

LOG NO:	(MAR 07 1995 U)
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REPORT ON THE GAMBIER PROPERTY  
VANCOUVER MINING DIVISION, BRITISH COLUMBIA

NTS 92G/11  
49 30' NORTH LATITUDE  
123 21' WEST LONGITUDE

BY

J.P. MCGORAN, B.Sc., P. Geo.

FEBRUARY 1995

FILMED

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**23,799**

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## INTRODUCTION

### 1. Location

The Gambier Property, comprised of the MB mineral claim group in the Vancouver Mining Division, is located on the northeast side of Gambier Island, 30 kilometres northwest of the city of Vancouver (Figure 1). More precisely, it is located at 49 degrees and 30 minutes north latitude and 123 degrees and 21 minutes west longitude. (National Topographic System Map 92G/11)

### 2. Access and Physiography

Access to the property is best achieved from Horseshoe Bay by water taxi to Douglas Bay on the east side of Gambier Island. The area is centred 16 kilometres north of Horseshoe Bay. Old skid trails, originating from the beach in Douglas Bay provide walking access to the area. Recent logging on lot 2979 has left a fair amount of slash, resulting in reduced mobility. There are many areas of timber 'blowdown' throughout other parts of the MB claims, making access by foot difficult.

The terrain of the property is characterized by slopes that range from sea level on the coast to 450 metres (1500 feet) in the claim area. The work discussed in this report was undertaken at the centre of the claim group of the property in an area that ranged from 100 metres to 200 metres above sea level.

The vegetation in the grid area is characterized as second growth coastal forest of cedar, spruce and fir, with overmature cottonwoods and alders in the poorly drained valley bottoms. Undergrowth consists of variable salal, devil's club, alder and abundant moss.

### 3. Ownership

The Gambier property, as the MB mineral claim group, consists of four modified grid mineral claims, totalling 37 units and covering 925 hectares. The status of these claims is summarized below and the relative claim locations are plotted in Figure 2.

CLAIM NAME	NUMBER OF UNITS	TENURE NUMBER	RECORD DATE
MB 1	8	258252	JANUARY 3
MB 10	4	258264	MARCH 29
MB 11	6	258265	MARCH 29
MB 18	12	258266	MARCH 29

Messrs J.P. McGoran and R.M. Durfeld are the registered owners of the MB mineral claims.



#### 4. History and Previous Work

The first claim staking on Gambier Island in 1905 would have coincided with the exploration and development of the Britannia Mine. The location of this staking is not known.

A 1929 report by H.J. Airey refers to copper mineralization in the vicinity of Gambier Creek.

A report by W. Reed in 1966 refers to mineralization in the vicinity of Copper Cove.

The next documented work was in the early 1970s, by Gaylord Mines, who staked the northeast section of Gambier Island to cover old known copper showings. Gaylord Mines conducted soil sampling, EM 16 and magnetometer surveys over the northeast section of Gambier Island. This work defined anomalies "A", which is centred in the area of Copper Cove and "C", which is just south of Gambier Creek at a point approximately 1 kilometre inland from Douglas Bay. Anomaly "A" was tested by a single diamond drill hole that was cored at -45.5 for 815 feet (248 metres) and was reported to have assayed 0.117% copper over its entire length. Anomaly "C" was not tested by diamond drilling at that time. Gaylord Mines allowed the property to lapse.

The property was again staked in February 1978 by 20th Century Energy Corporation. During the period 1978 to 1981, 20th Century conducted extensive exploration in the area of anomaly "C" that was comprised of a geochemical soil sampling and induced polarization surveys, followed by 5,558 metres of diamond drilling. This work defined a 'Porphyry Copper-Molybdenum Deposit' with estimated reserves of:

- 198 million tonnes of 0.24% Cu and 0.015% MoS , with a 0.20% copper equivalent cutoff.
- or - 56 million tonnes of 0.36% Cu and 0.021% MoS , with a 0.40% copper equivalent cutoff.

In December 1984 and March 1985, the MB 1, MB 10, MB 11 and MB 18 mineral claims were forfeited and relocated by Messrs. J.P. McGoran and R.M. Durfeld.

