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September 1987

Sierra Madre Resources Inc.

HARBET MINERAL CLAIM

FILMED

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1987 Exploration Program

ARIS SUMMARY SHEET

District Geologist, Victoria

Off Confidential: 89.03.01

ASSESSMENT REPORT 17125

MINING DIVISION: Victoria

-PROPERTY: Harbey
-LOCATION: LAT 48 55 30 LONG 124 09 30
UTM 10 5419546 415147
NTS 092C16E

-CLAIM(S): Harbey
-OPERATOR(S): Sierra Madre
-AUTHOR(S): Cukor, V.
-REPORT YEAR: 1987, 57 Pages

COMMODITIES

SEARCHED FOR: Gold

GEOLOGICAL

-SUMMARY: Mafic volcanics of the Franklin Creek Unit and cherts of the Sicker Group are intruded by diorite of the Jurassic Island Intrusions. Gold showings were found in the Sicker Group cherts and the intrusive rocks.

WORK

DONE: Geochemical
EMGR 38.0 km; VLF
Map(s) - 1; Scale(s) - 1:5000
MAGG 38.0 km
SOIL 752 sample(s) ;AU,AG,CU,PB,ZN,MO
Map(s) - 4; Scale(s) - 1:5000

MINFILE: 092C

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SIERRA MADRE RESOURCES INC.

THE HARBAY MINERAL CLAIM

DUNCAN, B. C. AREA

1. INTRODUCTION

This report is prepared at the request of Sierra Madre Resources Inc., a Vancouver based company. The report is written based on the author's knowledge of the area, a study of pertinent data and his supervision of the program conducted on the property during the months of June through August, 1987.

Work performed on the property consisted of geological mapping and sampling of outcrops, and of geophysical and geochemical surveys, with a total expenditure of \$85,000. The geological work and field supervision was conducted by D. Cukor, geologist.

2. REVIEW

2.1 SUMMARY, CONCLUSIONS

The Harbey Mineral claim is underlain by the Triassic and older units of Franklin Creek and Sicker Group; both subsequently were intruded by the younger Island intrusives.

The Franklin Creek unit is host to skarn type and replacement type mineralization, which assayed up to .26 oz/t gold on the Anne claims (also known as the Widow claims and prior to that as the Comego property) located only about 1 mile west of the Harbey claim.

2. REVIEW (CONT'd)

2.1 SUMMARY and CONCLUSIONS (Cont'd)

On the Harbey property the shear zone within the Sicker Group is mineralized by pyrite and was found to assay significant gold values. At the other location pyritized chert within the same unit also assayed gold. An assay of .352 oz/t gold and .11 oz/t silver was obtained from the altered shear within the Island Intrusive. Moreover, the high geochemical values in gold, silver, molybdenum and copper are spread over all of the three geological units on the property.

Elsewhere within the "Vancouver Island Gold Belt" the Sicker Group is the best for economic gold deposits. Previously the Franklin volcanics were targeted to be most likely to host gold values on the property. However, the shear zone connected with VLF conductor, geochemical anomalies and gold showing in place, located within the Sicker Group should become the primary target for further exploration. However the showing in the contact zone of the intrusive should not be neglected. Further work should definitely be carried out to further evaluate high geochemical values elsewhere on the property and especially to open the showings for further detailed examination, mapping and sampling.

2. REVIEW (CONT'D)

2.2 RECOMMENDATIONS

The next stage of exploration on the Harbey claim should consist of physical work and detailed geological mapping and sampling. All three showing areas should be trenched, as should areas of high gold geochemical anomalies that were outlined. All those areas need very detailed geological mapping and extensive sampling. If positive results are obtained in the next stage, all areas of interest should be diamond drill tested.

2.3 COST ESTIMATE

The following budget is estimated to be necessary for completion of the recommended program.

Bulldozer trenching 250 tons @ \$100.	\$25,000
Mobilization, demobilization	3,000
Geological supervision, sampling, mapping	7,500
Assays	4,000
Accommodation, transport, communication	2,500
Report	3,000
	<hr/>
Sub Total	\$45,000
Contingency	<u>5,000</u>
Phase 1 Total	\$50,000

2. REVIEW

2.3 COST ESTIMATE (Cont'd)

Within this phase, funds for a performance bond to be lodged with McMillan Bloedel (\$10,000) should also be secured.

Contingent on results of stage 1, a second stage of about 2,000 feet of diamond drilling should be planned with estimated expenditure of about \$90,000.

If funds for both recommended stages are raised within this same public offering, a total of about \$150,000 should be allocated for the expenditure on the property.

3. PROPERTY

3.1 LOCATION

The Harbey Mineral claim is located in the Cowichan Lake Land District at the southern part of Vancouver Island. It covers the headwater of Reynard Creek, a southern tributary of the Chemainus River. (See Figure 1)

The property is located at a distance of about 40 air kilometers west north west of Duncan, B.C., and about 6 kilometers north east of the small community of Youbou. It is within the Victoria Mining Division, and is located at NTS 92C/16E. The center of the claim is at the approximate latitude 48° 55' 33" north and longitude 124° 09' 30". Location of the property is shown on Figures 1 and 2.

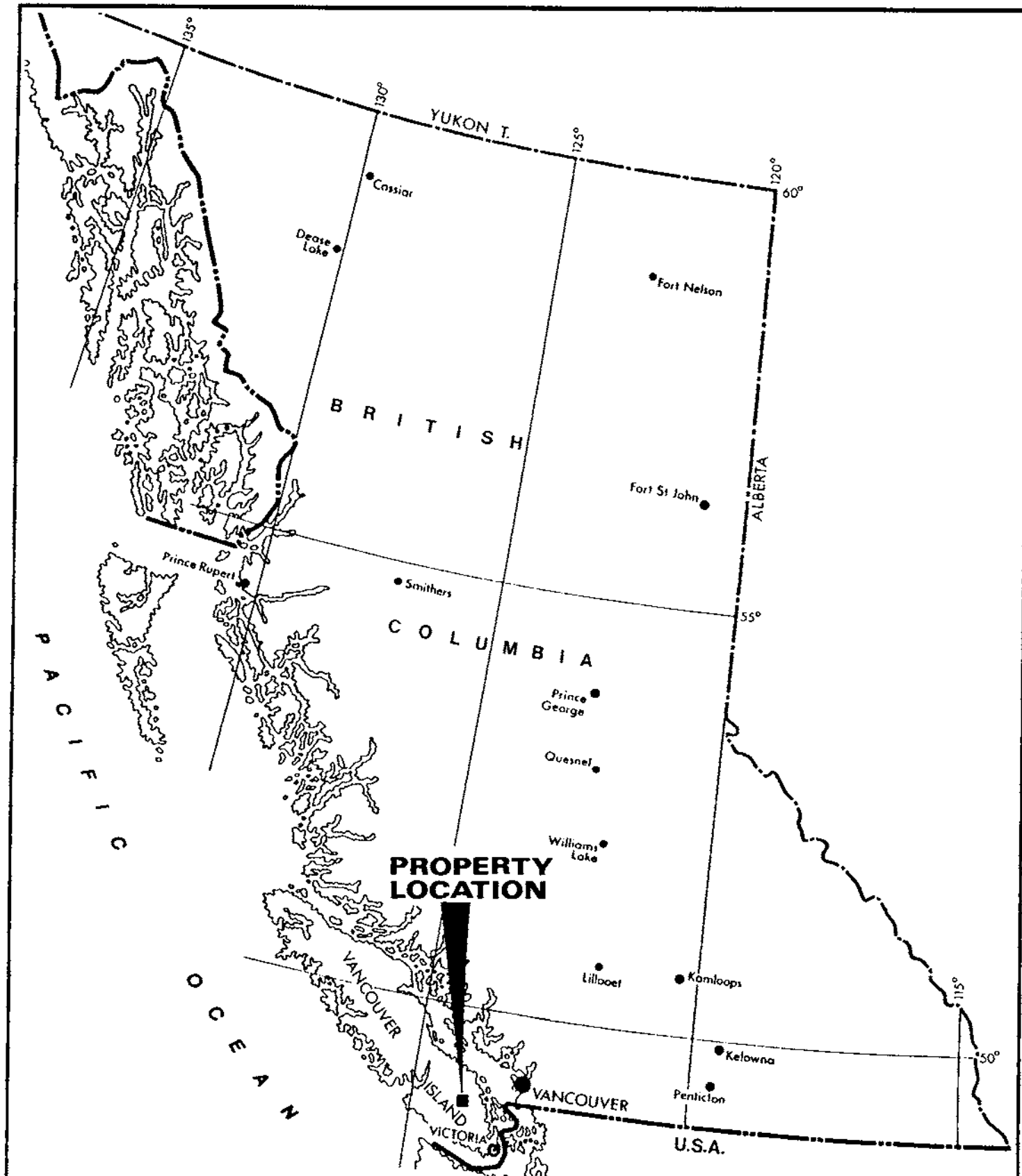
3.2 ACCESS

The property is accessible by a good quality logging road following the north side of the Chemainus River Valley. From the turnoff on the Island Highway at Chemainus to the bridge D-12 (crossing the Chemainus River near the property) is a distance of about 40 kilometers. From the bridge, old logging roads reach the claim area.

3.3 CLAIMS

The property consists of a single claim located on the modified grid system. The name and corresponding recording data are as follows:

<u>Claim</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Anniversary Date</u>
Harbey	20	1838	March 4, 1988



PROPERTY LOCATION

Sierra Madre Resources Inc.		
Harbey Mineral Claim Location Map		
VICTORIA M.D.	NTS 92C/16 E	
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: August 1987	SCALE: 0 100 km	FIG. 1

3. PROPERTY (CONT'D)

3.3 CLAIMS (Cont'd)

The property lies within Blocks 57, 437, 438 and 996, Cowichan Lake Land District, with the surface and timber rights belonging to McMillan Bloedel Limited. Prior to commencement of exploration, the Licence for Mineral Exploration was obtained and a performance bond had to be posted with the Company.

The claims appear to be staked in accordance with the Mineral Act of B.C.

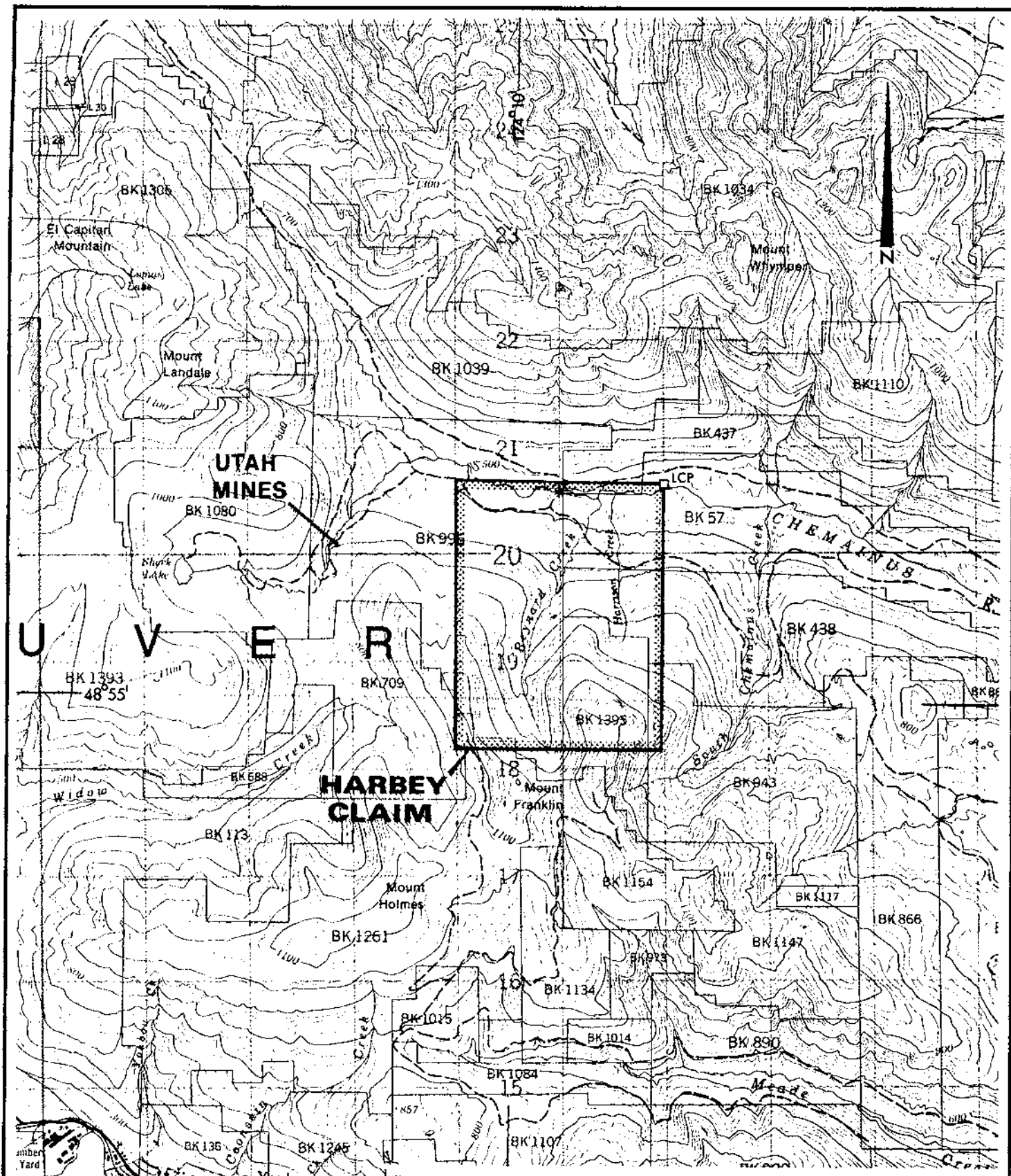
3.4 TOPOGRAPHY AND CLIMATE

The property occupies the northern slopes of Mount Franklin. It is between approximate elevations of 500 and 1,100 meters for a total relief of about 600 meters. The topography is generally rugged with steep, north-south canyons in the southern part of the claim.

The northern part of the claim had been logged and is now covered with thick second growth, which sometimes hampers prospecting and mapping. The southern part of the property is covered by standing timber, where presently new roads are under construction in preparation for logging.

The climate of the area is characterized by hot summers and moderate winters with heavy atmospheric precipitation.

