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VANCOUVER, B.C.

**PRELIMINARY ASSESSMENT REPORT**

on the

**BANK 1 - 4 MINERAL CLAIMS**

Lillooet Mining Division,  
British Columbia  
NTS 92J/7, 10

N 50°30.05', W 122°45.02'

Prepared by:  
Mark Terry, B.Sc.  
Consulting Geologist

**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
November, 1994

23,595

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## SUMMARY AND CONCLUSIONS

The BANK claims are located in a favourable geological environment. Felsic volcanics in contact with a dioritic intrusive, along with favourable structures (faults and/or shears) are considered ideal for hosting both massive sulphides and precious metals.

Extensive alteration, sulphide mineralization, and the presence of significant base and precious metal values makes the BANK property an attractive exploration target.

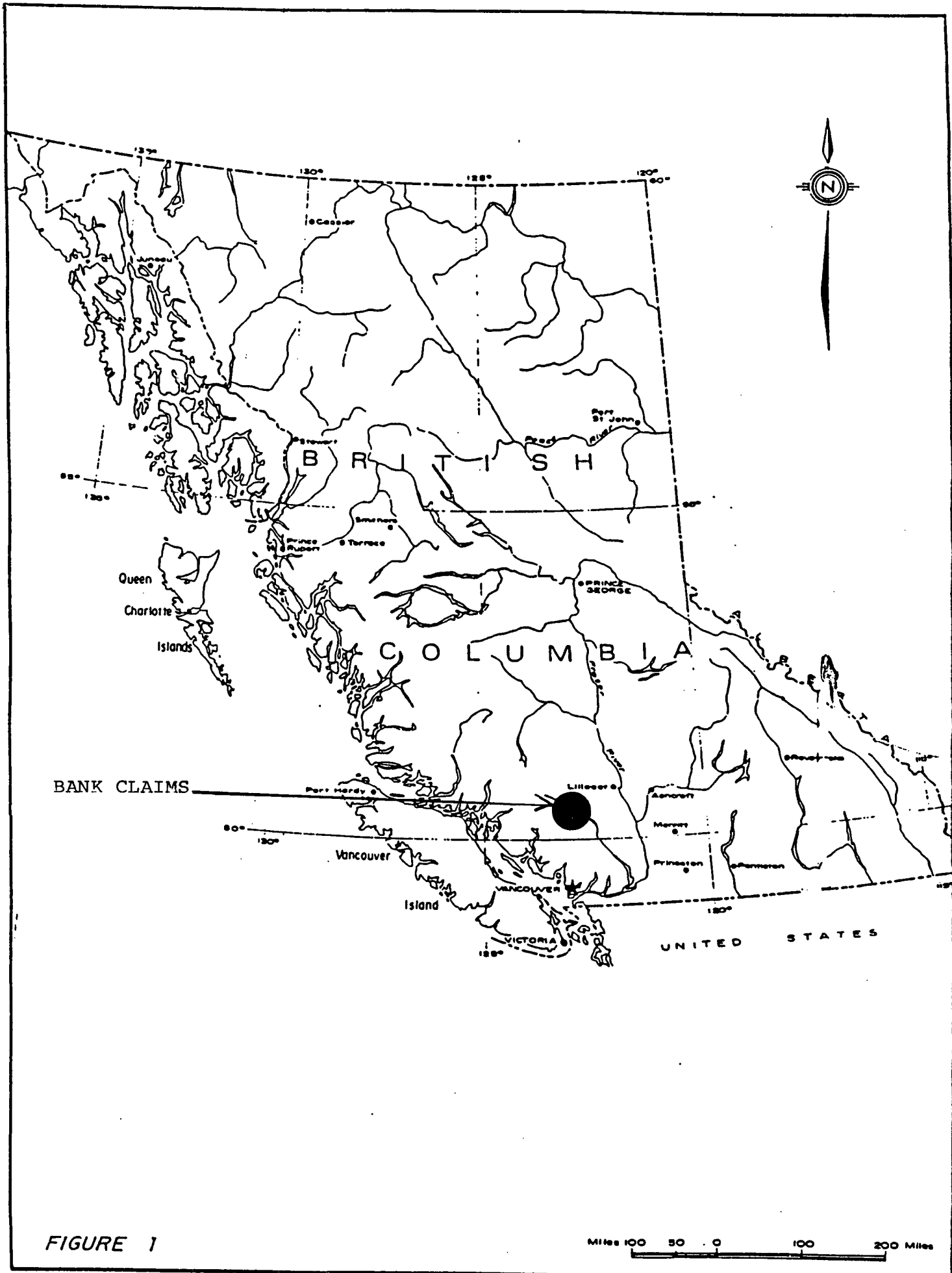


FIGURE 1

Miles 100 50 0 100 200 Miles

## **INTRODUCTION**

This report summarizes the preliminary exploration program on the BANK 1 - 4 mineral claims during late August, 1994. The author supervised the program at the request of Donegal Developments Ltd.

The work program consisted of a few line kilometres of geophysics and some geological mapping. Published reports on the property are limited, but helped in developing a path of direction for the exploration program as well as this report.

There is evidence of previous exploration on the BANK property. Several trenches and pits were seen, as well as a shaft which would be at least 20 metres in depth. The shaft was inaccessible due to unsafe conditions. The pits and trenches have been masked with vegetation. No written documentation on these workings was found.

### **LOCATION AND ACCESS**

The BANK 1 - 4 mineral claims are located adjacent to the southern border of the Birkenhead Lake Provincial Park in the Coast Mountains of southwestern British Columbia. The property lies approximately 25 kilometres north from the town of Pemberton.

Access to the property is via paved highway (Highway 2) from Pemberton. Travel north through the Mount Currie Indian Reservation and up to the old CNR station at Gramsons. From Gramsons, turn north-northwest onto the Birkenhead Lake Forest Service Road, a gravel logging road. Travel eight kilometres up the road to the bridge crossing Taillefer Creek. An east-west claim line crosses the road 50 metres north of the bridge. The LCP is located approximately 1500 metres west from the road along the line. The LCP and all corner posts were placed with the aid of a GPS unit. Coordinates for the LCP are N50°30.05', W122°45.02'. The author did not attempt to locate the LCP.

#### **CLAIM STATUS**

The BANK 1- 4 mineral claims are located in the Lillooet Mining Division of British Columbia. The claims are found on NTS Map Sheets 92J/07 and 92J/10 and on BCDMPR Mineral Claim Maps 92J/07E and W and 92J/10E and W. The claims are recorded in the name of James Malcolm Donaldson of Vancouver. Claim details are listed below.