Work conducted since 1985, on behalf of Durfeld and McGoran, has consisted of geochemical (soil, silt and rock sampling) and geological mapping surveys peripheral to anomaly "C" and covering much of the present claim group.

## 5. Work Program

The objectives of this program were to locate the east and south-east extent of the Gambier deposit by soil and rock geochemistry using ICP analysis for copper, molybdenum, gold, silver and other elements, as shown in Appendix I. The work was conducted at the south east margin of the Gambier deposit ('c' zone).

During December, 1994, J.P. McGoran, assisted by D. Javorsky, sampled the MB 11 claim, re-established grids and 'hip chain' and brunton compass for control. The description of these samples is noted in Table 1 and the location plotted on Map 1.

Eleven surface rock samples of 0.5 to 1.5 Kg were collected in plastic sample bags and marked as to sample location. Flagging with the same sample number was attached at the sample location. These samples were analysed at Acme Analytical Laboratories for 30 element ICP plus gold. The procedure is outlined in Appendix III. The description of these samples is noted in Table 2 and the location plotted on Map 1.

Fifty-eight soil samples were collected from the top of the B horizon, at 30 metre intervals, with the aid of a grab-hoe or soil auger and placed in kraft sample bags marked with grid coordinates. Portions of line 60 west were sampled by a soil auger in an area where a thick A horizon prevented one reaching the B horizon with a grab hoe and shovel. The soils were generally coarse and well drained and, as such, would be classed as Dystric Brunisols. Steep areas of outcrop lacked well developed soil horizons,. These samples were also analysed at Acme Analytical Laboratories for 30 element ICP plus gold.

Two stream sediment samples were collected and were analysed for 35 elements and gold.

PC

DISCUSSION

As with previous soil results there is a positive correlation between copper, molybdenum, silver and gold.

The only observed lithology is the grandiorite described by J.A. Roddick in memoir 335 and open file 661 and Gambier Group andesite.

There is a good correlation between anomalous copper and molybdenum values in the B horizon and underlying chalcopryite mineralization (see previous soil geochemistry reports). It appears as if the Gambier deposit is now closed off between line 58 and line 60.

PC

## GEOLOGY

### 1. Regional Geology

The regional geology of Gambier Island is mapped by J.A. Roddick of the Geological Survey of Canada and is published as Memoir 335 and Open File 611. This mapping shows the southern and western portions of Gambier Island to be underlain by intrusive rocks of granodiorite composition. Younger volcanic and clastic rocks of the Jurassic to Cretaceous Age Gambier Group underlie the northern portion of Gambier Island. The Gambier Group rocks have a north to northwest strike and steep easterly to northeasterly dips. Ramilles Channel through McNab Creek to the north shows a strong northerly trending regional structure on the east side of Gambier Island.

### 2. Lithology

Rocks of Jurassic to Cretaceous Gambier Group were the oldest and most dominant lithology in the Copper Cove area. This mapping divided the Gambier Group into:

- i. volcanic sediment and pyroclastic rocks, comprised of:
  - a) feldspar porphyry
  - b) feldspar-hornblende porphyry
  - c) volcanic breccia
  - d) chert
- ii. massive medium grained andesite.

During Upper Cretaceous to Tertiary time the Gambier Group rocks were intruded by massive medium grained diorite and quartz porphyry to quartz feldspar porphyry as dykes and small stocks.

Only one highly altered and silicified outcrop of diorite was identified on the north side of the central creek, although diorite float was found on the northern grid boundary.