All water and timber for development purposes is available on the claim; large supply centers are within easy reach. The property topography and claim location is shown on Figures 2 and 3.



Sierra Madre Resources Inc.

Harbey Mineral Claim

Claim Location and Topography

VICTORIA M.D.

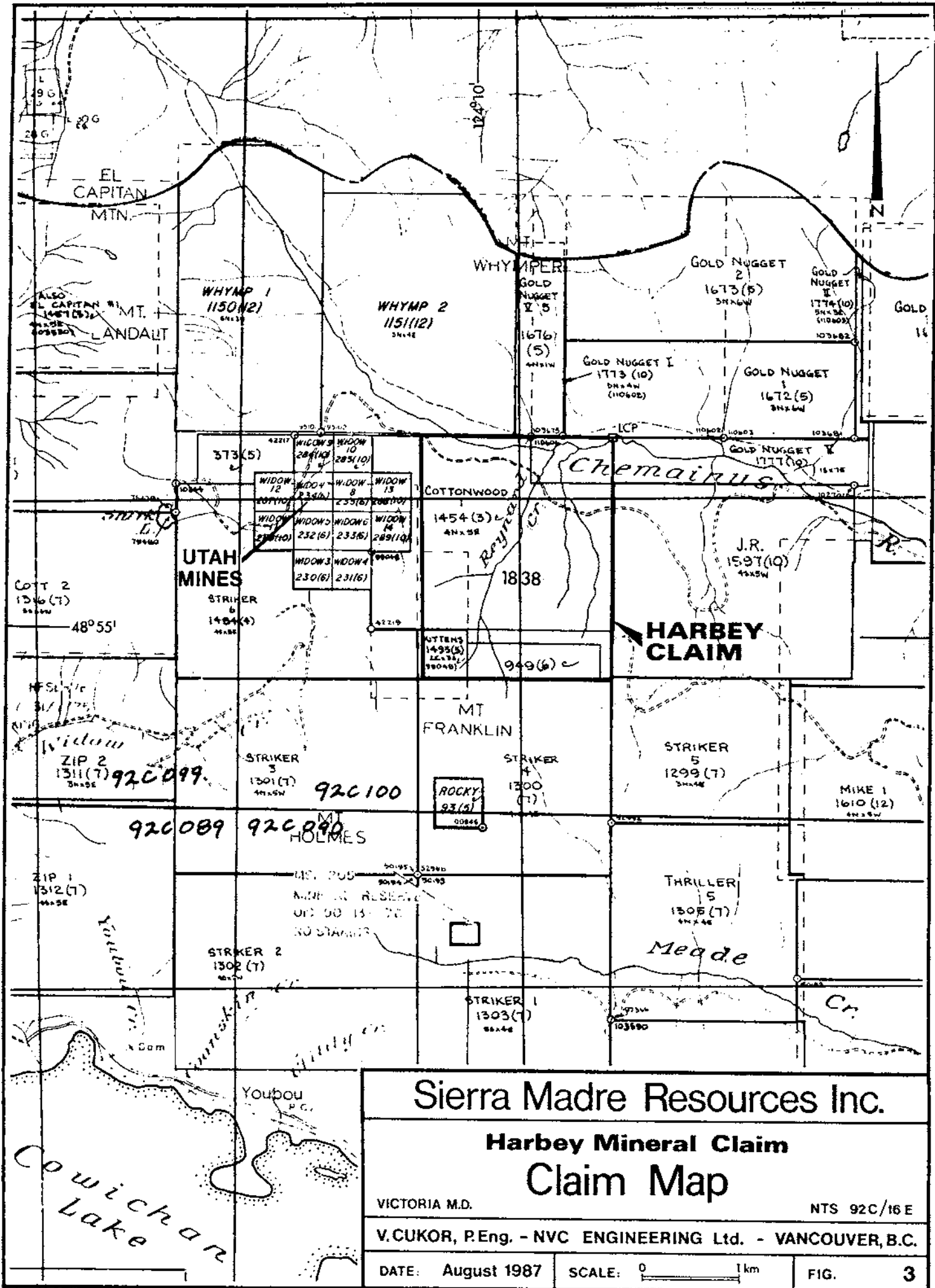
NTS 92C/16E

V.CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

DATE: August 1987

SCALE: 0 1 km

FIG. 2



Sierra Madre Resources Inc.

Harbey Mineral Claim Claim Map

VICTORIA M.D.

NTS 92C/16 E

V. CUKOR, P. Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

DATE: August 1987

SCALE: 0 1 km

FIG. 3

4. HISTORY

There are no records of previous work on the property, and during the 1987 field program, no physical evidence of any past exploration was detected. Only brief examination of the property was carried out, prior to the recent program.

Exploration, however has been recorded on the Anne claims (previously known as the Widow claims), where Hibernia Mining explored old copper-gold showings. Allegedly Utah Mines has a plan to perform a drill program on this property in the near future.

Elsewhere in the same 100 mile long volcanic belt, a number of other precious metal prospects are known.

At the south end of the belt, Twin J. Mine produced some 300,000 tons of ore with a grade of .075 oz/t gold, 2.05 oz /t silver, with values in zinc, copper and lead.

The Lynx-Myra ore body has been in production for the last twenty years. In 1979 Westmin Resources announced the discovery of H.W. Deposit, of 15 million tons of ore with a grade of .07 oz/t gold, 1.1 oz/t silver, 2.2% copper and additional values in lead and zinc.

Abermin Corporation is conducting a program on the Lara Property, where a 530 foot long and 11 foot wide zone was reported to average .12 oz/t gold, 2.8 oz/t silver, 4.5% zinc, 1% lead and .75% copper. A further expenditure of \$1,000,000 was announced for the 1987 exploration.

5. GEOLOGY

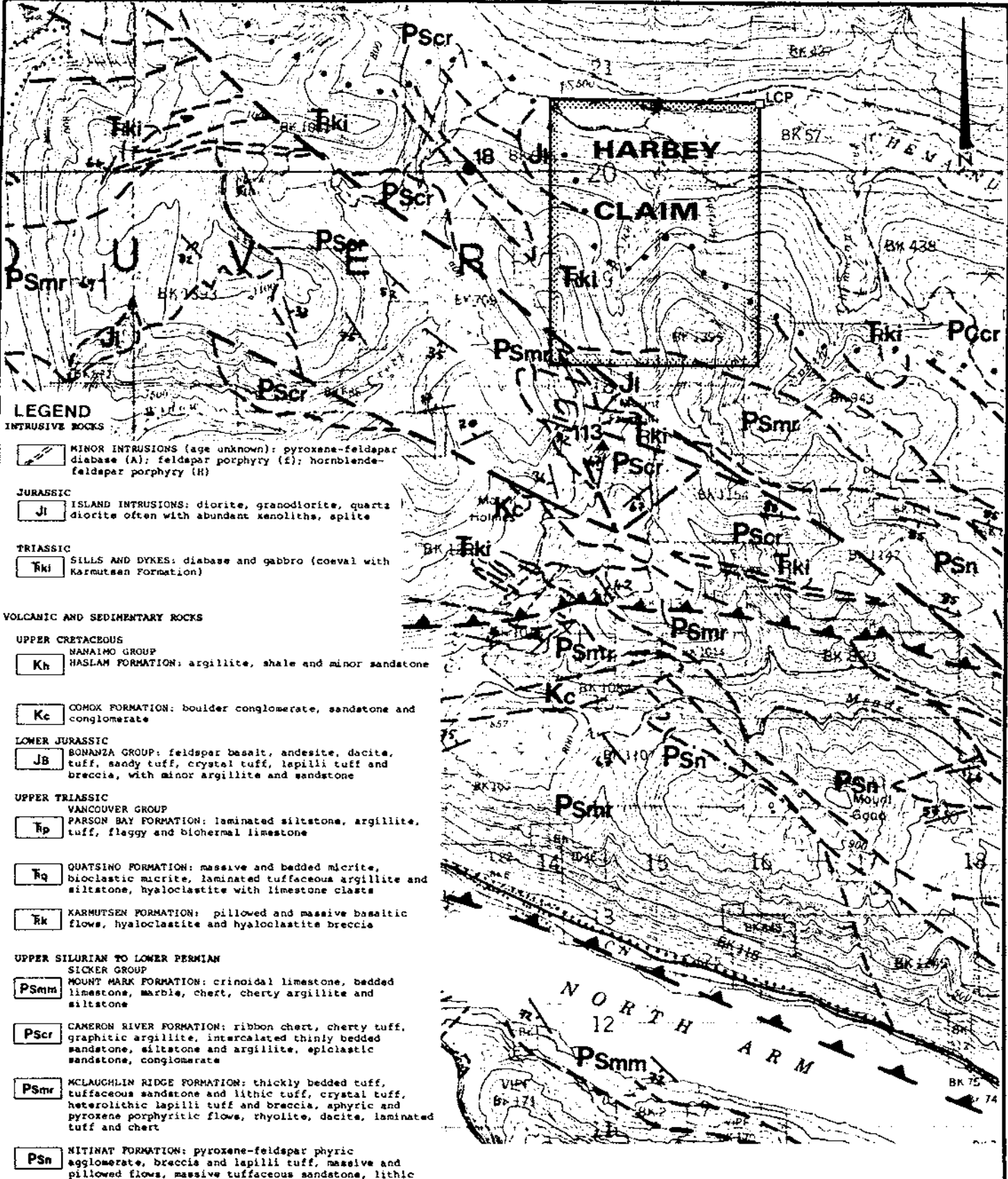
5.1 REGIONAL GEOLOGY

The property lies within a 100 mile long and 10 mile wide northwest trending belt which consists of complex sedimentary and volcanic rocks, of Cretaceous age or older. The geology of the Cowichan Lake area, within which lies the property, is shown on Open File Geology Map 1987/2, sheet 1 of 9, by W.D. Massey et al.

According to Massey's map, the geology comprises of volcanic and sedimentary rock, ranging in age from Cretaceous to Silurian. Locally these rocks are intruded by diorites, granodiorites and quartz diorites belonging to the Jurassic Island intrusives.

Geological units strike mostly northwest-southeast; this generally is the trend of most of the main fault and thrust zones which appear on the map sheet.

Numerous mineral showings are found within the area, mostly within Triassic Karmutsen volcanics and the Silurian Sicker Group sediments and volcanics. The one closest to the Harbey claim is the Comego (Anne) gold-silver-copper-molybdenum showing, located only about 1 mile west of the claims.



LEGEND

- INTRUSIVE ROCKS**
- MINOR INTRUSIONS (age unknown): pyroxene-feldspar diabase (A); feldspar porphyry (f); hornblende-feldspar porphyry (H)
- JURASSIC**
- Ji ISLAND INTRUSIONS: diorite, granodiorite, quartz diorite often with abundant xenoliths, spilitic
- TRIASSIC**
- Eki SILLS AND DYKES: diabase and gabbro (coeval with Karmutsen Formation)
- VOLCANIC AND SEDIMENTARY ROCKS**
- UPPER CRETACEOUS**
- Kh NANAIMO GROUP
 - Haslam Formation: argillite, shale and minor sandstone
 - Kc COMOK FORMATION: boulder conglomerate, sandstone and conglomerate
- LOWER JURASSIC**
- JB BONANZA GROUP: feldspar basalt, andesite, dacite, tuff, sandy tuff, crystal tuff, lapilli tuff and breccia, with minor argillite and sandstone
- UPPER TRIASSIC**
- VanCOUVER GROUP
 - Psmp PARSON BAY FORMATION: laminated siltstone, argillite, tuff, flaggy and biohermal limestone
 - Pq QUATSINO FORMATION: massive and bedded micrite, bioclastic micrite, laminated tuffaceous argillite and siltstone, hyaloclastite with limestone clasts
 - Rk KARMUTSEN FORMATION: pillowed and massive basaltic flows, hyaloclastite and hyaloclastite breccia
- UPPER SILURIAN TO LOWER PERMIAN**
- SICKER GROUP
 - Psmm MOUNT MARK FORMATION: crinoidal limestone, bedded limestone, marble, chert, cherty argillite and siltstone
 - Pscr CAMERON RIVER FORMATION: ribbon chert, cherty tuff, graphitic argillite, intercalated thinly bedded sandstone, siltstone and argillite, epiclastic sandstone, conglomerate
 - Psmr MCLAUGHLIN RIDGE FORMATION: thickly bedded tuff, tuffaceous sandstone and lithic tuff, crystal tuff, heterolithic lapilli tuff and breccia, sphyric and pyroxene porphyritic flows, thuyolite, dacite, laminated tuff and chert
 - Psn NITINAT FORMATION: pyroxene-feldspar phryic agglomerate, breccia and lapilli tuff, massive and pillowed flows, massive tuffaceous sandstone, lithic tuff, laminated tuff and chert

SYMBOLS

- Geological contact (defined, approximate, transitional).....
- Limit of drift covered area.....
- Roof pendent (unit code indicated; too small to map separately).....
- Limit of mapping.....
- Bedding (horizontal, inclined, overturned).....
- Bedding estimated from pillows (inclined).....
- Schistosity (inclined, vertical).....
- Fault (defined, approximate).....
- Thrust fault (defined, approximate, assumed) teeth indicate upthrust side with dip indicated.....

Sierra Madre Resources Inc.

**Harbey Mineral Claim
Geology Map**

VICTORIA M.D.

NTS 92C/16 E

V.CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

DATE: August 1987

SCALE: 0 1km

FIG. 4

5. GEOLOGY

5.2 PROPERTY GEOLOGY

Part of the Harbey Claim area is underlain by basic volcanics of the Triassic Franklin Creek Unit, equivalent to the Karmutsen volcanics. These rocks overlie Silurian or Permian cherts of the Sicker Group which outcrop on the southern half of the property. In the northern part of the property, both groups are intruded by diorite of the Jurassic Island Intrusion.

The observed trend and the trend on the map of the units is west-northwest. Major faulting also strikes in this direction; the fault that crosses the southwest corner of the property runs in this same direction.

The outcrop on the property is scarce, and of what there is it is concentrated in the southern part of the property, exposed on canyon walls and road cuts.

The alteration on the property consists of kaolinitization of intrusive, silicification of the chert, and some hornfelsing in the volcanic and the chert. In places there is limonitic staining. Some quartz veining was noted, running north-south and northwest-southeast (90° to the trend of the contacts) vertically and in a third direction, dipping shallowly to the southwest.

Some fracture filling by felsic dykes was noted on the property, one such a place is line 19 S 70 W.