<u>Claim Name</u>	<u>Tenure Number</u>	<u>No. of Units</u>	<u>Expiry Date</u>
BANK 1	320217	12	Aug. 20, 1994
BANK 2	320218	16	Aug. 20, 1994
BANK 3	320219	12	Aug. 20, 1994
BANK 4	320220	16	Aug. 20, 1994

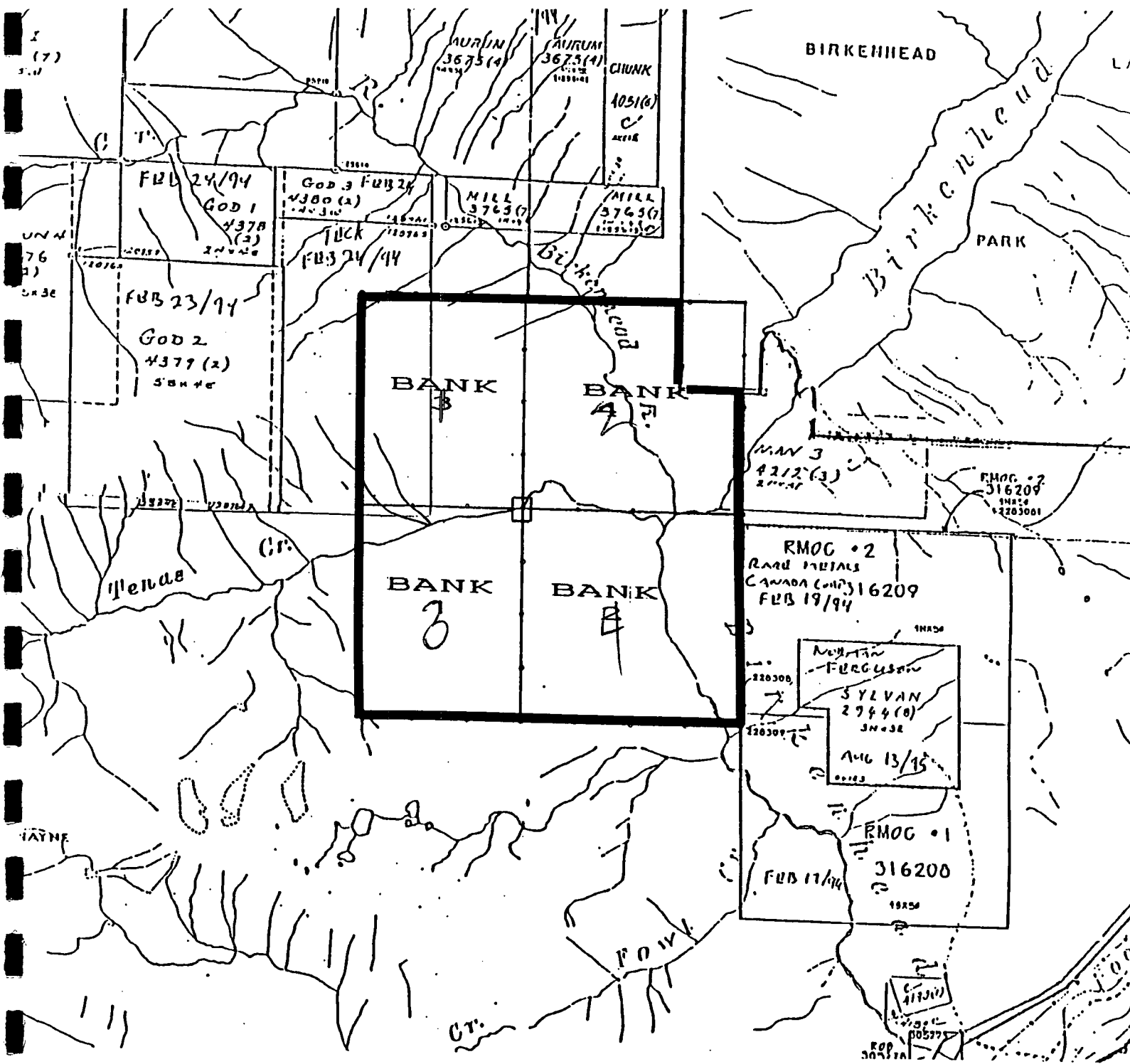
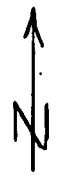


Fig 2 CLAIM LOCATION.

