vicinity of each target. All of the drill holes should be inclined at minus 45 to 50 degrees and drilled from southwest to northeast across the target zones to depths of 60 metres.

All quartz-carbonate replaced intercepts should be assayed for gold, silver, mercury, antimony and arsenic (mercury, antimony and arsenic are typical gold indicator elements of listwanite deposits).

The sites proposed for reverse circulation percussion drilling are readily accessible.

May 20, 1992

Kelowna, B.C.

Murray Morrison - B.Sc.

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* Assessment Reports on file with the Ministry of Energy, Mines and Petroleum Resources of British Columbia.

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:
- 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.
- During the past twenty-two years, I have intermittently 3. 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 magnetometer survey outlined in this report.
- I own a 100% interest in the J 1-5 Mineral Claims.

May 20, 1992

Kelowna, B.C.

Murray Morrison - B.

- 21 - APPENDIX B

STATEMENT OF EXPENDITURES - ON THE J CLAIM GROUP.

Statement of Expenditures in connection with a Magnetometer Survey carried out on the J Claim Group, located 23 km northwest of Cache Creek, B.C. (N.T.S. Maps 92-I-13&14W) for the year 1992.

MAGNETOMETER SURVEY (14.0 km)

M. Morrison, geologist	81/2	days @	\$250.00/day	\$ 2125.
Vehicle (including gasoline and insurance)	81/2	days @	\$ 40.00/day	340.
Meals and Lodging	81/2	days @	\$ 60.00/day	510.
Flagging and belt chain thread				40.
Magnetometer rental	81	days @	\$ 25.00/day	 212.
		su	o-total	\$ 3227.

REPORT PREPARATION COSTS

M. Morrison, geologist	2 days @	\$250.00/day \$	500.
(correcting magnetometer plotting and contouring data and writing report	magnetometer		
1) 01 :		Al-	

Drafting		\$	50.
Typing			50.
Copying Reports			20.
	sub-total	#	620.
	GRAND TOTAL	#	3847.

I hereby certify that the preceding statement is a true statement of monies expended in connection with the magnetometer survey carried out March 10 - 23, 1992.

May 20, 1992

Murray Morrison - Geologist