5. GEOLOGY

5.3 MINERALIZATION

Three types of mineralization were described by Fyles on the Comego property, west of the Harbey claim. The most prominent is a gold-silver-copper skarn type mineralization. Samples from this type assayed up to .26 oz/t gold, .4 oz/t silver and up to 9.8% copper. The second type contains rusty quartz - carbonate veins and replacements and the third type is quartz - molybdenite veins and replacements. This latest type contains quartz, molybdenite, pyrite and chalcopyrite, and often assays values in tungsten.

The 1987 program on the Harbey claim proved the presence of gold-silver mineralization in both the soil and underlying rocks. Although the main regional structural trend is northwest, both high copper and gold geochemical anomalies show a conspicuous northeast trend, which is also coincidental with the trend of the VLF conductive zones. In his report, Fyles indicated that the Franklin Creek volcanics are most likely the host of precious metals values. On the Harbey claims, significant gold values so far were obtained from shear zones located in both the contact zone of the Island Intrusives and in cherts of the Sicker group.

The shear zone sampled at location No. 1 (see Figure 5) is within a strong geochemical anomaly and seems to be connected with the VLF conductor. The samples taken at that location (19 + 50 S, 575 W) assayed as follows:

5. GEOLOGY

5.3 MINERALIZATION (Cont'd)

Sample No.	Width	Description	oz/t Au	oz/t Ag
901	select	pyritized chert	.002	.02
902	select	pyritized chert	.002	.02
903	1 foot	hematitic chert	.251	.04
904	4 feet	includes chert and 18" shear	.035	.02
905	select	chert over larger area	.019	.02

Sample location N.2 was within pyritized, silicified and somewhat sheared diorite. The sample taken at that location ran:

906	2 feet	rusty, silicified diorite	.352	.11
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Sample location No. 3 comprised pyritized chert which assayed:

907	grab	pyritized chert	.061	.08
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In the time of the program, a logging crew was actively constructing roads in the southern part of the property and exposing, most likely, more outcrops in road cuts. These locations should eventually be examined and sampled.

Sample locations are shown on Figure 5.

6. GEOCHEMICAL SURVEY

6.1 FIELD METHOD

In preparation for the survey a chain and compass grid was cut, with a 100 metre line separation in the northern part and 200 metre in the southern part of the claim. Samples were collected at 50 metre spacing. Wherever possible soil was taken from shallow pits dug by mattock, preferably from the "B" horizon. All samples were packed in the standard soil sample envelopes, partially dried in the field and shipped to General Testing in Vancouver, to be processed further.

6.2 LABORATORY PROCEDURE

All samples were assayed for gold, silver, copper, molybdenum, lead and zinc. Firstly they were oven dried and sieved to -250 mesh. For the gold assay, a bead was prepared by the fire assay from a 10 g sample. The bead was dissolved in aqua regia and processed by atomic absorption.

For the other metals 1 gram of the -250 mesh fraction was dissolved, diluted and processed by atomic absorption photospectrography. All assay results were expressed in parts per million; on the Geochemical Plan - Gold Plot, the gold values are shown as parts per billion.

6. GEOCHEMICAL SURVEY (CONT'D)

6.3 DATA PRESENTATION

Four geochemical plans were prepared in the scale of 1:5,000. Results are presented for gold, silver, copper and molybdenum. Assays for lead and zinc stayed in background values and plans for these two metals were not prepared. All assay reports are, however, appended to the end of the report.

The areas with anomalous and significantly anomalous values were contoured and significant anomalies were hatch-patterned.

6.4 DISCUSSION OF RESULTS

a) Molybdenum - anomalous values are considered to be over 5 ppm Mo and significantly anomalous over 10 ppm Mo. Anomalous values are scattered over the whole grid area, however there is a concentration of the anomalous values in the northern part of the grid, where the highest result of 69 ppm Mo was encountered. This is also the area where the intrusive rocks underlie the property. The large anomaly, located between lines L 15 and L 4 along the western edge of the grid, should definitely be checked more closely. Anomalies in the southern part of the grid follow a conspicuous northeast trend.

6. GEOCHEMICAL SURVEY (CONT'D)

6.4 DISCUSSION OF RESULTS (Cont'd)

- b) Silver - anomalous readings of more than 1 ppm Ag and significantly anomalous results of over 2 ppm Ag cover the larger part of the grid. No significant pattern could be established except that some of the anomalous zones are still following the northeast trend.
- c) Copper - anomalous values are considered to be higher than 70 ppm Cu and significantly anomalous over 100 ppm Cu. Two significant anomalous areas were encountered: first, a very strong anomaly at the north end of the grid, close to the bank of the Chemainus River. Only sporadic high gold values are associated with this anomaly, and it could easily have been transported from elsewhere. The second anomaly extends from Line 27 to Line 12 in the northeast direction and is associated with gold anomalies and also with the VLF-EM conductive zone. It also covers the gold showing at Line 19. This anomaly represents a prime exploration target, where further work is fully warranted.
- d) Gold - values over 35 ppb Au are considered anomalous and over 50 ppb Au significantly anomalous. Four results are very high, over 1 ppm Au.

6. GEOCHEMICAL SURVEY (CONT'D)

6.4 DISCUSSION OF RESULTS (Cont'd)

d) Gold (Cont'd)

The gold anomalies are of much smaller areal extent than the copper anomalies, but they largely coincide with each other in position. The trends of the latest gold anomalies greatly support the previously mentioned north-east trend as the major structural trend, also supported by the VLF-EM data.

7. GEOPHYSICAL SURVEYS

The grid used for the geochemical survey was also utilized for the VLF-EM and Magnetic survey. The surveys were run by a Scintrex IGS-2 with VLF 4 and MP 4 sensors (see Appendix A for detailed instrument description).

7.1 VLF-EM SURVEY

The Scintrex IGS-2 was programmed to receive the VLF stations, Luahalei, Hawaii, 23.4 KHz and Cutter, Main 24.0 KHz. During the period of the survey, the station Seattle, Washington was inoperative. As well, due to its weak signal, Cutter, Maine was plagued by sporadic and fairly frequent electromagnetic interference; thus only the data for Hawaii is presented (see Figure 9). A conspicuous VLF anomaly is evident, running northeast-southwest, coinciding with both the geochemical copper and gold anomalies and with the gold showings. At Line 11, 400 W the anomaly is strong and narrow, suggesting it may be close to surface and may provide a trenching target if it can be accessed easily by bulldozer.

The VLF-EM survey has shown good response, coinciding with geologic trends, geochemistry and showings, thus it may be used to define the anomaly in more detail. For this purpose, a 50 metre spacing of the lines and 12.5 metre stations should be used.

7. GEOPHYSICAL SURVEYS (CONT'D)

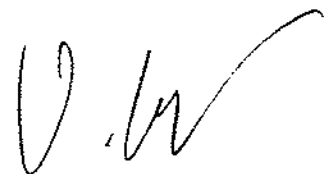
7.2 GROUND MAGNETIC SURVEY

The IGS instrument measures total magnetic field. It is fitted with a proton-processing magnetometer sensor and is used in conjunction with a base station which is fitted similarly. Corrections are performed at the end of the day's survey, electronically, by connecting the base station with the field unit.

The results were plotted on Figure 10, scale 1:5000. The readings are fairly uniform over the whole surveyed area except for some very low, erratic readings, probably due to micropulsations. The northern part of the grid was not surveyed magnetically due to disturbances in the magnetic field that caused very erratic readings.

Overall, the magnetic survey does suggest a northeast trend in some areas.

RESPECTFULLY SUBMITTED



V. Cukor, P. Eng.
NVC ENGINEERING LTD.

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CERTIFICATE

I, VLADIMIR CUKOR, of 304 - 1720 Barclay Street, Vancouver,
British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geological Engineer with NVC
ENGINEERING LTD. and with business address as above;
2. I graduated from the University of Zagreb, Yugoslavia
in 1963 as a Graduated Geological Engineer;
3. I am a Registered Professional Engineer in the Geological
Section of the Association of Professional Engineers
in the Province of British Columbia, Registration No.
7444;
4. I have practiced my profession as a Geological
Engineer for the past twenty-three years in Europe,
North America and South America in engineering geology,
hydrogeology and exploration for base metals and
precious metals;
5. I have personally conducted or supervised work as
documented in this Report;
6. I have no interest, direct or indirect, in properties
of Sierra Madre Resources Inc., nor do I expect to
receive any.

August 10th, 1987


V. Cukor, P. Eng.

NVC ENGINEERING LTD.

APPENDICES

THE IGS-2 SYSTEM

1.0 INTRODUCTION

1.1 General Information

The IGS-2 Integrated Geophysical System is a portable microprocessor-based instrument which allows more than one type of survey measurement to be performed by a single operator during a survey.

The IGS-2 is a modular system which can easily be configured to suit different and changing survey requirements. Reconfiguring the system is easy and offers both operational flexibility and minimal redundancy with a minimum number of spare consoles and/or modules.

When configured with any of the available sensor options, the IGS-2 System Control Console becomes a method-specific instrument according to the sensor option(s) utilized. In addition, the IGS-2 Console is an electronic notebook into which geophysical, geological or other data may be manually entered and digitally stored.

Data is stored in the IGS-2 in an expandable, solid state memory and can be output in the field by connecting the instrument to a printer, tape recorder, modem or microcomputer.

The 32 character digital display uses full words in most cases, ensuring clear communication. Both present and previous data are displayed simultaneously, allowing comparisons to be made at a glance during a survey.

The IGS-2 records header information, data values, station number, line number, grid number and the time of each observation in its internal memory. Data are first sorted by grid number, then in order of increasing line number and, within each line, by increasing station number. In this way, the data are organized logically regardless of the sequence in which they were taken. Ancillary data can also be manually entered and recorded at a given station, along with the survey parameters.

The IGS-2 may appear complex because of the new microprocessor-based technology employed in its design. However, it does not perform any operation that is, in principle, unfamiliar to an experienced operator. Only the procedures have changed. For instance, data can now be recorded in the memory of the IGS-2 by a



Figure IGS:1
The IGS-2 as Worn by an Operator

series of simple keystrokes, rather than recording measurements by hand in a notebook. Likewise, an error spotted in the records, which would be corrected or erased by hand, is now corrected by means of the Edit function which allows the error to be removed from memory, corrected, and then refiled, or erased altogether.

1.2 Product Updates

At Scintrex we are continually working in improve our line of products. You may be notified as important changes occur to either the software or hardware of our products. We would appreciate hearing from you if you are interested in our latest developments. We would also value hearing from you about any successes, or problems you may have encountered so that we may advise you.

8.0 SPECIFICATIONS

8.1 Magnetometry Specifications

Total Field Operating Range	20,000 to 100,000 nT (1 nT = 1 gamma).
<hr/>	
Gradient Tolerance For Total Field:	±5000 nT/m.
<hr/>	
Total Field Absolute Accuracy	±1 nT at 50,000 nT ±2 nT over total field operating and temperature range.
<hr/>	
Resolution	0.1 nT.
<hr/>	
Tuning	Fully solid-state. Manual or automatic mode is keyboard selectable.
<hr/>	
Reading Time	2 seconds. For portable readings this is the time taken from the push of a button to the display of the measured value.
<hr/>	
Continuous Cycle Times	Keyboard selectable in 1 second increments upwards from 2 seconds to 999 seconds.
<hr/>	
Operating Temperature Range	-40°C to +50°C provided optional Display Heater is used below -20°C.
<hr/>	

8.2 Sensor Options

In the following options the actual sensors are identical;
however, mountings and cables vary.

Portable Total Field Sensor Option	Includes sensor, staff, two 2 m cables and backpack sensor harness. Weight of sensor, cable and staff is 1.9 kg.
---	---

Staff is 30 x 600 mm collapsed
and 1600 mm extended.

Base Station Sensor Option

Includes sensor, tripod, 50 m
cable external power cable and
analog chart recorder cable.
Weight of sensor, cable and
tripod is 6.5 kg. Tripod is
540 mm collapsed, 1650 mm
extended.

Gradiometer Sensor Option

For use with the Portable
Total Field Sensor Option,
includes second sensor, cables
and both a .5m and a 1m staff
extender. Combined weight of
Total Field and Gradiometer
Sensor options with staff,
extender and cables is 3.5 kg.

9.0 SPECIFICATIONS

Frequency Tuning	Automatic digital tuning. Can be tuned to any frequency in the range 15.0 to 29.0 kHz with a bandwidth of 150 Hz. Up to three frequencies can be chosen by keyboard entry for sequential measurements.
Field Strength Range	Fields as low as 100 mA/m can be received. In practice, background noise may require fields up to 5-10 times this level. Maximum received field is 2 mA/metre. These values are specified for 20 kHz. For any other frequency, calculate the above limits by multiplying by the station frequency in kHz and dividing by 20.
Signal Filtering	Narrow bandpass, low pass and sharp cut-off high pass filters.
Measuring Time	0.5 seconds sample interval. As many as 2^{16} samples can be stacked to improve measurement accuracy.
VLF-Magnetic Field Components Measured	1) Horizontal amplitude, 2) vertical in-phase component, and 3) vertical quadrature components. Vertical components are displayed as a percentage of horizontal component and are related in phase to the horizontal component. Their range is $\pm 120\%$; reading resolution 1%.
VLF-Magnetic Field Sensor	Two air-cored coils in a backpack mounted housing with an electronic level for automatic tilt compensation. The error in the vertical in-phase component is less than 1% for tilts up to $\pm 15^\circ$.

VLF-Electric Field Dipole

Two electrodes with integral preamplifiers and 5 m of cable. Probe input impedance exceeds 100 megaohms and capacitance is less than 1 picofarad.

VLF-Electric Field Components Measured

In-phase and quadrature components of the horizontal electric field phase related to the horizontal VLF-magnetic field. These components are not recorded but are used in the calculations of resistivity and phase. The reading resolution is 1 ohmmeter.

Apparent Resistivity Calculation

$$\rho = \frac{1}{2\pi f \mu_0} \left| \frac{E_x}{H_y} \right|^2$$

where:

ρ = apparent resistivity in ohmmeters

E_x = horizontal electric amplitude, calculated.

$$E_x = (E_x(I)^2 + E_x(Q)^2)^{\frac{1}{2}}$$

H_y = horizontal magnetic amplitude, measured

f = VLF station frequency in Hertz

μ_0 = permeability of the ground in Henries/meter, a constant

The resistivity calculation has a range of 1 to 100,000 ohmmeters with a resolution of 1 ohmmeter.