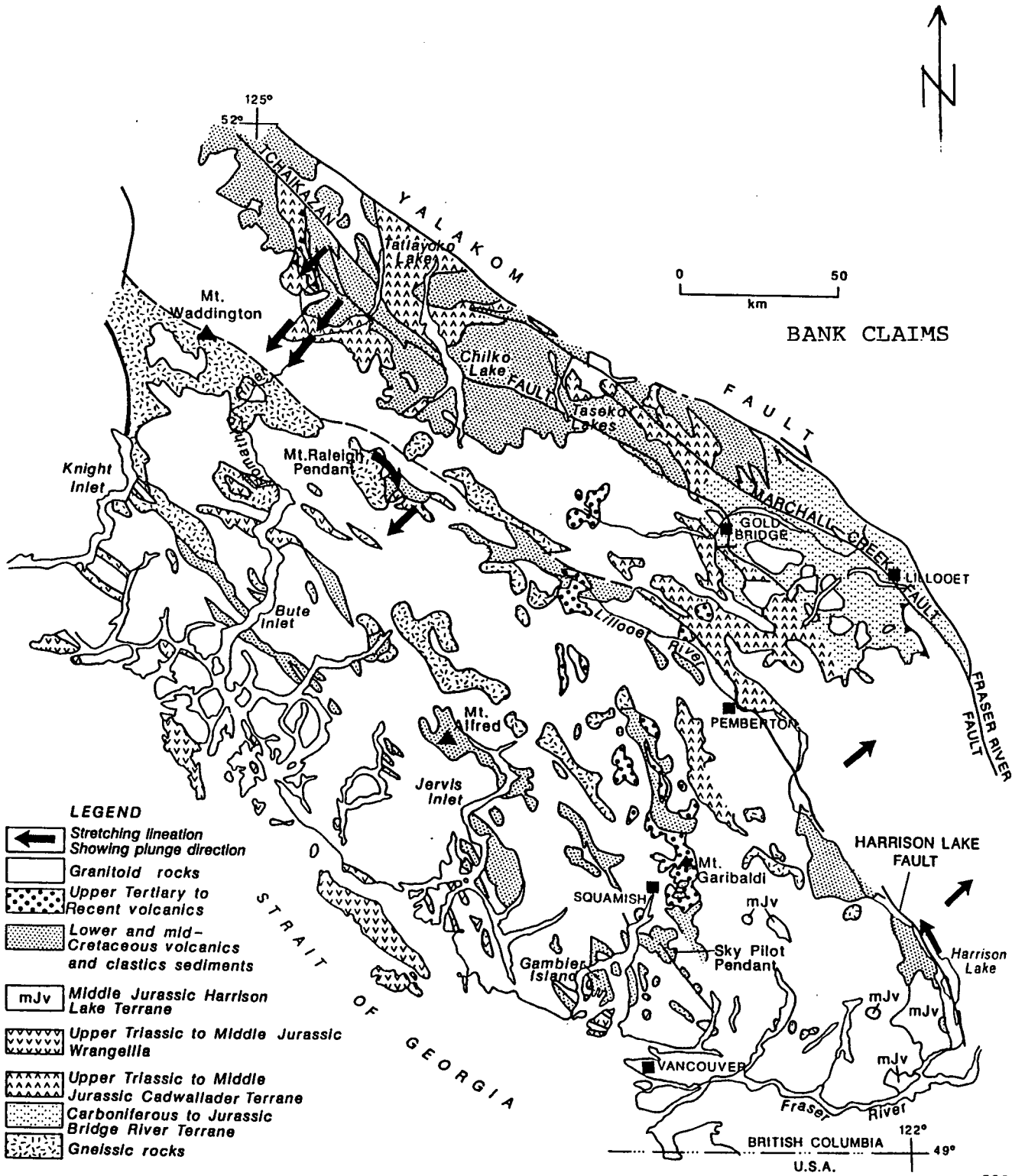
## **GEOLOGY**

### **REGIONAL GEOLOGY**

The BANK claims are located in the Pemberton Volcanic Belt of the Coast Plutonic Complex of the Canadian Cordillera. The main compositional type of intrusives are granodiorite to quartz diorite. Lesser amounts of granite and quartz monzonite are present. Calc alkaline volcanics and sedimentary rocks, and their metamorphic equivalents, found in the area range in age from Upper Jurassic to Tertiary. Andesitic breccias, tuffs, rhyolites, rhyolitic tuffs, and agglomerates are found along with phyllites, sandstones, minor limestones, and conglomerates.

The dominant trend of major structures in the region is a northwest to a west-northwest direction. The major structure in the area is the Yalakom Fault Zone which is located approximately 50 kilometres northeast of the BANK property. Associated faults such as the Marchall Creek Fault and the Tchaikazan Fault are also located northeast of the property and parallel the Yalakom Fault. The Harrison Lake Fault is postulated to pass very close to the BANK property. Little is known about the character and significance of these faults. They may be related to mineralization in the Bridge River area, which is located just east of the Coast Plutonic Complex boundary. The Bridge River camp has produced more lode gold production than any other area in the Cordillera.





REGIONAL GEOLOGY

Fig 3

GSC

An apparent fault striking northeast through Anderson Lake (east of the BANK property) appears to offset or deform Lillooet Lake and Lillooet River. This apparent offset is more likely caused by emplacement of dioritic plutons located west of Lillooet Lake and south of Lillooet River (Mt. Currie, Mt. James Turner, Mt. Weart, etc.). Minor north-south structures are evident in the area. Previous reports suggest that faulting and plutonic activity in the area have resulted in various degrees of folding, but no evidence of folding or faulting was observed on the property. One minor shear which strikes northerly was noted on the BANK property.

Most of the intrusives in the Coast Plutonic Complex show no metamorphism. Some local areas show metamorphic grades that would be described as belonging to the greenschist facies.

Economic mineralization in the Coast Plutonic Complex consists of gold and copper. The complex has less than average mineral wealth in terms of known production compared with other areas of the Canadian Cordillera. It does, however, host the Britannia, the largest massive sulphide deposit ever found in the Cordillera. The Britannia is located approximately 70 kilometres south of the BANK property.

## **PROPERTY GEOLOGY**

Only a limited area of the BANK claims was examined during this preliminary study. The majority of the area was covered with glacial as well as recent alluvial material. The majority of the outcrops observed were a medium to dark grey lithic tuff consisting of a grey-green matrix

and mafic fragments up to 3 cm in size. Minor amounts of andesitic flows and lithic tuffs were also seen on the property. Some limestone is found near the area of the old workings. No rhyolites or rhyolitic tuffs were seen, but are reported to be on the property. A granodiorite body is reported to intrude the western portion of the property (Howell, 1981).

The dominant fabric strikes in a north-south direction and dips steeply to the south. The major fracture pattern has a strike of east-west and dips steeply to the east. A secondary fracture set has strikes of west-northwesterly and shallow dips to the northeast. The only shear observed was located in an outcrop of lithic tuff and is a minor shear with a width of 5 cm; it parallels the major fracture orientation. No direct evidence of folding was observed, but published reports indicate an anticlinal structure exists in the area. If so, the bedding-cleavage relationship may suggest that the property is close to the anticlinal nose (assuming the cleavage is axial planar). Further work is required to substantiate this theory.

Metamorphism is quite noticeable in a good portion of the outcrop observed. The metamorphic classification seen on the BANK property would belong in the chlorite zone and biotite zone of the lower greenschist facies. Metamorphic overprint is quite extensive at the main showing (old workings). Original textures and fabrics have been obscured here. Metamorphism is less obvious in other areas of the property.

Alteration is evident in much of the exposed outcrop. The main type of alteration seen was silicification of varying degrees. Argillic alteration is noted in much of the outcrops, but would be described as weak to moderate. Chloritization occurs in much of the outcrop, with

degree of intensity increasing with corresponding increase in sulphide content. At the main showing, chloritization is strong, helping to obscure original textures and composition of the rocks.

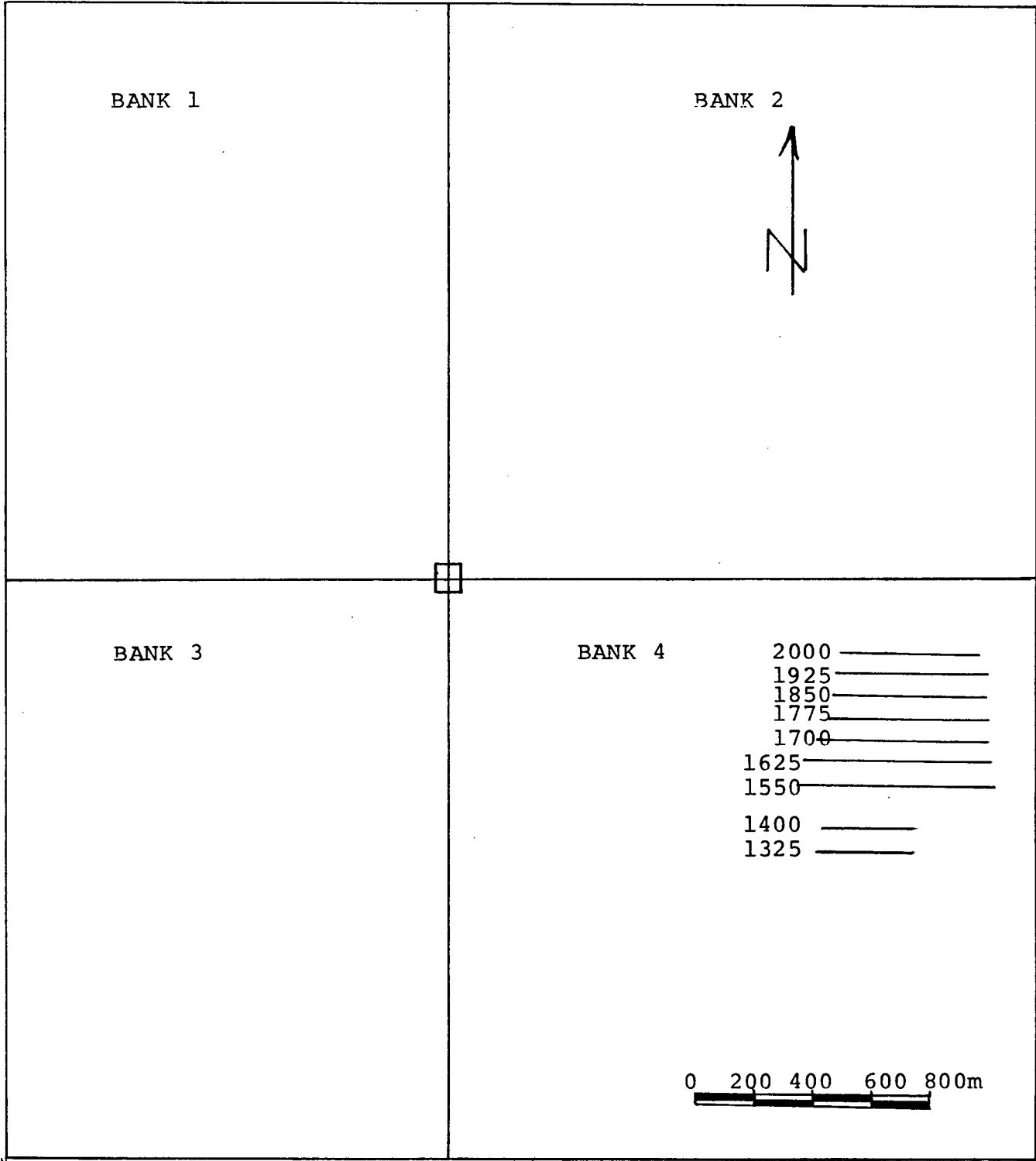
The main sulphide mineral present is pyrite. It occurs both as fine disseminations, and as coarse euhedral crystals up to 5 mm in size. Chalcopyrite was seen at the showings, along with minor amounts of arsenopyrite, sphalerite, and galena. Malachite occurs at the main showing and is the main copper mineral seen.

## GEOPHYSICS

A small ground geophysical survey was carried out on a small portion of the BANK property. The survey consisted of VLF-EM and total magnetic field measurements. Two different VLF stations (frequencies) were used (Seattle and Hawaii). A SCINTREX IGS -2 was used for the survey.

A flagged grid was established using hipchain and compass. The line direction was east-west (090). Line spacing was 75 metres and station separation was 25 metres.

Any meaningful conclusions cannot be made due to the limited size of the survey. It was hoped that the survey would cover the known showing to find out if geophysics would detect the showing and give indications of any extensions or additional mineralized zones. The survey had to be cut short due to weather conditions (moisture in the instrument). It does appear that the last two lines surveyed (L. 1400 N and L. 1325 N) start to detect a possible VLF-EM anomaly using the Seattle station. Due to the line orientation, measurements recorded using the Hawaii station cannot be read using conventional VLF-EM profiles.



GRID LOCATION

Fig 4

## DISCUSSION

Although the work program on the BANK property was limited, many encouraging factors were noted.

First, the program has demonstrated that highly anomalous gold and copper mineralization occurs on the claims. Sulphide mineralization with corresponding alteration was noted in much of the outcrop observed.

Secondly, the geology and alteration seen on the property is conducive to potential economic mineralization. Felsic volcanics with intrusive contacts as well as strong structures is an ideal scenario for base metal and precious metal deposition.

The geology, alteration, and mineralization all indicate that the BANK property is a very attractive exploration target. Although the area over which the geophysical survey was conducted was limited, it did indicate the possible presence of an anomaly. Too little work was carried out to make any concrete determinations. The BANK claims need a more comprehensive examination before any conclusions can be drawn. A proposed work program is outlined on the following page.

## PROPOSED PROGRAM

The property requires more thorough geological mapping and sampling. Emphasis should be placed on noting any variation in alteration, discrete changes in bedding-cleavage relationships, and any other structural conditions. With some control on mineralogical and geological conditions, relationships between different elements may be deduced. This would aid in interpretation of soil geochemistry.

A geophysical survey consisting of VLF-EM and magnetics should be carried out. At least 30 line kilometres should be run, making sure to cover the known mineral showings. VLF-EM measurements should be plotted in contours as opposed to profiles, enabling measurements from Hawaii to be interpreted. Geochemical soil sampling should be carried out over any geophysical anomalies

Trenches should be blasted in the vicinity of the known showings to get a better picture of the geological conditions resulting in the mineralization.

Cost proposals are as follows:

Geology	10 days @ 250/day	\$ 2,500
Geophysics	20 kilometres @ 300/day	6,000
Assaying		2,200
Trenching and blasting		2,000
Accommodation		1,300
Report		<u>800</u>
	<b>TOTAL</b>	<b>\$ <u>14,800</u></b>



**STATEMENT OF COSTS**

Geologist	2 days @ \$250/day	\$ 500
Geophysical technician	3 days @ \$200/day	600
Assistants	6 days @ \$150/day x 2	1,800
Vehicle	6 days @ \$50/day	300
Field supplies		150
Equipment rental		600
Accommodations		650
Map plotting		300
Report		<u>500</u>
	<b>TOTAL COSTS</b>	<b>\$ <u>5,600</u></b>

## REFERENCES

Beckett, R.J. " Report on Geology of Norse Explorations Ltd. Birkenhead Lake Area Holdings NOR 1 to 47, DEE 1 to 24, BIRK 1 to 10 Claims", Aug. 11, 1969. BCDMPR Assessment Report #02430.

Christopher, P.A. "Geological, Geochemical, and Geophysical Report on Tenas Creek Property, Lillooet Mining Division", May 22, 1985. BCDMPR Assessment Report #13770.

Howell, W.A., "Geochemical Survey Report On Tenas Creek Property ("HORSES ASS" Claims 1 - 4), Lillooet Mining Division", Oct. 23, 1981. BCDMPR Assessment Report #09637.

"Geological and Geochemical Survey Report on the Tenas Creek Property (HORSES ASS Claims), Lillooet Mining Division."

Richards, G.G., "Geological and Geochemical Survey Report on the Tenas Creek Property (HORSES ASS Claims), Lillooet Mining Division", July 27, 1984. BCDMPR Assessment Report #12,601.

Roddick, J.A. & Hutchison, W.W., "Pemberton (East Half) Map-Area, B.C." GSC Paper 73-17.

## STATEMENT OF QUALIFICATIONS

I, Mark Terry, residing at 1022-470 Granville St., Vancouver, B.C., state that:

1. I graduated from St. Francis Xavier University (B.Sc: Geol.) in 1986.
2. I have practised my profession continuously since 1986 in Canada, the United States, and Europe.
3. I have personally visited the BANK property and supervised the 1994 work program.
4. This report is based on my observations obtained from my property visit, and by reviewing previously published data on the area.
5. I hold no interest in the BANK claims.