Phase Angle Calculation

The phase angle ϕ is expressed as:

$$\phi = \text{arc tan} \frac{E_x(Q)}{E_x(I)}$$

where:

$E_x(Q)$ = horizontal quadrature VLF electric field, measured

$E_x(I)$ = horizontal in-phase
VLF electric field,
measured

The phase angle calculation
has a range of -180° to $+180^\circ$
with a resolution of 1° . By
definition the angle is
positive when the E field
leads the H field.

CERTIFICATE OF ASSAY

Date: July 24, 1987



SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division

File: 8706-2958

1001 East Pender Street,
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Telephone: (604) 254-1647
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TO: N.V.C. ENGINEERING LTD.
Ste. 304 - 1720 Barclay Street
Vancouver, B.C.
V6G 2Y1

We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxx	xxxxxxx
	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #3 0+00-W	0.06	1.3	22	44	128	2		
0+50	0.02	1.3	20	6	10	2		
1+00	0.02	1.8	21	10	10	2		
1+50	0.02	1.2	21	32	15	2		
2+00	0.02	1.2	47	23	16	2		
2+50	0.02	1.2	135	26	34	2		
3+00	0.02	1.4	105	31	34	2		
3+50	0.03	1.1	113	32	35	2		
4+00	1.62	1.5	118	37	41	2		
4+50	0.17	1.0	164	31	106	2		
5+00	0.05	1.5	78	152	95	2		
5+50	0.04	1.5	86	32	30	2		
6+00	0.03	1.4	65	99	80	2		
6+50	0.03	1.4	143	26	43	4		
7+00	0.03	1.1	153	353	257	4		
7+50	0.20	1.3	151	37	50	4		
8+00	0.06	1.0	112	184	176	2		
8+50	0.03	1.5	115	61	68	4		
9+00	0.02	1.5	180	31	57	7		
9+50	0.03	1.0	130	101	59	7		
10+00-W	0.02	1.5	107	37	56	4		
L #6 0+00-W	0.02	1.5	39	36	21	7		
0+50	0.02	0.9	61	34	18	2		
1+00	0.03	0.8	36	22	15	4		
1+50	0.02	0.9	62	26	23	4		
2+00	0.02	0.4	59	28	12	2		
2+50	0.02	1.1	46	25	22	2		
3+00	0.03	1.0	38	30	27	4		
3+50	0.03	1.4	35	29	21	4		
4+00	0.03	0.9	31	16	36	4		
4+50	0.02	0.9	47	25	32	2		
5+00	0.03	0.6	21	22	13	4		
5+50	0.03	0.3	31	7	10	2		
6+00	0.03	0.6	34	14	11	2		
6+50	0.03	1.5	11	15	12	2		
7+00	0.03	0.9	33	21	18	4		
7+50	0.02	0.8	30	22	18	7		

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L. Wong
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CERTIFICATE OF ASSAY

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TO: N.V.C. ENGINEERING LTD.

(Page 2)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxx
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #6 8+00-W	0.03	0.8		24	16	13	15		
8+50	0.02	1.0		21	21	9	10		
9+00	0.02	1.0		36	21	18	20		
9+50	0.02	0.9		55	20	10	4		
10+00-W	0.03	1.0		57	23	14	4		
BL #7 0+00-W	0.02	0.6		31	16	17	2		
L #7 0+50-W	0.02	0.9		42	30	25	2		
1+00	0.02	1.4		30	25	10	4		
1+50	0.02	1.1		34	26	18	7		
2+00	0.02	0.7		28	14	18	4		
2+50	0.02	0.8		22	21	13	2		
3+00	0.02	0.5		17	20	10	2		
3+50	0.04	0.4		38	11	14	4		
4+00	0.04	0.9		17	24	10	4		
4+50	0.02	0.9		29	25	11	4		
5+00	0.02	3.6		22	27	10	2		
5+50	0.02	2.4		43	33	17	2		
6+00	0.02	2.8		33	29	14	2		
6+50	0.02	0.9		21	19	10	2		
7+00	0.02	1.4		35	24	24	4		
7+50	0.02	1.5		28	27	10	2		
8+00	0.02	0.9		18	21	10	2		
8+50	0.03	1.4		23	21	34	2		
9+00	0.03	1.9		55	28	34	10		
9+50	0.03	1.9		48	24	29	20		
10+00-W	0.02	.18		33	26	21	20		
L #8 0+50E	0.05	1.5		39	25	14	7		
1+00	0.02	1.5		69	26	27	15		
1+50	0.03	0.9		35	21	10	7		
2+00	0.02	1.0		31	27	21	24		
2+50	0.03	1.5		65	30	14	15		
3+00	0.02	0.9		64	19	12	7		
3+50-E	0.02	0.8		65	16	16	7		

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page 3

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MARKED	GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
<u>L #8</u> 4+00-E	0.02	1.2	30	29	12	10		
4+50	0.02	0.7	21	15	10	2		
5+00	0.02	0.8	33	16	10	7		
5+50	0.03	0.9	32	23	10	10		
6+00	0.05	0.8	25	17	7	4		
6+50	0.05	0.8	31	21	8	4		
7+00	0.02	0.8	23	16	8	2		
7+50	0.02	1.3	32	23	10	15		
8+00	0.03	1.5	58	23	10	15		
8+50	0.03	1.4	57	19	57	10		
9+00	0.02	1.4	37	37	18	7		
9+50-E	0.03	0.9	23	23	10	7		
10+00-E	0.02	0.9	25	16	21	4		
<u>L #16</u> 0+00-W	0.02	0.6	20	20	8	4		
0+50	0.03	1.8	70	43	31	7		
1+00	0.02	0.5	29	21	10	2		
1+50	0.02	1.7	45	49	38	4		
2+00	0.03	1.1	56	22	39	15		
2+50	0.04	2.1	145	48	61	20		
3+00	0.02	0.5	45	8	11	7		
3+50	0.03	1.3	87	34	72	4		
4+00	0.03	0.9	49	22	34	4		
5+00	0.02	1.3	75	34	26	4		
5+50	0.02	0.6	38	21	12	4		
6+00	0.02	1.5	56	28	20	2		
6+50	0.03	1.3	54	32	16	4		
7+00	0.04	1.1	46	24	21	7		
7+50	0.03	1.1	29	28	57	7		
8+00-W	0.03	0.9	53	49	70	7		
<u>L #21</u> 0+50-E	0.03	1.5	87	55	28	4		
1+00	0.03	1.8	60	58	35	4		
1+50	0.03	1.5	147	51	48	4		
2+00	0.02	0.6	101	43	27	2		
2+50	0.02	1.3	65	42	44	4		
3+00-E	0.02	0.7	44	35	10	7		

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(page 4)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxx	xxxxxxxxxxx
	Au (ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #21 3+50-E	0.02	0.5	46	37	19	4		
4+00	0.02	0.8	68	43	36	4		
4+50	0.38	0.3	25	13	11	4		
5+00	0.06	0.4	31	15	41	7		
5+50	0.02	0.8	40	12	17	7		
6+00	0.02	1.8	64	34	54	4		
6+50	0.02	0.6	45	29	27	4		
7+00	0.02	1.8	86	43	66	7		
7+50	0.02	1.1	30	14	38	4		
8+00	0.02	0.9	43	33	72	2		
8+50	0.02	1.4	48	35	54	4		
9+00	0.02	1.5	58	25	41	7		
9+50	0.02	1.5	32	26	38	4		
10+00-E	0.02	1.8	59	17	34	7		
L #23 0+50E	0.02	1.5	100	23	30	4		
1+00	0.25	2.0	49	60	52	7		
1+50	0.07	0.5	31	14	10	2		
2+00	0.07	0.9	36	33	24	7		
2+50	0.07	1.0	29	37	18	4		
3+00	0.07	1.9	60	34	58	4		
3+50	0.07	0.8	36	24	16	7		
4+00	0.07	2.3	56	34	46	10		
4+50	0.07	1.8	75	25	53	10		
5+00	0.07	1.9	66	39	50	4		
5+50	0.07	1.6	46	19	25	4		
6+00	0.07	1.6	62	7	45	4		
6+50	0.07	1.0	39	6	15	2		
7+00	0.07	1.4	64	29	40	4		
7+50	0.07	1.8	50	33	30	7		
8+00	1.46	1.6	33	35	30	10		
8+50	0.02	1.9	43	26	35	4		
9+00	0.02	2.0	48	19	35	4		
9+50-E	0.02	1.5	37	29	31	4		
L #9 0+00-W	0.02	0.9	41	26	19	2		
0+50	0.02	1.1	34	32	11	4		
1+00-W	0.02	0.6	28	28	20	4		

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(page 5)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD	SILVER	Copper	lead	Zinc	Molybdenum	xxxxx	xxxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
<u>L #9</u>								
1+50-W	0.03	0.3	14	10	10	4		
2+00	0.02	1.1	41	28	33	2		
2+50	0.02	0.8	23	28	15	7		
3+00	0.04	1.5	35	30	19	4		
3+50	0.02	1.4	38	27	15	10		
4+00	0.02	2.3	60	38	19	4		
4+50	0.02	1.1	26	17	21	4		
5+00	0.02	0.5	24	32	21	4		
5+50	0.02	1.6	36	48	17	4		
6+00	0.03	1.0	20	15	13	2		
6+50	0.04	0.5	20	12	11	1		
7+00	0.02	0.6	24	14	23	1		
7+50	0.02	0.5	27	16	21	2		
8+00	0.02	0.5	28	16	19	3		
8+50	0.02	0.5	43	20	24	4		
9+00	0.02	1.0	44	20	24	5		
9+50	0.02	0.9	39	21	31	7		
10+00-W	0.02	0.6	45	18	27	5		
<u>L #14</u>								
0+00-W	0.02	0.9	43	23	32	2		
0+50	0.02	1.5	59	36	34	8		
1+00	0.02	2.1	54	22	47	9		
1+50	0.02	0.5	37	26	29	3		
2+00	0.02	0.8	85	17	41	3		
2+50	0.02	1.0	40	18	31	2		
3+00	0.02	0.4	31	19	18	2		
3+50	0.02	17.2	45	143	267	2		
4+00	0.02	2.3	54	31	33	3		
4+50	0.02	0.6	22	15	14	2		
5+00	0.02	0.9	43	19	24	2		
5+50	0.02	1.2	24	15	16	1		
6+00	0.02	1.5	47	22	28	2		
6+50	0.02	1.7	49	20	36	3		
7+00	0.02	3.8	44	38	62	6		
7+50	0.02	4.1	73	47	80	5		
8+00	0.05	1.2	49	23	22	6		
8+50-W	0.03	1.2	46	22	35	15		

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TO : N.V.C. ENGINEERING

(page 6)

We hereby certify that the following are the results of assays on: soil

MARKED		GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	XXXXXXXXXX
		Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	
<u>L #14</u>	9+00-W	0.02	1.6		42	18	18	3	
	9+50	0.02	0.9		56	20	19	2	
	10+00-W	0.02	1.6		94	22	43	2	
<u>BL #15</u>	0+00-W	0.02	2.0		84	22	50	3	
<u>L #15</u>	0+50-W	0.02	1.3		77	22	44	2	
	1+00	0.02	1.5		64	21	41	2	
	1+50	0.03	1.2		74	23	50	3	
	2+00	0.02	1.2		56	20	31	8	
	2+50	0.09	1.5		50	20	30	7	
	3+00	0.02	1.2		78	20	33	5	
	3+50	0.03	1.1		95	20	44	5	
	4+00	0.02	1.2		61	21	34	3	
	4+50	0.02	1.5		64	20	35	3	
	5+00	0.02	1.3		59	20	26	2	
	5+50	0.02	1.5		79	19	71	1	
	6+00	0.08	4.3		35	>1000	26	3	
	6+50	0.03	1.2		106	39	29	3	
	7+00	0.02	1.3		64	19	23	2	
	7+50	0.02	1.5		59	16	22	1	
	8+00	0.02	.17		80	20	26	3	
	8+50	0.06	1.6		72	17	21	3	
9+00	0.02	1.7		90	20	28	3		
9+50	0.02	1.5		75	22	61	3		
10+00-W	0.02	1.6		66	17	49	2		
<u>L #17</u>	0+00-W	0.02	0.8		49	15	20	1	
	0+50	0.02	2.1		47	20	16	3	
	1+00	0.02	4.7		53	>1000	31	1	
	1+50	0.02	1.5		96	43	50	4	
	2+00	0.02	1.6		59	24	41		
	2+50	0.02	4.3		83	46	86	2	
	3+00	0.03	3.9		135	38	106	2	
	3+50	0.03	0.9		51	17	35	1	
	4+00	0.05	3.8		148	37	111	1	
4+50-W	0.02	5.0		106	53	97	8		

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CERTIFICATE OF ASSAY

Date: July 24, 1987

File: 8706-2958



SGS SUPERVISION SERVICES INC.

General Testing Laboratories Division

1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

TO: N.V.C. ENGINEERING

(page 7)

We hereby certify that the following are the results of assays on: soil

MARKED		GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxx	xxxxxx
		Au (ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
<u>L #17</u>	5+00-W	0.03	2.2	106	21	43	5		
	5+50	0.03	1.2	84	17	31	2		
	6+00	0.03	1.0	66	16	22	1		
	6+50	0.03	1.1	78	17	24	1		
	7+00	0.03	2.5	72	31	26	1		
	7+50	0.03	1.0	69	14	20	1		
	8+00-W	0.03	1.1	29	18	36	1		
<u>L #19</u>	0+00-W	0.03	0.5	63	45	25	1		
	0+50	0.03	0.6	21	43	29	1		
	1+00	0.03	0.4	13	20	27	1		
	1+50	0.03	0.5	21	30	26	1		
	2+00	0.03	1.6	145	17	63	6		
	2+50	0.03	1.7	166	20	84	6		
	3+00	0.10	2.0	94	35	72	3		
	3+50	0.02	3.8	95	51	75	3		
	4+00	0.02	1.2	68	20	48	1		
	4+50	0.04	0.9	39	10	26	1		
	5+00	0.04	1.3	106	17	44	1		
	5+50	0.04	1.5	78	19	44	1		
	6+00	0.02	1.6	238	19	93	13		
	6+50	0.06	2.2	319	20	131	28		
	7+00	0.03	1.5	185	17	31	2		
	7+50	0.02	1.2	127	15	17	1		
	8+00-W	0.02	1.8	63	16	11	1		
<u>L #21</u>	0+00-W	0.02	1.6	72	21	32	1		
	0+50	0.04	2.2	72	27	37	1		
	1+00	0.02	1.6	75	20	33	1		
	1+50	0.02	1.2	66	22	26	1		
	2+00	0.03	1.5	50	16	27	1		
	2+50	0.02	1.2	52	20	33	1		
	3+00	0.02	0.6	49	16	15	1		
	3+50	0.02	1.6	52	20	57	1		
	4+00	0.02	1.8	81	22	51	8		
	4+50	0.02	.15	80	20	39	3		
	5+00-W	0.02	2.0	70	24	44	1		

/ continued on page 8 ..

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(page 8)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxx	xxxxxxxxxxxxxx
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
<u>L #21</u>	5+50-W	0.03	1.9	69	21	43	1		
	6+00	0.03	1.6	190	20	41	1		
	6+50	1.20	1.1	128	16	29	1		
	7+00	0.03	1.8	230	20	25	1		
	7+50	0.03	2.4	233	17	27	1		
	8+00	0.02	2.0	88	16	29	2		
	8+50	0.03	2.1	118	19	23	2		
	9+00	0.02	1.2	55	23	45	1		
	9+50	0.02	1.5	80	23	77	1		
	10+00-W	0.02	1.8	98	24	46	1		
<u>L #23</u>	0+00-W	0.03	1.6	68	22	25	1		
	0+50	0.03	2.2	93	33	45	1		
	1+00	0.02	1.6	63	32	41	1		
	1+50	0.03	1.1	23	20	18	1		
	2+00	0.03	.12	40	21	33	1		
	2+50	0.03	1.8	32	23	23	1		
	3+00	0.02	1.1	49	19	29	1		
	3+50	0.02	1.8	130	23	51	2		
	4+00	0.02	2.1	101	23	61	1		
	5+00	0.03	1.5	60	25	59	2		
	5+50	0.02	1.6	84	20	48	1		
	6+00	0.02	1.1	107	18	51	1		
	6+50	0.02	2.7	154	22	41	1		
	7+00	0.02	1.2	68	18	41	1		
	8+00-W	0.02	0.5	43	19	19	1		
<u>L #9</u>	0+50-E	0.02	1.0	28	13	18	3		
	1+00	0.02	1.1	43	16	21	4		
	1+50	0.02	1.0	35	13	18	4		
	2+00	0.02	0.9	22	10	14	3		
	2+50	0.02	.10	65	14	22	5		
	3+00	0.02	0.9	32	12	14	2		
	3+50	0.02	0.8	32	12	27	1		
	4+00	0.02	1.2	51	15	25	3		
	4+50	0.02	1.3	37	14	21	1		
	5+00	0.02	0.6	63	15	33	2		
	5+50-E	0.02	1.2	83	15	36	2		

continued on page 9 ..

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(page 9)

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MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #9	6+00-E	0.02	1.5	117	19	37	13		
	6+50	0.02	1.0	26	12	20	1		
	7+00	0.02	1.1	33	18	28	1		
	7+50	0.02	1.1	55	14	34	1		
	8+00	0.02	1.8	60	17	20	7		
	8+50	0.02	0.9	64	20	32	2		
	9+00	0.02	0.9	59	17	29	9		
	9+50	0.02	1.2	45	13	29	6		
	10+00-E	0.02	1.7	67	16	49	4		
	L #10	0 +00-W	0.02	1.0	36	11	24	8	
0+50		0.02	1.7	88	14	35	5		
1+00		0.02	1.1	42	10	15	1		
1+50		0.02	1.3	43	13	16	1		
2+00		0.02	1.0	30	13	19	2		
2+50		0.02	0.9	37	10	27	1		
3+00		0.02	1.0	37	16	34	4		
3+50		0.02	1.2	54	13	33	1		
4+00		0.02	1.0	32	14	28	1		
4+50		0.02	1.2	31	25	20	1		
5+00		0.02	0.6	22	12	23	1		
5+50		0.02	0.8	28	10	19	1		
6+00		0.02	1.3	47	17	70	3		
6+50		0.02	0.8	47	13	33	5		
7+00		0.02	1.1	93	11	77	20		
7+50		0.02	1.2	51	16	49	14		
8+00		0.02	1.5	47	18	49	17		
8+50		0.02	1.5	61	23	45	1		
9+00		0.02	1.1	28	13	31	6		
9+50		0.02	0.9	16	11	17	4		
10+00-W	0.02	1.2	19	10	19	5			
L #11	0+50E	0.02	1.1	24	11	12	6		
	1+00	1.42	1.1	23	12	15	6		
	1+50	0.02	1.1	20	10	12	8		
	2+00	0.02	1.2	22	14	19	2		
	2+50	0.02	1.1	34	14	25	9		
	3+00-E	0.02	0.9	30	10	24	5		

continued on page 10.

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(page 10)

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MARKED	GOLD		SILVER		Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxxx
	Au (ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)				
<u>L #11</u> 3+50E	0.02	1.1	35	10	23	4				
4+00	0.02	1.2	25	13	35	3				
4+50	0.20	1.6	65	11	26	2				
5+00	0.11	0.9	20	154	22	1				
5+50	0.03	1.1	15	12	20	5				
6+00	0.12	1.9	22	20	35	4				
6+50	0.02	2.0	61	16	85	2				
7+00	0.03	1.1	27	12	24	1				
7+50	0.02	1.2	28	12	30	2				
8+00	0.02	1.0	22	10	23	1				
8+50	0.02	1.6	29	14	22	9				
9+00	0.02	1.6	31	16	25	11				
9+50	0.09	1.0	18	12	18	6				
10+00-E	0.02	1.8	56	15	41	3				
<u>L #12</u> 0+00-W	0.02	1.1	18	12	17	2				
0+50	0.02	1.7	52	23	48	26				
1+00	0.03	3.9	122	46	93	2				
1+50	0.02	1.7	40	15	27	1				
2+00	0.02	1.1	18	10	18	1				
2+50	0.02	1.5	25	10	19	1				
3+00	0.02	0.6	11	9	6	1				
3+50	0.02	1.2	20	10	17	1				
4+00	0.02	0.6	12	4	6	1				
4+50	0.02	1.5	45	11	21	1				
5+00	0.02	0.6	10	10	14	1				
5+50	0.03	1.0	15	11	16	2				
6+00	0.03	1.7	26	12	20	6				
6+50	0.03	1.3	30	13	26	9				
7+00	0.03	1.2	21	13	26	2				
7+50	0.03	2.0	41	17	21	8				
8+00	0.02	1.2	20	14	21	11				
8+50	0.05	2.0	18	>1000	21	8				
9+00	0.02	1.6	40	24	59	10				
9+50	0.02	1.6	37	15	30	18				
10+00-W	0.02	0.5	11	10	15	5				

/ continued on page 11 ..

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MARKED	GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxxxxxxx	xxxxxxxx
	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #13 0+50-E	0.02	0.9	51	10	28	11		
1+00	0.02	1.0	47	12	26	5		
1+50	0.02	1.2	122	12	47	1		
2+00	0.02	0.5	12	17	9	1		
2+50	0.02	0.8	29	9	21	10		
3+00	0.02	0.6	20	9	15	3		
3+50	0.02	1.0	52	35	20	1		
4+00	0.02	1.5	39	14	52	14		
4+50	0.02	1.1	42	10	34	6		
5+00	0.02	1.6	59	12	28	4		
5+50	0.02	1.1	27	13	20	2		
6+00	0.27	1.1	88	13	49	3		
6+50	0.02	1.2	62	10	33	1		
7+00	0.02	0.9	29	9	20	1		
8+00	0.02	0.9	40	11	20	1		
8+50	0.02	0.9	42	9	26	2		
9+00	0.02	0.9	18	10	21	2		
9+50	0.02	0.8	24	10	24	1		
10+00-E	0.02	0.6	13	8	12	1		
L #17 0+50-E	0.02	1.1	42	14	31	3		
1+00	0.02	0.5	14	9	9	1		
1+50	0.02	0.4	10	9	7	1		
2+00	0.02	0.5	9	4	3	1		
2+50	0.02	0.5	11	6	3	1		
3+00	0.02	1.5	37	14	18	3		
3+50	0.02	0.6	10	9	11	1		
4+00	0.02	0.5	12	5	5	1		
4+50	0.02	1.6	57	14	74	2		
5+00	0.02	1.7	58	13	71	2		
5+50	0.02	1.2	64	13	27	2		
6+00	0.03	1.2	31	9	22	1		
6+50	0.02	1.0	29	10	43	1		
7+00	0.02	1.6	56	10	20	2		
7+50	0.05	0.9	27	10	25	1		
8+00	0.02	0.9	46	7	24	1		
8+50-E	0.02	1.2	27	11	24	1		

/ continued on page 12 ,...

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MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxxxx
	Au(ppm)	Ag(ppm)		Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #17	9+00-E	0.02	1.5	43	10	21	2		
	9+50	0.02	1.3	32	10	22	3		
	10+00-E	0.02	1.6	34	12	20	4		
L #18	0+50-E	0.02	0.5	14	9	13	1		
	1+00	0.03	0.6	10	8	10	1		
	1+50	0.02	0.6	10	5	5	1		
	2+00	0.02	0.5	12	4	7	1		
	2+50	0.05	1.7	27	14	19	2		
	3+00	0.02	0.5	9	9	7	1		
	3+50	0.02	1.7	21	21	22	3		
	4+00	0.02	1.8	12	13	20	2		
	4+50	0.02	2.2	75	16	73	10		
	5+00	0.02	2.1	85	16	83	5		
	5+50	0.02	2.5	83	20	73	1		
	6+00	0.02	1.6	45	16	33	2		
	6+50	0.02	1.8	81	18	39	1		
	7+00	0.02	1.5	34	12	30	2		
	7+50	0.02	1.5	46	12	48	2		
	8+00	0.02	1.2	25	16	31	1		
	8+50	0.02	1.2	34	14	27	2		
9+00	0.02	0.6	13	11	15	1			
9+50	0.02	1.3	42	17	40	1			
10+00-E	0.02	1.0	20	17	21	2			
L #19	0+50-E	0.02	0.4	8	9	5	1		
	1+00	0.02	1.3	27	13	24	1		
	1+50	0.02	1.0	18	16	19	1		
	2+00	0.02	0.9	18	14	20	1		
	2+50	0.02	0.5	10	9	5	1		
	3+00	0.02	2.1	27	18	21	1		
	3+50	0.02	1.2	23	16	38	1		
	4+00	0.02	1.6	75	15	55	1		
	4+50	0.02	1.7	75	28	73	1		
	5+00	0.02	1.0	40	16	28	3		
	5+50	0.02	1.9	76	18	65	2		
	6+00	0.02	1.9	59	16	40	2		
6+50-E	0.02	1.9	25	17	23	2			

/ continued on page 13 ...

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TO: N.V.C. ENGINEERING

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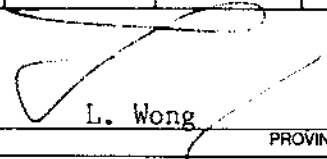
We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxx	xxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #19	7+00-E	0.02	2.4	73	16	68	3		
	7+50	0.02	1.9	15	14	20	1		
	8+00	0.02	1.5	40	17	58	1		
	8+50	0.02	1.5	27	17	25	2		
	9+00	0.02	0.8	20	18	23	1		
	9+50	0.02	1.2	23	14	31	1		
	10+00-E	0.02	1.2	27	15	33	1		
BL #2	0+00-W	0.02	1.7	139	20	79	1		
L #2	0+50-W	0.02	1.0	131	17	77	1		
	1+00	0.02	1.8	196	17	82	1		
	1+50	0.02	1.8	194	15	79	1		
	2+00	0.02	1.8	221	19	86	1		
	2+50	0.02	2.4	238	16	82	1		
	3+00	0.02	1.8	131	15	49	2		
	3+50	0.02	1.5	81	13	32	1		
	4+00	0.02	1.2	115	13	40	1		
	4+50	0.02	1.6	137	15	35	1		
	5+00	0.02	1.7	165	18	52	1		
	5+50	0.02	1.1	137	17	52	1		
	6+00	0.02	1.5	152	18	59	1		
	6+50	0.04	1.7	187	20	64	1		
	7+00	0.03	1.8	139	19	59	1		
	7+50	0.03	2.2	176	20	65	1		
	8+00	0.03	1.7	159	20	62	1		
	8+50	0.02	0.9	129	17	43	1		
	9+00	0.02	0.9	142	13	30	1		
	9+50	0.02	1.0	131	12	29	1		
	10+00-W	0.02	0.9	126	10	26	1		
L 7 E	0+50	0.02	0.8	37	14	16	1		
L 7	1+00-E	0.02	1.2	63	16	37	2		
	1+50	0.02	0.8	35	17	25	6		
	2+00	0.02	1.1	48	18	30	8		
	2+50-E	0.02	0.8	18	13	14	2		

/ continued on page 14 ..

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 L. Wong
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 OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

CERTIFICATE OF ASSAY

Date: July 24, 1987

File: 8706-2958



SGS SUPERVISION SERVICES INC.