Date at Vancouver, B.C., this 10th day of November, 1994.

  
\_\_\_\_\_  
Mark A. Terry, B.Sc.

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**Appendix**

**ROCK SAMPLE ASSAYS**

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GEOCHEMICAL ANALYSIS CERTIFICATE



Donegal Development Ltd. File # 93-2082

1022 - 470 Granville St. Vancouver BC V6C 1V5

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb
BANK #1	2	408	21	137	3.3	<1	774	1196	30.78	789	<5	<2	2	10	1.4	<2	2	19	1.57	.014	<2	6	.96	2	.03	<2	1.63	<.01	.01	<1	840
BANK #2	3	1339	19	1467	1.4	<1	498	1275	25.61	274	9	<2	2	27	16.4	<2	13	9	6.33	.017	<2	5	.08	<2	.01	3	.20	<.01	.01	<1	130
BANK #3	3	849	633	78	62.0	5	6	43	14.31	2035	6	6	<2	1	1.5	9	58	4	.12	.009	<2	4	.01	8	.03	8	.24	.01	.15	4	4050
BANK #4	2	6598	47	373	22.9	11	251	2350	20.45	1278	<5	<2	<2	9	4.4	10	39	15	1.29	.028	<2	6	.54	4	.06	5	1.36	.01	.07	4	1020
BANK #5	2	89	10	52	.4	6	8	831	5.77	71	<5	<2	<2	16	<.2	<2	<2	20	.31	.033	<2	9	.90	3	.15	<2	.97	.02	.05	<1	54
RE BANK #5	2	85	8	50	.4	5	7	807	5.60	76	<5	<2	<2	16	.6	<2	<2	20	.30	.031	<2	8	.88	8	.15	<2	.95	.03	.04	1	42

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 23 1993 DATE REPORT MAILED: *Aug 30/93.* SIGNED BY: *C. Leong* O. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

P.02/02

604 253 1716 TO 6890288

5'94 9:22 FR ACME LABS

ACME ANALYTICAL LABORATORIES LTD. 352 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716  
**AA** **GEOCHEMICAL ANALYSIS CERTIFICATE** **AA**  
 Donegal Development Ltd. File # 94-2179  
 1022 - 470 Granville St., Vancouver, BC V6G 1V5 Submitted by: Mark Tarry

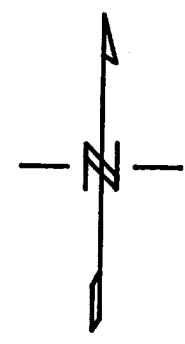
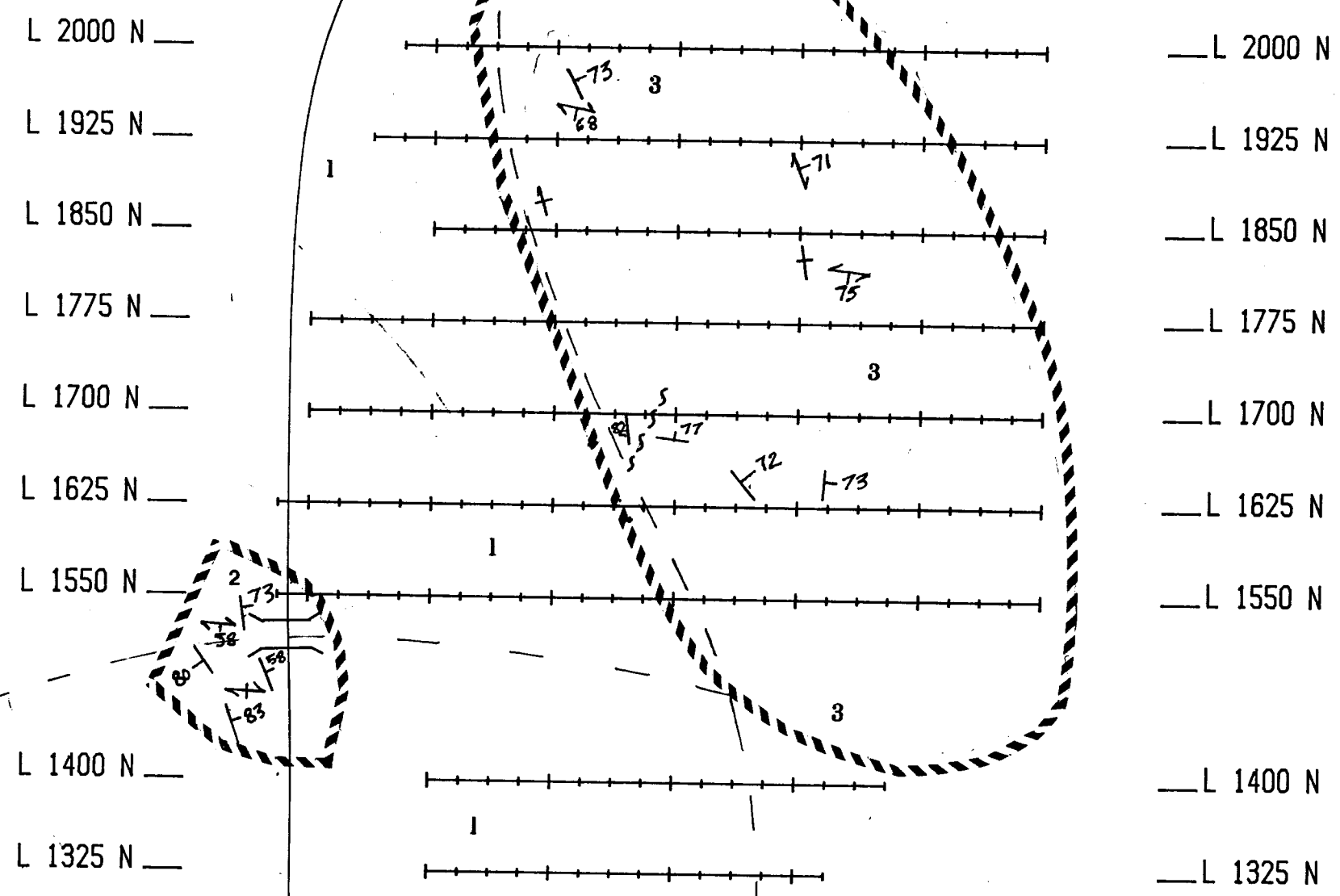
SAMPLE#	Mo	Cu	Pb	Zn	Ag	Mi	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
523316 H	5	7062	7	314	8.5	9	39	964	6.52	77	<5	<2	<2	37	.7	<2	5	42	.95	.041	<2	11	1.61	16	.13	<2	2.02	<.01	<.01	<1	620
523317 H	4	5203	12	444	19.7	10	34	1872	20.60	569	6	<2	5	12	2.6	<2	44	27	.71	.006	<2	11	1.72	7	.05	<2	2.69	<.01	.06	<1	580
RE 523317 H	3	5427	16	475	20.6	10	35	2005	21.35	590	<5	<2	5	12	3.0	<2	46	29	.76	.008	<2	10	1.83	7	.06	<2	2.88	<.01	.06	<1	560

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GR SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: JUL 20 1994 DATE REPORT MAILED: *July 22/94* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

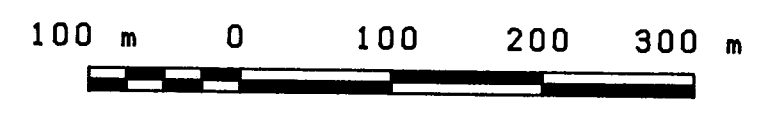
LCP 1500m

900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E



**GEOLOGICAL BRANCH  
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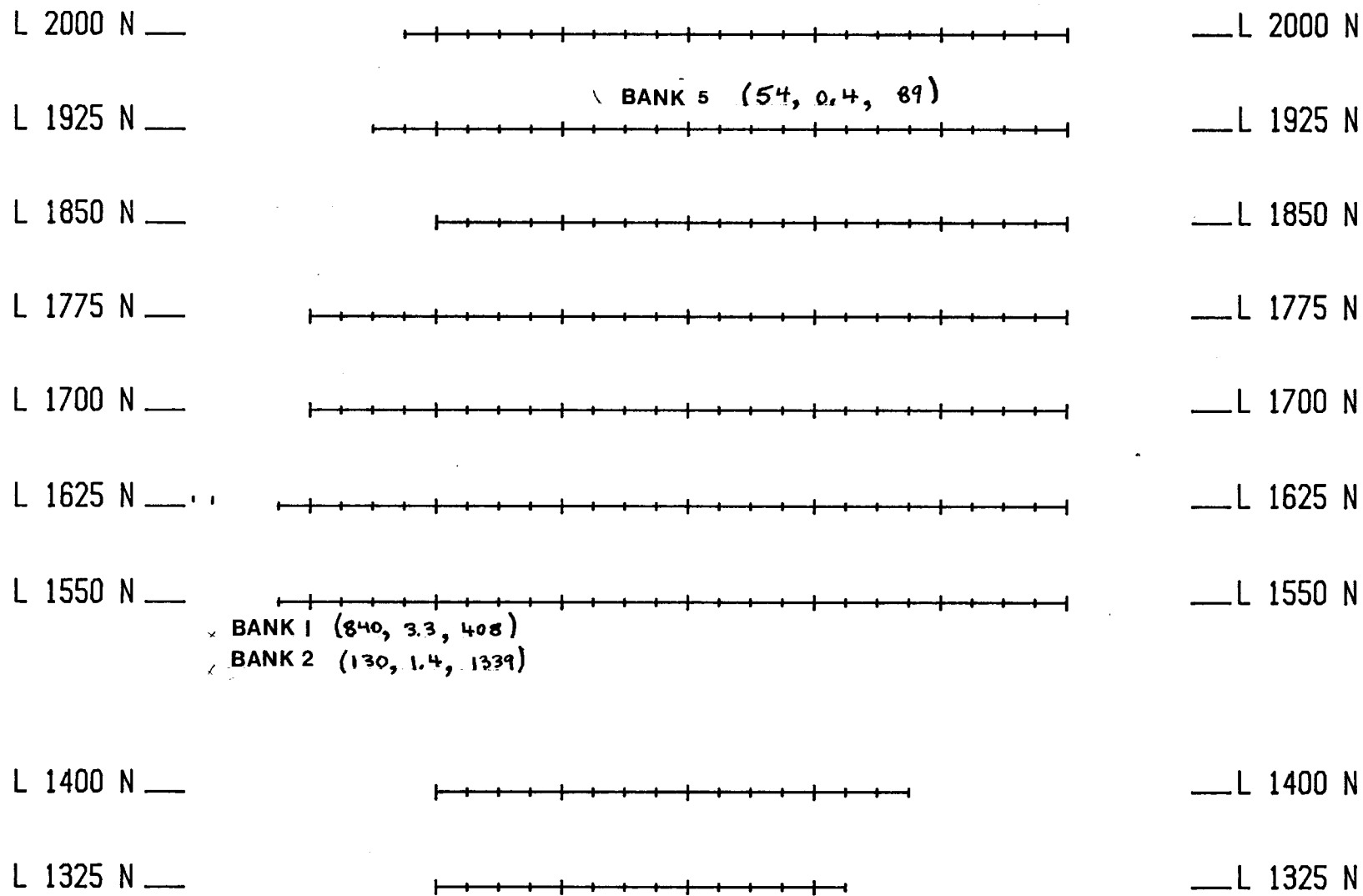


SCALE 1:5000

- GEOLOGICAL CONTACT (assumed)
- SHEAR
- BEDDING
- FRACTURE
- BRIDGE
- ROAD
- 2** ALTERED ANDOSITIC TUFF WITH Pyrite, chalcopyrite
- 3** LITHIC TUFF
- 1** ALLUVIAL

<b>JOHN SNEDIGAR</b>
<b>PROPERTY GEOLOGY</b>
<b>Figure 5</b>
<b>BANK CLAIMS</b>
LILLOOET M.D., BRITISH COLUMBIA
<b>DONEGAL DEVELOPEMENTS LTD</b>

900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E

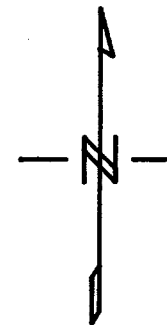


BANK 5 (54, 0.4, 89)

BANK 1 (840, 3.3, 408)  
BANK 2 (130, 1.4, 1339)

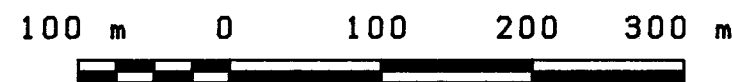
BANK 3 (4050, 62.0, 849)  
BANK 4 (1020, 22.9, 6598)  
523316 (620, 8.5, 7062)  
523317 (580, 19.7, 5203)

BANK 2 (1000, 10.1, 50) Au (ppb), Ag (ppm), Cu (ppm)