General Testing Laboratories Division

1001 East Pender Street,
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Telephone: (604) 254-1647
Telex: 04-507514

TO: N.V.C. ENGINEERING

(page 14)

We hereby certify that the following are the results of assays on: soil

MARKED		GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	XXXXXXXX	XXXXXXXX
		Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn(ppm)	Mo (ppm)		
L 7	3+00-E	0.06	0.6	15	11	11	1		
	3+50	0.05	1.2	50	16	27	4		
	4+00	0.06	1.1	45	16	28	3		
	4+50	0.02	1.0	63	16	27	3		
	5+00	0.02	1.2	47	17	28	4		
	5+50	0.02	1.5	52	16	25	4		
	6+00	0.02	1.0	35	13	22	69		
	6+50	0.02	1.8	51	18	29	4		
	7+00	0.02	1.5	61	45	77	11		
	7+50	0.02	1.1	32	20	36	2		
	8+00	0.02	1.7	44	17	38	2		
	8+50	0.02	0.8	30	17	26	2		
	9+00	0.02	0.9	20	14	18	1		
	9+50	0.02	1.0	48	15	22	1		
	10+00-E	0.02	0.8	30	15	18	3		
L 8	0+50-W	0.02	0.9	35	18	22	3		
	1+00	0.02	1.6	49	23	58	7		
	1+50	0.02	0.9	18	15	15	1		
	2+00	0.02	1.2	25	19	24	9		
	2+50	0.02	1.8	41	20	27	1		
	3+00	0.02	1.1	30	22	24	3		
	3+50	0.02	1.3	25	11	17	6		
	4+00	0.02	1.2	30	13	20	1		
	4+50	0.02	0.9	18	9	20	1		
	5+00	0.02	1.4	47	14	36	2		
	5+50	0.02	1.3	35	13	24	1		
	6+00	0.06	1.2	27	14	26	2		
	6+50	0.10	1.0	20	12	27	4		
	7+00	0.04	1.1	22	11	21	8		
	7+50	0.02	1.4	42	18	73	5		
	8+00	0.02	1.4	57	17	50	7		
	8+50	0.02	1.1	24	12	18	6		
	9+00	0.02	1.4	44	13	37	1		
	9+50	0.02	1.2	63	16	43	1		
	10+00-W	0.02	0.9	22	13	23	2		

/ continued on page 15 ...

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(page 15)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxxxxxxxxx
	Au(ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #11	0+00-W	0.02	1.0	33	13	22	2	
	0+50	0.02	1.6	37	13	21	2	
	1+00	0.02	1.2	26	13	16	3	
	1+50	0.02	0.9	21	9	15	8	
	2+00	0.02	0.6	15	10	9	5	
	2+50	0.02	3.3	33	22	22	7	
	3+00	0.02	0.4	24	8	18	2	
	3+50	0.02	0.5	52	7	24	2	
	4+00	0.02	0.5	26	5	18	2	
	4+50	0.02	1.1	46	13	52	4	
	5+00	0.02	1.1	36	13	34	3	
	5+50	0.02	0.6	25	14	30	5	
	6+00	0.02	0.5	47	11	31	7	
	6+50	0.02	0.4	16	5	11	2	
	7+00	0.02	0.8	32	9	25	2	
	7+50	0.02	1.0	47	19	44	8	
	8+00	0.02	1.8	44	17	74	11	
8+50	0.02	1.5	73	15	67	13		
9+50	0.02	0.5	22	10	21	14		
10+00-W	0.02	1.1	50	12	43	11		
L #13	0+50-W	0.02	0.5	32	9	16	1	
	1+00	0.02	0.5	37	10	18	4	
	1+50	0.02	1.3	55	13	55	11	
	2+00	0.08	1.0	85	10	47	5	
	2+50	0.02	1.0	66	12	30	3	
	3+00	0.02	0.6	30	9	18	2	
	3+50	0.02	0.6	52	12	24	3	
	4+00	0.02	0.6	32	9	19	4	
	4+50	0.02	0.8	62	14	33	3	
	5+00	0.02	0.6	37	8	20	1	
	5+50	0.02	0.5	37	6	36	2	
	6+00	0.02	0.9	81	9	45	3	
	6+50	0.02	0.3	24	5	18	2	
	7+00	0.10	0.9	72	10	43	6	
	7+50	0.02	0.8	53	13	55	20	
8+00	0.02	1.1	77	12	53	10		
8+50-W	0.02	1.4	37	15	32	21		

/ continued on page 16

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TO: N.V.C. ENGINEERING

(page 16)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER		Copper	Lead	Zinc	Molybdenum	xxxxx	xxxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)				
L #13	9+00-W	0.02	1.6	51	15	56	10			
	9+50	0.02	1.3	55	17	49	24			
	10+00-W	0.02	1.5	73	19	62	10			
L #4	0+00-W	0.02	0.6	49	11	19	2			
	0+50	0.02	0.9	52	10	21	1			
	1+00	0.02	0.9	49	11	20	1			
	1+50	0.02	1.6	71	14	50	1			
	2+00	0.03	1.5	110	14	35	1			
	2+50	0.02	1.6	105	13	30	1			
	3+00	0.02	1.5	83	21	41	3			
	3+50	0.02	1.3	59	19	40	3			
	4+00	0.02	1.8	76	21	47	3			
	4+50	0.02	0.8	37	16	19	1			
	5+00	0.02	1.0	30	15	21	3			
	5+50	0.02	1.5	36	15	22	2			
	6+00	0.02	1.6	55	19	33	2			
	6+50	0.02	1.3	38	14	20	2			
	7+00	0.02	1.3	46	14	20	4			
	7+50	0.03	1.1	39	14	18	3			
	8+00	0.04	1.5	120	21	49	1			
	8+50	0.03	1.1	123	18	37	1			
	9+00	0.03	1.1	57	15	20	3			
	9+50	0.02	0.9	44	15	20	2			
	10+00-W	0.02	1.0	35	14	17	2			
L #5	0+50-W	0.02	0.5	13	14	10	1			
	1+00	0.02	0.6	13	18	35	4			
	1+50	0.02	1.3	78	19	53	1			
	2+00	0.02	0.4	16	12	11	1			
	2+50	0.02	0.6	14	13	16	1			
	3+00	0.02	1.1	31	14	27	4			
	3+50	0.02	0.9	13	15	17	1			
	4+00	0.02	0.5	11	12	14	1			
	4+50	0.03	0.4	11	11	12	1			
	5+00	0.02	0.5	12	10	11	1			
	5+50-W	0.02	0.6	17	12	19	1			

/ continued on page 17.

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General Testing Laboratories Division

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TO: N.V.C. ENGINEERING

(page 17)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxxxxx
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	
L #5	6+00-W	0.02	0.6	14	14	15	1	
	6+50	0.02	0.6	16	16	19	4	
	7+00	0.02	0.9	20	14	18	4	
	7+50	0.02	0.6	16	14	16	4	
	8+00	0.02	1.4	45	21	25	9	
	8+50	0.02	1.0	34	19	22	14	
	9+00	0.02	1.1	40	15	24	18	
	9+50	0.02	0.8	22	20	23	8	
	10+00-W	0.07	0.8	22	16	23	7	
	L #10	0+50-E	0.02	0.5	20	17	17	1
1+00		0.03	0.6	23	18	18	1	
1+50		0.04	0.5	24	460	16	1	
2+00		0.02	0.6	18	18	12	1	
2+50		0.02	0.9	34	19	19	11	
3+00		0.03	0.9	35	14	21	8	
3+50		0.02	0.6	20	14	20	5	
4+00		0.02	0.6	21	13	22	1	
4+50		0.02	1.0	34	10	25	4	
5+00		0.02	1.1	32	13	26	4	
5+50		0.02	0.9	35	14	24	6	
6+00		0.02	0.9	34	13	25	4	
6+50		0.02	2.1	32	15	21	12	
7+00		0.03	1.8	35	16	19	9	
7+50		0.02	1.5	33	16	18	9	
8+00		0.02	1.4	47	10	25	1	
8+50		0.02	1.0	42	11	24	1	
9+00		0.02	0.9	64	10	31	1	
9+50		0.03	1.0	59	10	25	1	
10+00-E		0.04	0.9	60	10	25	1	
L #12	0+50-E	1.46	0.4	10	8	11	1	
	1+00	0.02	0.4	7	9	6	1	
	1+50	0.02	0.3	8	9	6	1	
	2+00	0.02	0.9	19	13	15	3	
	2+50	0.02	0.5	18	10	13	6	
	3+00	0.02	0.8	18	12	26	3	
	3+50-E	0.02	0.6	10	10	12	6	

/ continued on page 18

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TO: N.V.C. ENGINEERING

(page 18)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxx	xxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #12	4+00-E	0.02	1.3	21	12	18	1		
	4+50	0.02	0.9	20	17	20	1		
	5+00	0.02	0.8	15	12	14	1		
	5+50	0.02	0.5	15	10	10	1		
	6+00	0.11	0.8	23	22	28	2		
	6+50	0.02	1.1	27	13	20	1		
	7+00	0.02	1.0	20	11	20	1		
	8+00	0.02	1.4	34	12	24	1		
	8+50	0.02	1.0	20	13	12	1		
	9+00	0.04	0.1	12	6	12	1		
	9+50	0.02	0.4	8	7	12	1		
10+00-E	0.02	0.6	35	9	26	5			
L #14	0+50-E	0.02	0.5	7	6	9	1		
	1+00	0.02	1.3	25	15	22	7		
	1+50	0.02	0.9	18	10	19	3		
	2+00	0.02	1.6	24	15	21	5		
	2+50	0.02	1.3	20	12	18	6		
	3+00	0.02	1.0	34	15	13	1		
	3+50	0.02	0.4	43	16	24	1		
	4+00	0.02	1.8	27	17	18	1		
	4+50	0.02	1.5	27	16	18	1		
	5+00	0.02	1.5	22	18	16	1		
	5+50	0.02	1.1	22	13	17	2		
	6+00	0.06	0.9	19	12	15	1		
	6+50	0.02	1.3	50	13	40	2		
	7+00	0.02	1.1	49	14	33	3		
	8+00	0.02	1.0	50	10	25	1		
8+50	0.02	0.9	42	11	26	4			
9+00	0.02	1.5	47	12	19	1			
9+50	0.02	1.6	45	11	21	1			
10+00-E	0.02	2.0	61	18	30	2			
L #15	0+50-E	0.02	1.3	20	14	19	1		
	1+00	0.02	1.1	17	19	25	1		
	2+00	0.02	1.3	16	16	15	1		
	2+50	0.02	0.5	14	14	10	1		
	3+00-E	0.02	1.5	19	14	17	1		

/ continued on page 19

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(page 19)

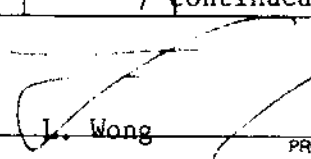
We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxxxx	xxxxxxxxxxxx
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
<u>L #15</u>	3+50-E	0.02	1.5	20	16	15	1		
	4+00	0.04	1.9	20	18	24	2		
	4+50	0.02	0.9	12	10	15	1		
	5+00	0.03	1.8	29	16	29	5		
	5+50	0.02	0.8	13	5	10	1		
	6+00	0.02	1.8	37	15	21	1		
	6+50	0.02	1.4	34	14	24	1		
	7+00	0.02	2.0	32	18	30	5		
	7+50	0.02	1.1	21	17	26	1		
	8+00	0.02	1.5	20	16	16	1		
	8+50	0.02	1.3	48	13	34	1		
	9+00	0.07	1.3	33	15	20	1		
	9+50	0.02	1.6	37	17	27	2		
	10+00-E	0.10	1.8	31	17	23	1		
<u>L #16</u>	0+50-E	0.06	1.3	23	14	16	1		
	1+00	0.03	1.0	15	13	14	1		
	1+50	0.02	0.6	11	10	4	1		
	2+00	0.02	0.9	13	12	8	1		
	2+50-E	0.02	0.9	32	15	17	1		
BL #18	0+00-W	0.02	1.0	30	14	12	1		
<u>L #18</u>	0+50	0.02	1.0	27	13	12	1		
	1+00	0.32	1.3	39	15	19	1		
	1+50	0.08	0.9	23	14	24	1		
	2+00	0.02	1.6	110	15	38	1		
	2+50	0.02	0.9	27	22	24	1		
	3+00	0.02	1.9	64	19	47	1		
	3+50	0.02	2.0	66	18	31	1		
	4+00	0.02	1.4	23	14	13	1		
	4+50	0.02	2.3	86	16	22	3		
	5+00	0.02	2.1	83	15	21	4		
	5+50	0.02	1.3	45	14	19	1		
	6+00	0.02	1.6	52	19	44	3		
	6+50	0.02	0.8	40	10	25	1		
	7+00	0.02	1.8	59	15	17	2		
7+50	0.02	1.8	71	14	17	1			
8+00-W	0.02	1.6	58	16	25	1			

/ continued on page 20.

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J. Wong
 PROVINCIAL ASSAYER

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers

MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing association
 REFEREE AND OR OFFICIAL CHEMISTS FOR: National Institute of Oilseed Products • The American Oil Chemists' Society
 OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

CERTIFICATE OF ASSAY

Date: July 24, 1987

File: 8706-2958



SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division

1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

TO: N.V.C. ENGINEERING

(page 20)

We hereby certify that the following are the results of assays on: soil

MARKED		GOLD	SILVER	Copper	Lead	Zinc	Molybdenum	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
		Au(ppm)	Pb (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #18	8+50-W	0.02	2.5	93	23	34	1		
	9+00	0.02	1.5	30	14	22	1		
	9+50	0.02	1.1	20	13	18	1		
	10+00-W	0.02	0.6	13	7	6	1		
BL #25	0+00-W	0.02	1.1	40	18	25	1		
<u>L #25</u>	0+50-W	0.02	1.0	35	14	26	1		
	1+00	0.02	1.1	27	18	1			
	1+50	0.02	1.8	54	26	47	1		
	2+00	0.02	1.3	37	22	30	1		
	2+50	0.02	1.6	47	21	50	1		
	3+00	0.02	1.3	36	23	33	1		
	3+50	0.02	1.1	34	22	28	1		
	4+00	0.02	1.5	44	20	38	1		
	4+50	0.02	1.9	56	23	43	1		
	5+00	0.02	1.3	31	18	21	1		
	5+50	0.02	1.5	42	16	28	1		
	6+00	0.02	2.0	51	17	32	1		
	6+50	0.02	1.9	61	16	28	1		
	7+00	0.03	1.8	94	17	30	1		
	7+50	0.03	1.3	40	17	25	1		
	8+00	0.02	1.3	37	17	30	1		
	8+50	0.02	1.5	65	20	28	1		
	9+00	0.02	1.5	164	19	26	1		
	9+50	0.02	1.8	67	21	56	1		
	10+25-W	0.02	1.8	47	17	28	1		
	0+00-E	0.02	1.3	35	19	21	1		
	1+00	0.02	1.3	26	21	20	1		
	1+50	0.02	1.3	27	18	18	1		
	2+00	0.02	1.0	29	14	18	1		
	2+50	0.02	2.6	96	24	46	1		
	3+00	0.02	1.5	54	21	33	1		
	3+50	0.02	0.9	25	22	30	1		
	4+00	0.02	1.6	42	24	27	1		
	5+00	0.02	0.9	35	22	26	1		
	5+50-E	0.02	1.1	32	23	36	1		

/ continued on page 21 ..

NOTE. REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

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L. Wong

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CERTIFICATE OF ASSAY

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File: 8706-2958



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General Testing Laboratories Division

1001 East Pender Street,
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Telex: 04-507514

TO: N.V.C. ENGINEERING

(page 21)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	xxxxx	xxxxxxxx
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)		
L #25	6+00-E	0.02	0.6	20	14	17	1		
	6+50	0.02	1.8	39	21	43	1		
BL #27	0+00-W	0.02	2.4	61	25	38	1		
L #27	0+50-W	0.02	1.6	40	23	40	1		
	1+00	0.02	2.6	115	29	47	1		
	1+50	0.02	2.0	176	24	42	1		
	2+00	0.02	1.8	88	21	33	1		
	2+50	0.02	1.9	81	24	35	1		
	3+00	0.02	1.4	45	20	40	1		
	3+50	0.02	1.5	40	21	37	1		
	4+00	0.02	1.4	36	19	38	1		
	4+50	0.02	1.3	30	20	47	1		
	5+00	0.02	1.6	66	21	50	1		
	5+50	0.02	1.4	57	21	30	1		
	6+00	0.02	1.3	62	23	44	1		
	6+50	0.02	1.1	29	18	25	1		
	7+00	0.02	1.3	24	18	26	1		
	7+50	0.02	1.6	52	27	44	1		
	8+00	0.02	1.8	49	24	39	1		
	8+50	0.02	.19	57	30	44	1		
	9+00	0.02	1.9	94	27	64	1		
	9+50	0.03	1.9	62	28	47	1		
	10+00-W	0.02	2.1	69	26	51	1		
0+50-E	1+00	0.02	1.5	32	24	25	1		
	1+50	0.02	0.5	20	22	14	1		
	2+00	0.02	1.3	28	20	24	1		
	2+50	0.02	0.9	21	15	14	1		
	3+00	0.02	1.3	26	19	39	1		
	3+50	0.02	1.8	39	19	46	1		
	4+00	0.02	1.3	27	21	33	1		
	4+50	0.02	1.4	63	24	56	1		
	5+00	0.02	1.3	96	22	47	1		
	5+50-E	0.02	1.0	25	19	38	1		

/ continued on page 22

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

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TO: N.V.C. ENGINEERING

(page 22)

We hereby certify that the following are the results of assays on: soil

MARKED	GOLD		SILVER	Copper	Lead	Zinc	Molybdenum	XXXXXXXXXX
	Au (ppm)	Ag (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	mo (ppm)	
<u>L # 27</u> 6+00-E	0.02	1.3		60	22	75	1	
6+50	0.02	1.5		45	21	79	1	
7+00	0.02	1.3		52	22	82	1	
7+50	0.02	1.3		30	18	67	1	
8+00	0.02	1.3		35	19	75	1	
8+50	0.02	1.4		35	19	74	1	
9+00	0.02	1.3		30	19	71	1	
9+50	0.02	1.3		24	19	40	1	
10+00-E	0.02	1.4		38	21	51	1	

> = Greater Than

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

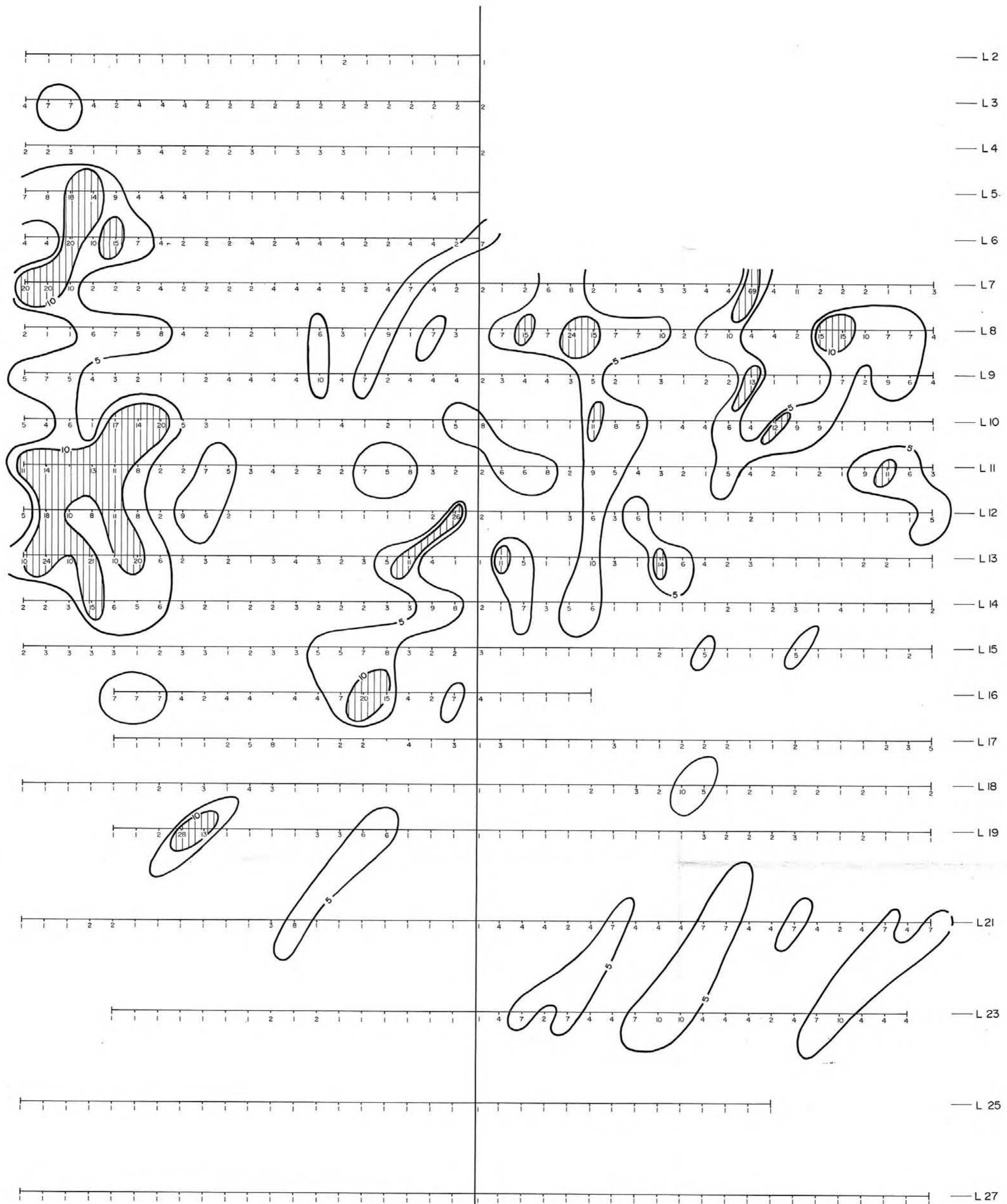
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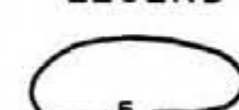

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10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E



SCALE meters 50 0 100 200 meters

LEGEND

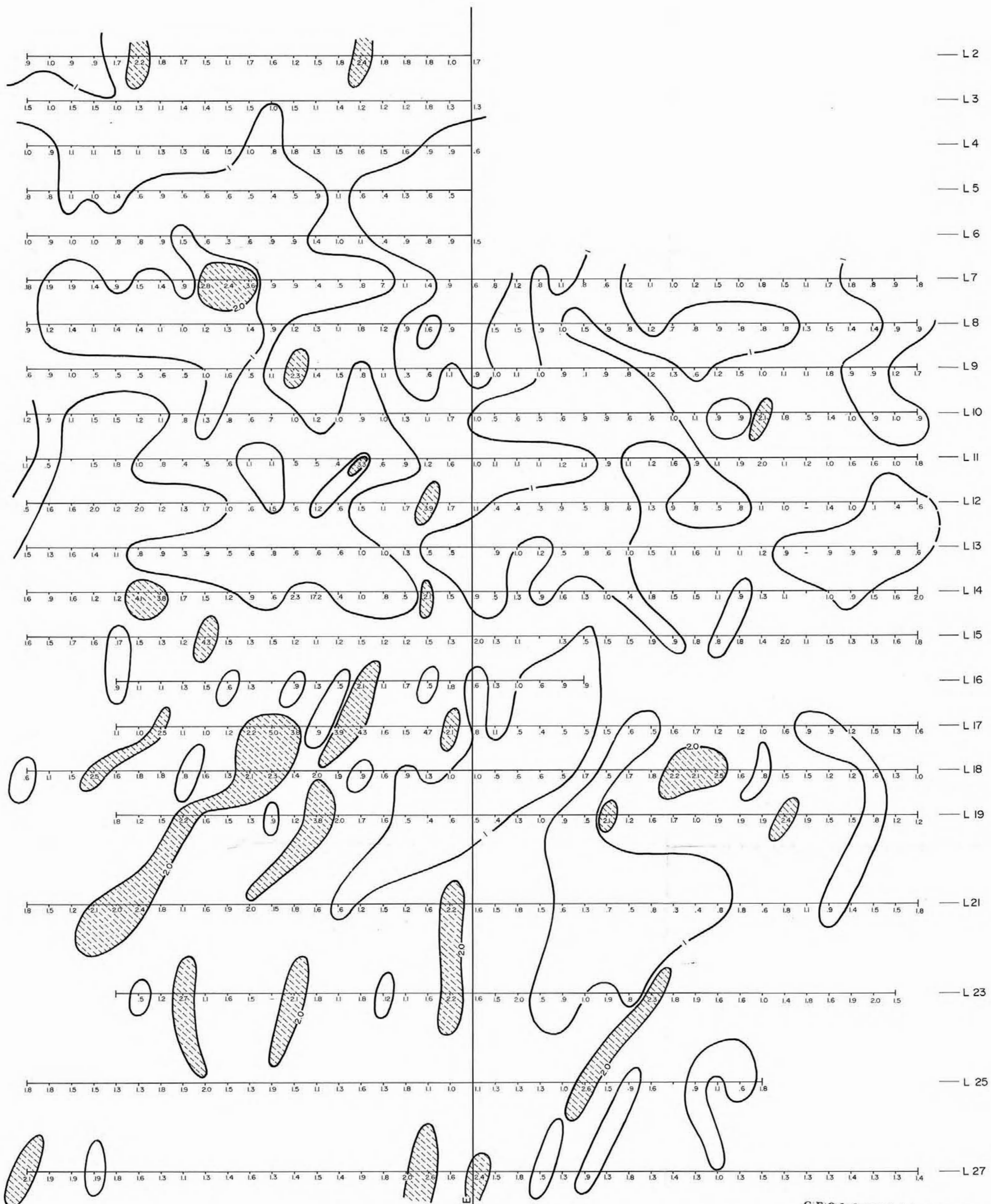
-  Anomalous > 5 ppm Mo
-  Significantly anomalous > 10 ppm Mo

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,125



Sierra Madre Resources Inc.		
HARBEY MINERAL CLAIMS		
GEOCHEMICAL PLAN - ppm Mo		
VICTORIA B.C.	NTS 92C/16E	
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: Sept., 1987	SCALE: as shown	FIG. 5

10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E



SCALE meters 50 0 100 200 meters

LEGEND

-  Anomalous >1 ppm Ag
-  Significantly anomalous >2.0 ppm Ag

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,125

Sierra Madre Resources Inc.

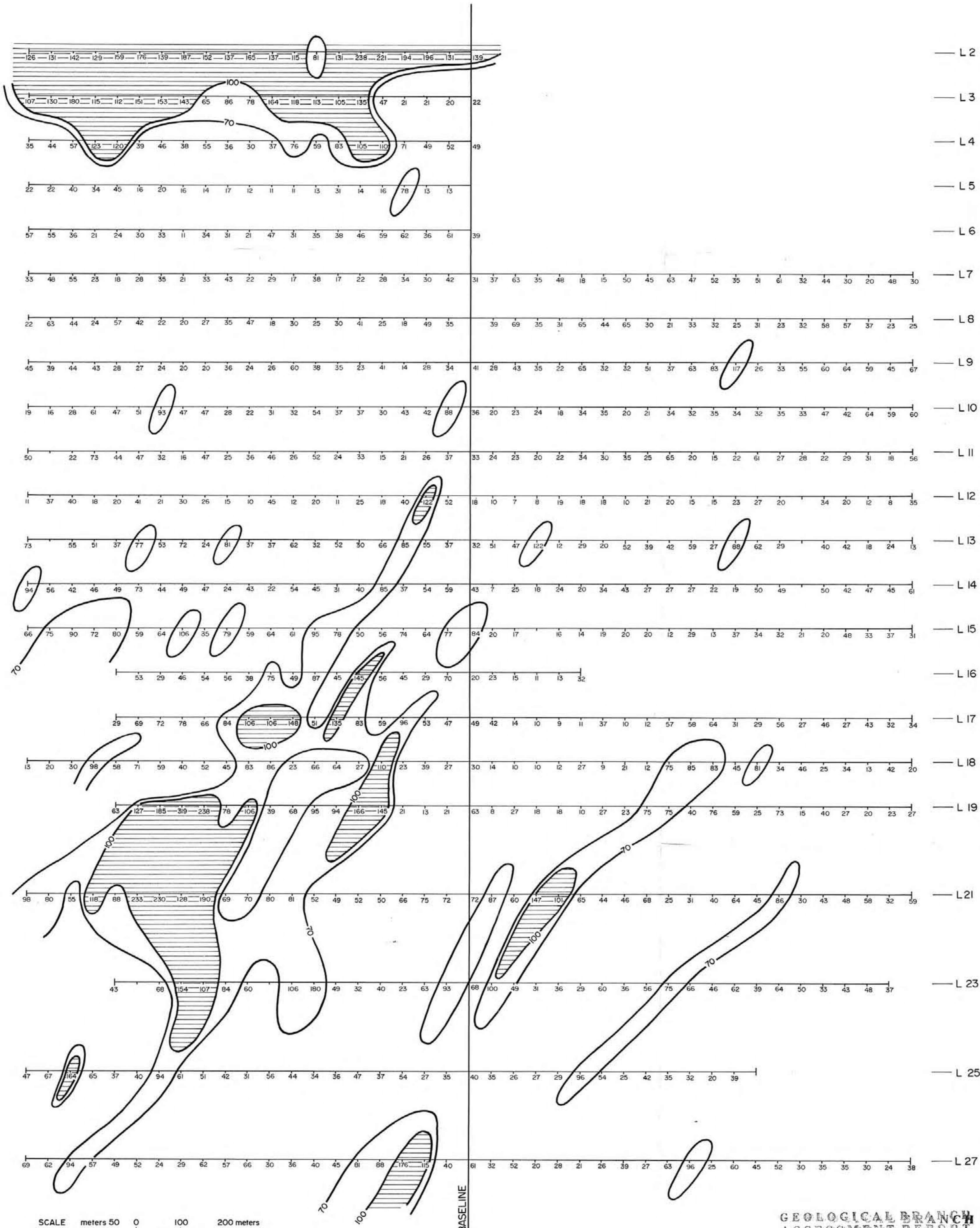
HARBEY MINERAL CLAIMS
GEOCHEMICAL PLAN - ppm Ag