**GEOLOGICAL BRANCH  
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SCALE 1:5000

**JOHN SNEDIGAR**

**SAMPLE LOCATIONS**

**Figure 6**

**BANK CLAIMS**

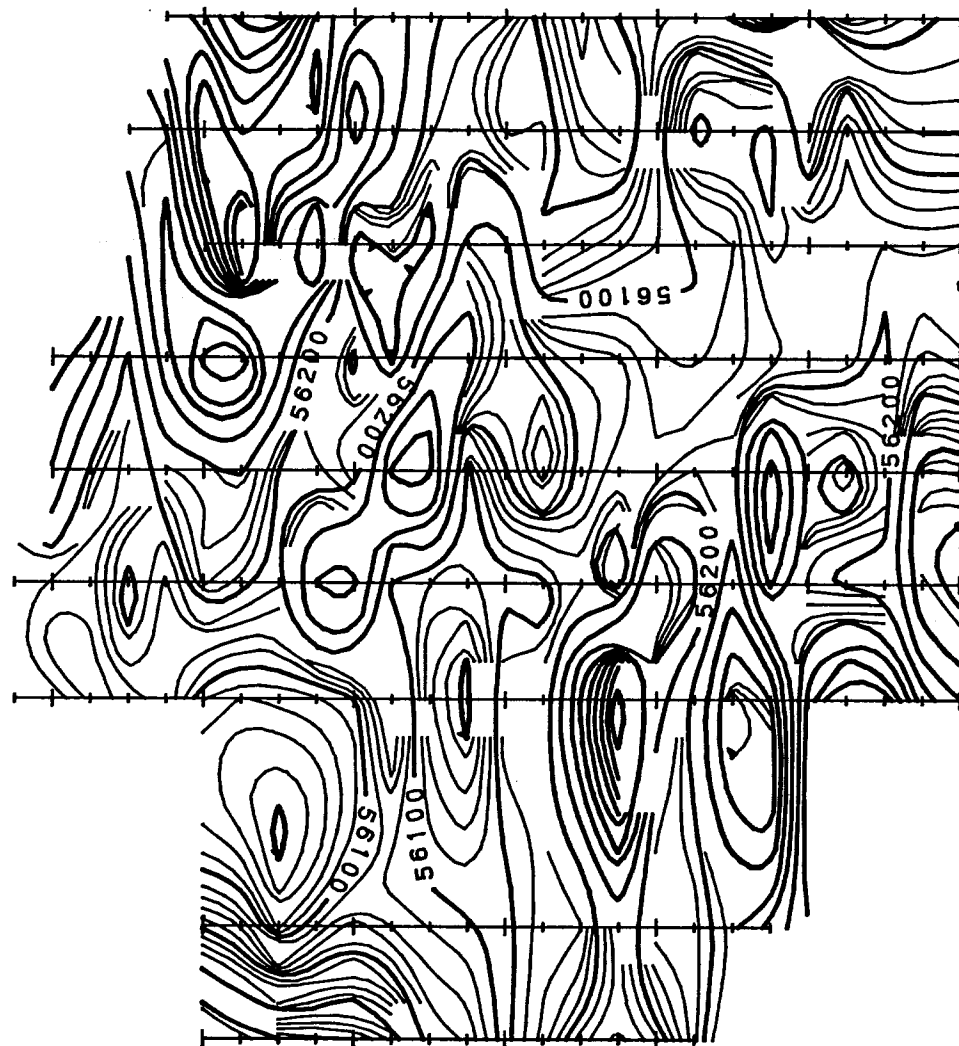
LILLOOET M.D., BRITISH COLUMBIA

**DONEGAL DEVELOPMENTS LTD**

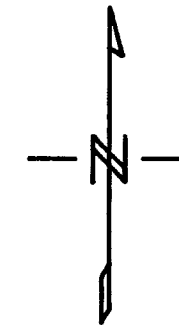


900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E

L 2000 N  
L 1925 N  
L 1850 N  
L 1775 N  
L 1700 N  
L 1625 N  
L 1550 N  
  
L 1400 N  
L 1325 N

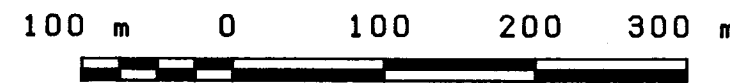


—L 2000 N  
—L 1925 N  
—L 1850 N  
—L 1775 N  
—L 1700 N  
—L 1625 N  
—L 1550 N  
  
—L 1400 N  
—L 1325 N



**GEOLOGICAL BRANCH  
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SCALE 1:5000

**LEGEND**

INSTRUMENT: SCINTREX IGS-2  
CONTOUR INTERVAL: ——— 20 nT  
————— 100 nT  
————— 500 nT

**JOHN SNEDIGAR**

**TOTAL FIELD MAGNETIC SURVEY**

**CONTOURS**

**Figure 9**

**BANK CLAIMS**

LILLOOET M.D., BRITISH COLUMBIA

**DONEGAL DEVELOPEMENTS LTD**

900 E 1000 E 1100 E 1200 E 1300 E 1400 E 1500 E

L 2000 N

L 1925 N

L 1850 N

L 1775 N

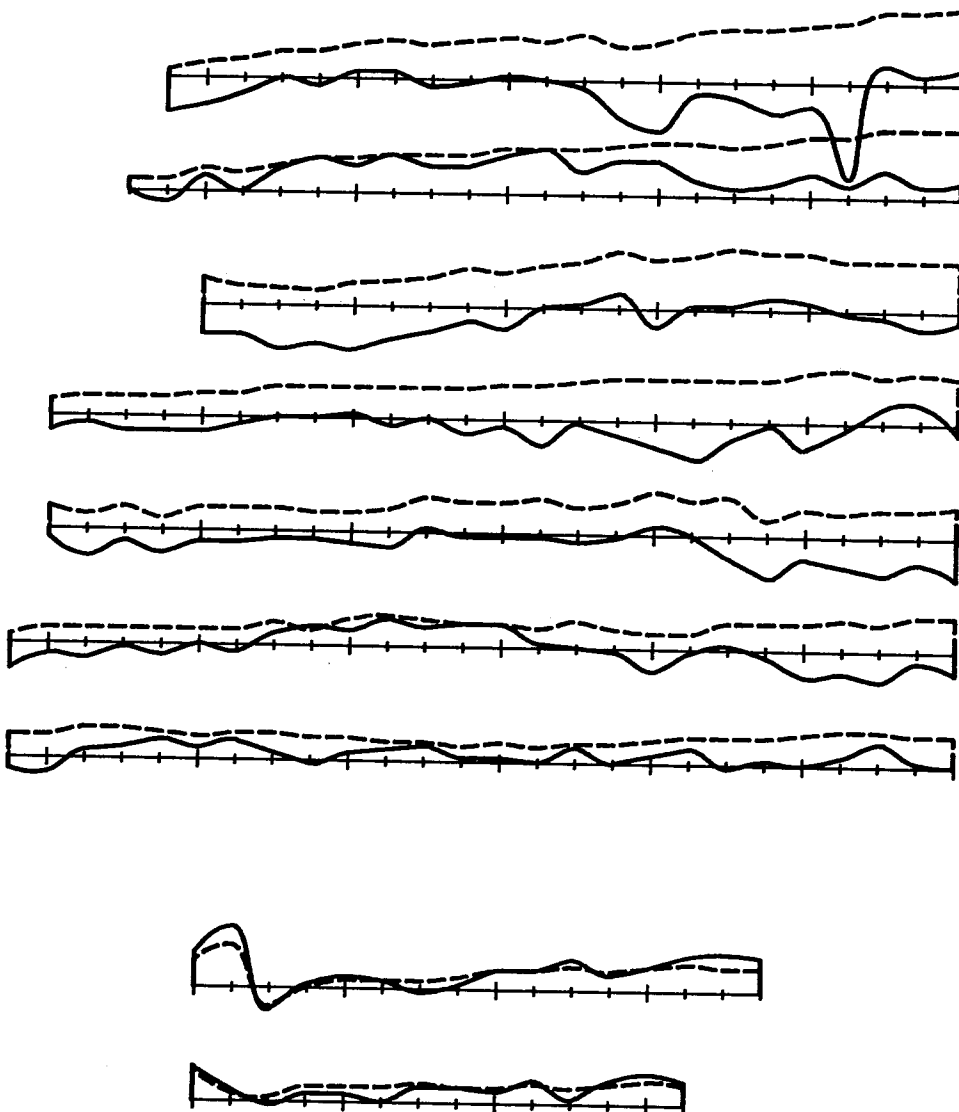
L 1700 N

L 1625 N

L 1550 N

L 1400 N

L 1325 N



L 2000 N

L 1925 N

L 1850 N

L 1775 N

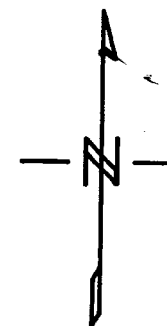
L 1700 N

L 1625 N

L 1550 N

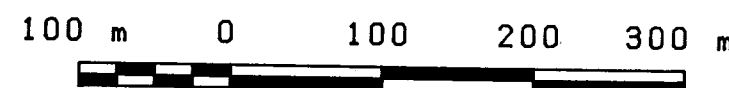
L 1400 N

L 1325 N



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SCALE 1:5000

**LEGEND**

INSTRUMENT: SCINTREX IGS-2

TRANSMITTER: HAWAII (NPM 23.4 KHZ)

IN-PHASE ———

QUADRATURE - - - - -

PROFILE SCALE: 1 Cm = 10 %

ANOMALY LOCATION ○

CONDUCTOR AXIS ———

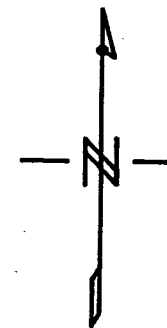
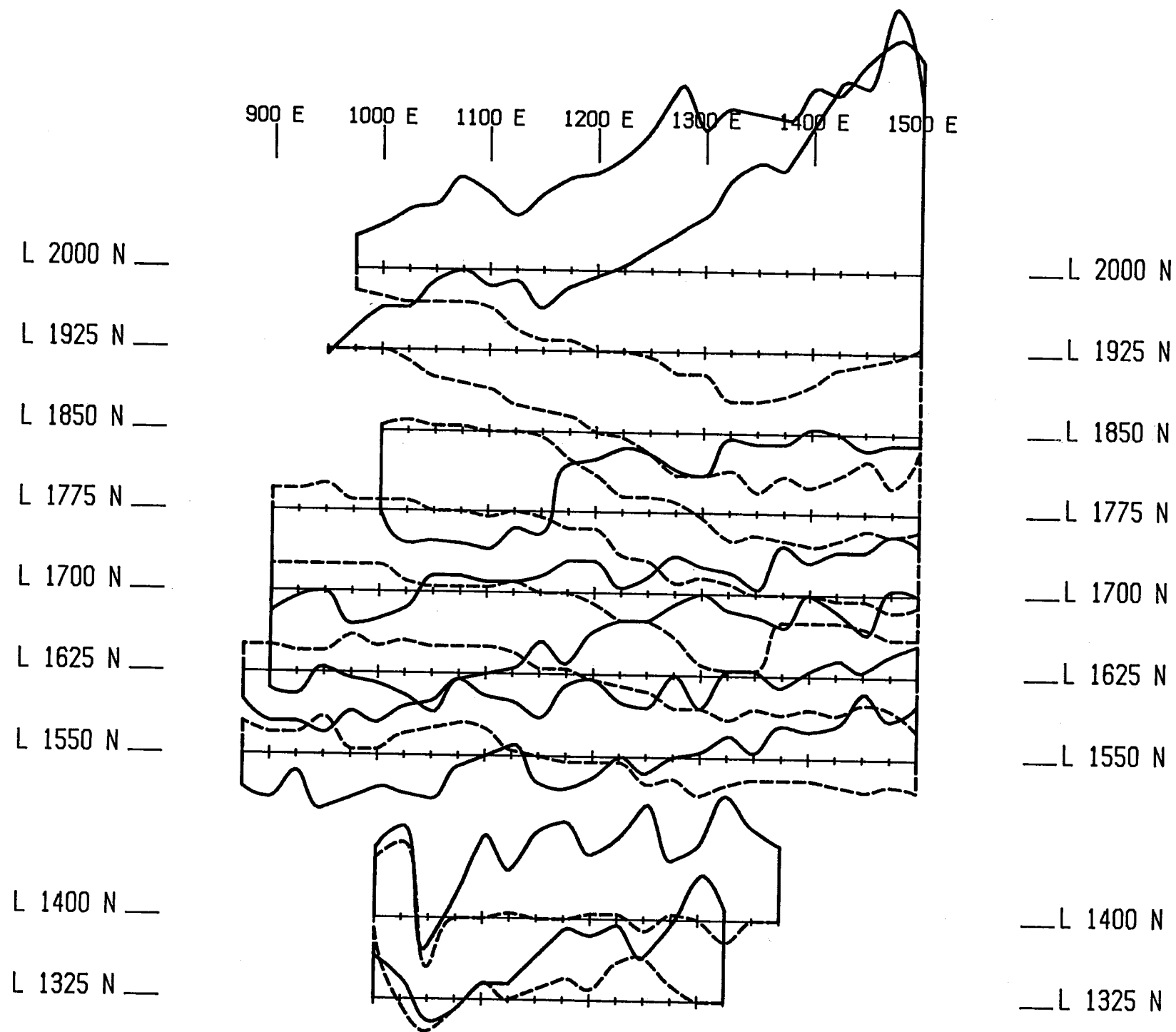
**JOHN SNEDIGAR**

**VLF-EM SURVEY  
PROFILES**

**Figure 8  
BANK CLAIMS**

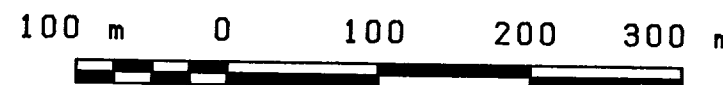
LILLOOET M.D., BRITISH COLUMBIA

**DONEGAL DEVELOPEMENTS LTD**



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**23,595**



SCALE 1:5000

**LEGEND**

- INSTRUMENT: SCINTREX IGS-2
- TRANSMITTER: SEATTLE (NLK 24.8 kHz)
- IN-PHASE      ———
- QUADRATURE    - - - - -
- PROFILE SCALE: 1 Cm = 10 %
- ANOMALY LOCATION    ○
- CONDUCTOR AXIS    ———

<b>JOHN SNEDIGAR</b>
<b>VLF-EM SURVEY PROFILES Figure 7 BANK CLAIMS LILLOOET M.D., BRITISH COLUMBIA</b>
<b>DONEGAL DEVELOPEMENTS LTD</b>