VICTORIA B.C. NTS 92C/16E

V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

DATE: Sept, 1987 SCALE: as shown FIG. 6

10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E

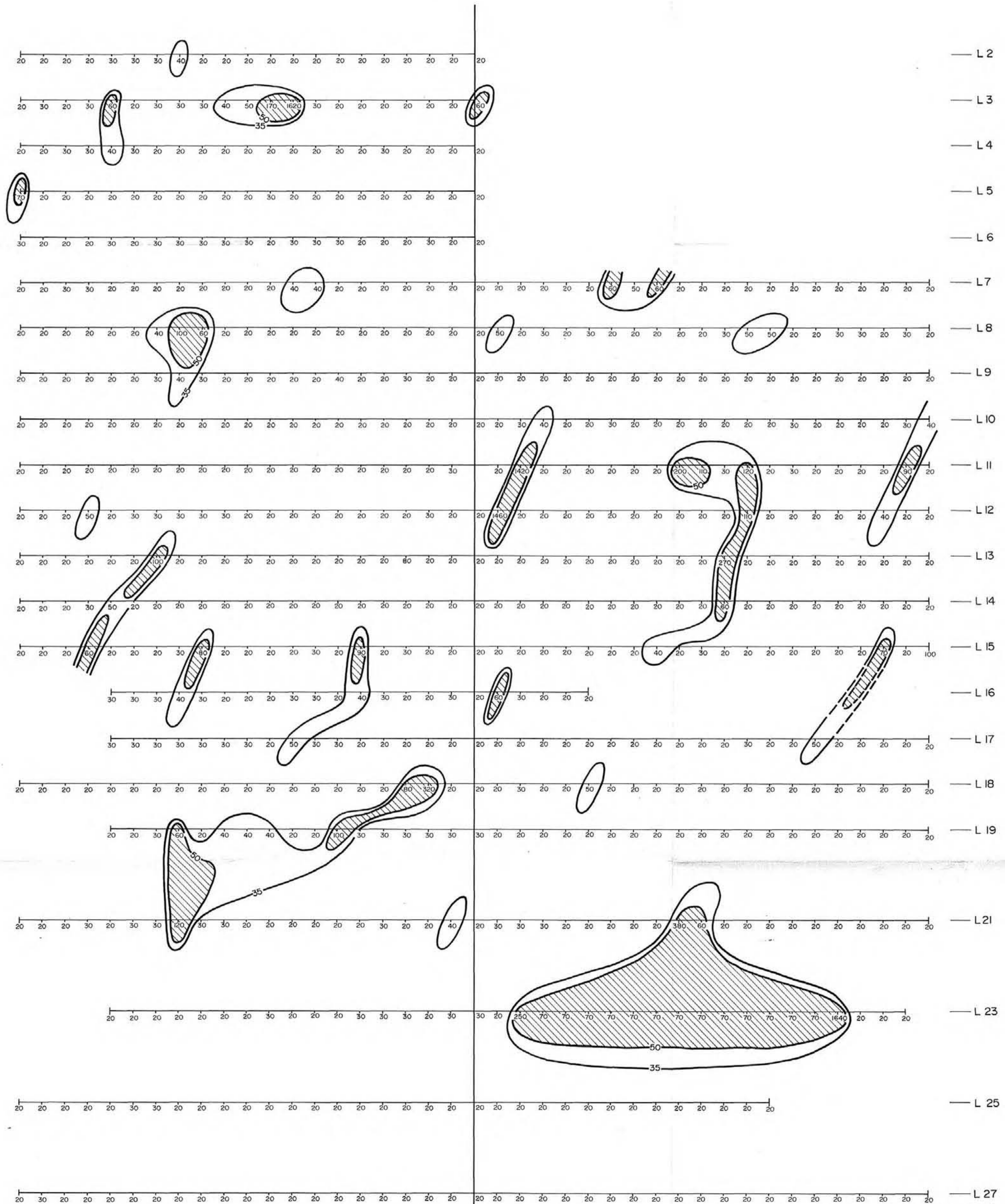


GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,125
Sierra Madre Resources Inc.

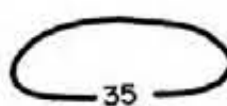

HARBEY MINERAL CLAIMS
GEOCHEMICAL PLAN - ppm Cu
VICTORIA B.C. NTS 92C/16E
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.
DATE: Sept., 1987 SCALE: as shown FIG. 7

10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E



SCALE meters 50 0 100 200 meters

LEGEND

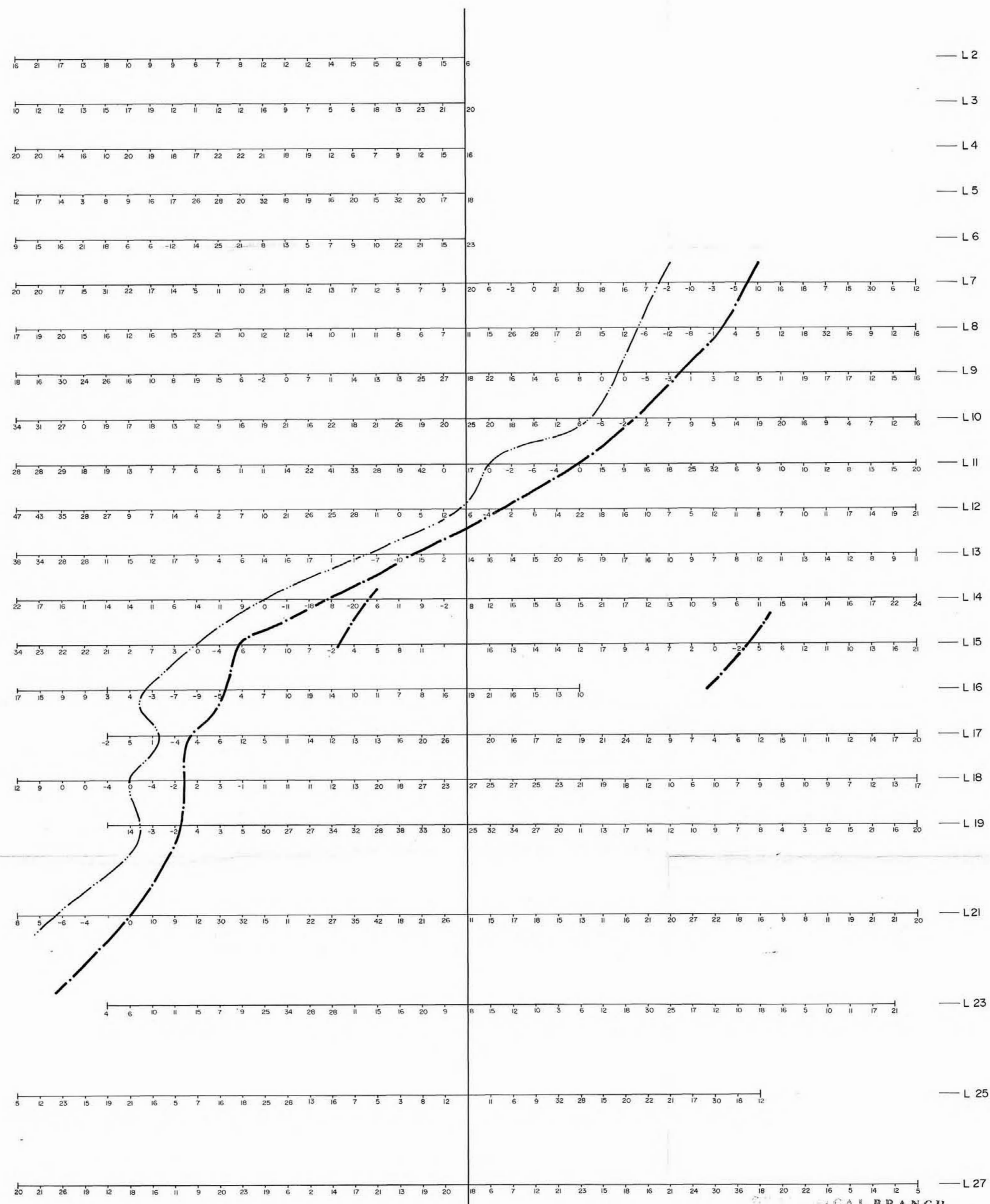
-  Anomalous > 35 ppb gold
-  Significantly anomalous > 50 ppb gold

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,125

Sierra Madre Resources Inc.		
HARBEY MINERAL CLAIMS		
GEOCHEMICAL PLAN - ppb Au		
VICTORIA, B.C.	NTS 92C/16E	
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: Sept., 1987	SCALE: as shown	FIG. 8

10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E



SCALE meters 50 0 100 200 meters

LEGEND
 - - - - - Crossover (Conductor)
 - · - · - Reverse Crossover

Instrument:
 Scintrex IGS-2
 integrated geophysical system

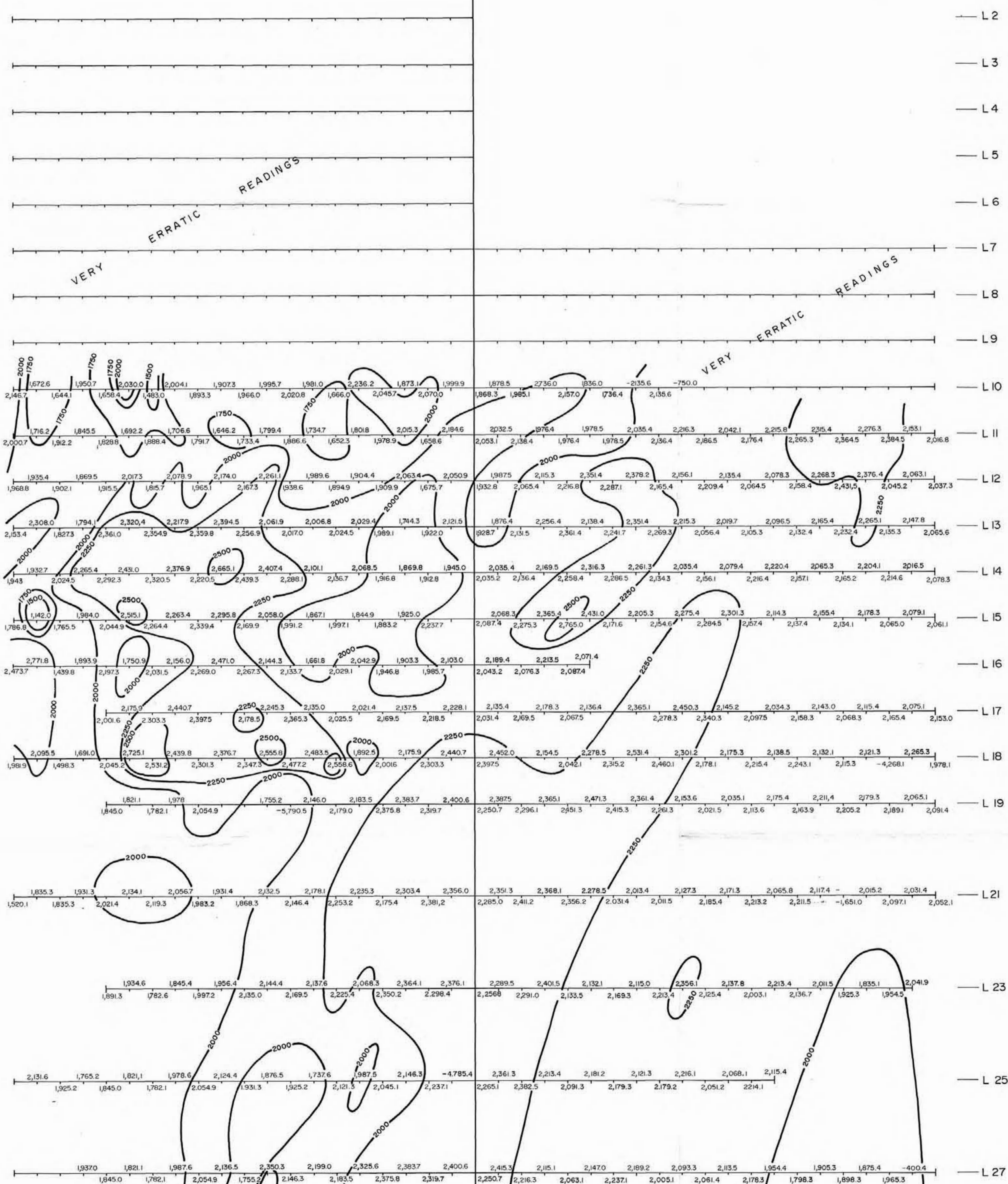
PHYSICAL BRANCH
 SURVEY REPORT

17,125

Sierra Madre Resources Inc.		
HARBAY MINERAL CLAIMS		
VLF-EM SURVEY - STATION HAWAII		
VICTORIA B.C.	NTS 92C/16E	
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: Sept., 1987	SCALE: as shown	FIG. 9

10+00W 9+00W 8+00W 7+00W 6+00W 5+00W 4+00W 3+00W 2+00W 1+00W 0 1+00E 2+00E 3+00E 4+00E 5+00E 6+00E 7+00E 8+00E 9+00E 10+00E

N



SCALE meters 50 0 100 200 meters

LEGEND

1,765.2 1,821.1 Readings in gammas
1,845.0 1,782.1

LOGICAL BRANCH
MAGNETIC SURVEY PLAN

17,125

Sierra Madre Resources Inc.		
HARBEY MINERAL CLAIMS MAGNETIC SURVEY PLAN (Contour Map)		
VICTORIA M.D.	NTS 92C/16E	
V. CUKOR, P. Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: Sept, 1987	SCALE: as shown	FIG. 10