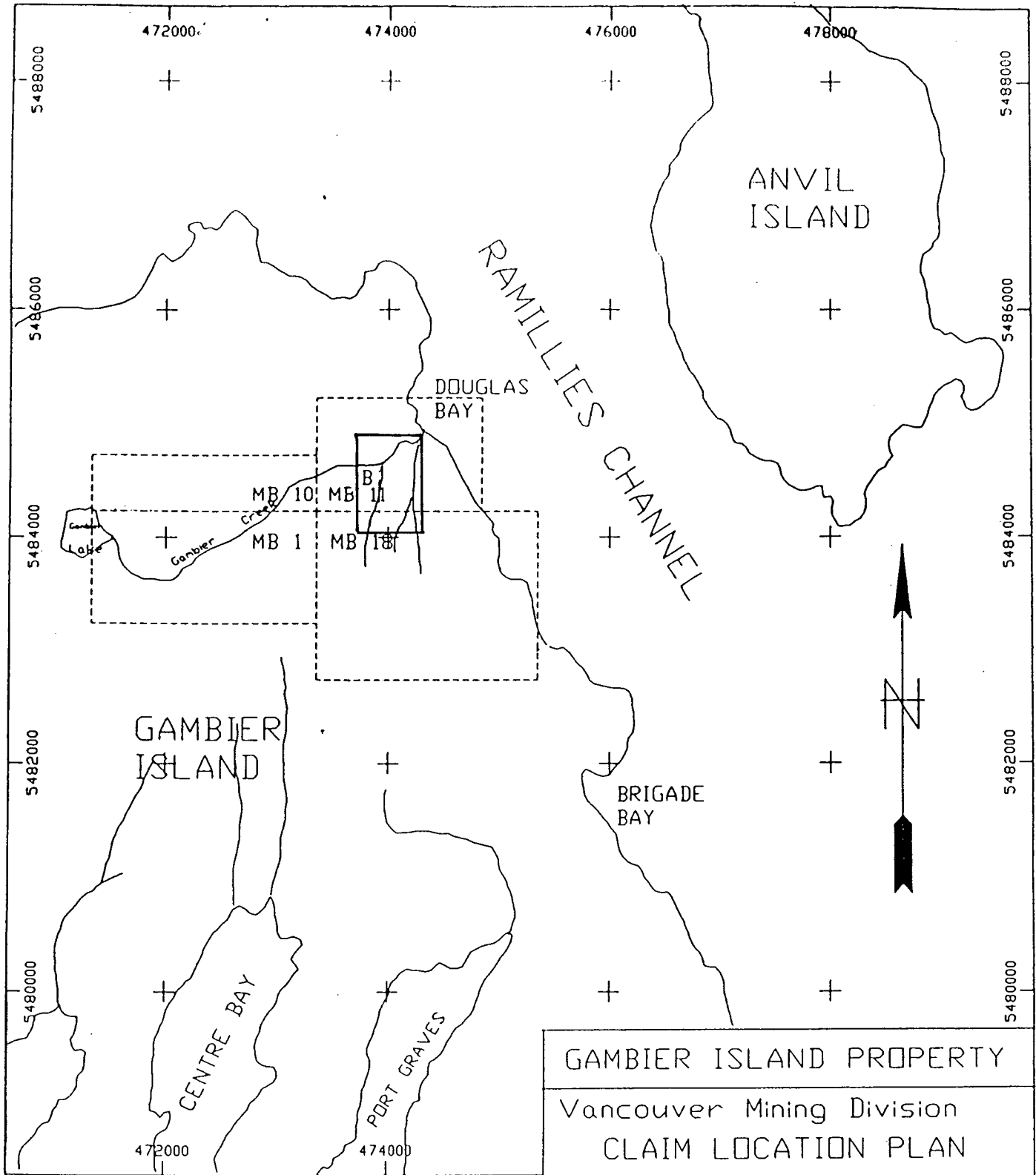
### 3. Structure

Regionally the prominent structural directions on Gambier Island are west-northwest and north-south. Mapping in the Copper Cove area shows strong jointing and minor faulting with two most dominant trends being 035\75NW and 092\vertical.

### 4. Mineralization

Due to the heavy rainfall sulphide mineralization is absent from most outcrop exposures and only noted on freshly broken surfaces. Pyrite, occurring as disseminations and blebs in the matrix and on fractures and veins, was noted in all lithologies and commonly accompanied by lesser chalcopyrite and malachite.

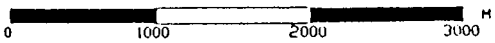






GAMBIER ISLAND PROPERTY

Vancouver Mining Division  
CLAIM LOCATION PLAN

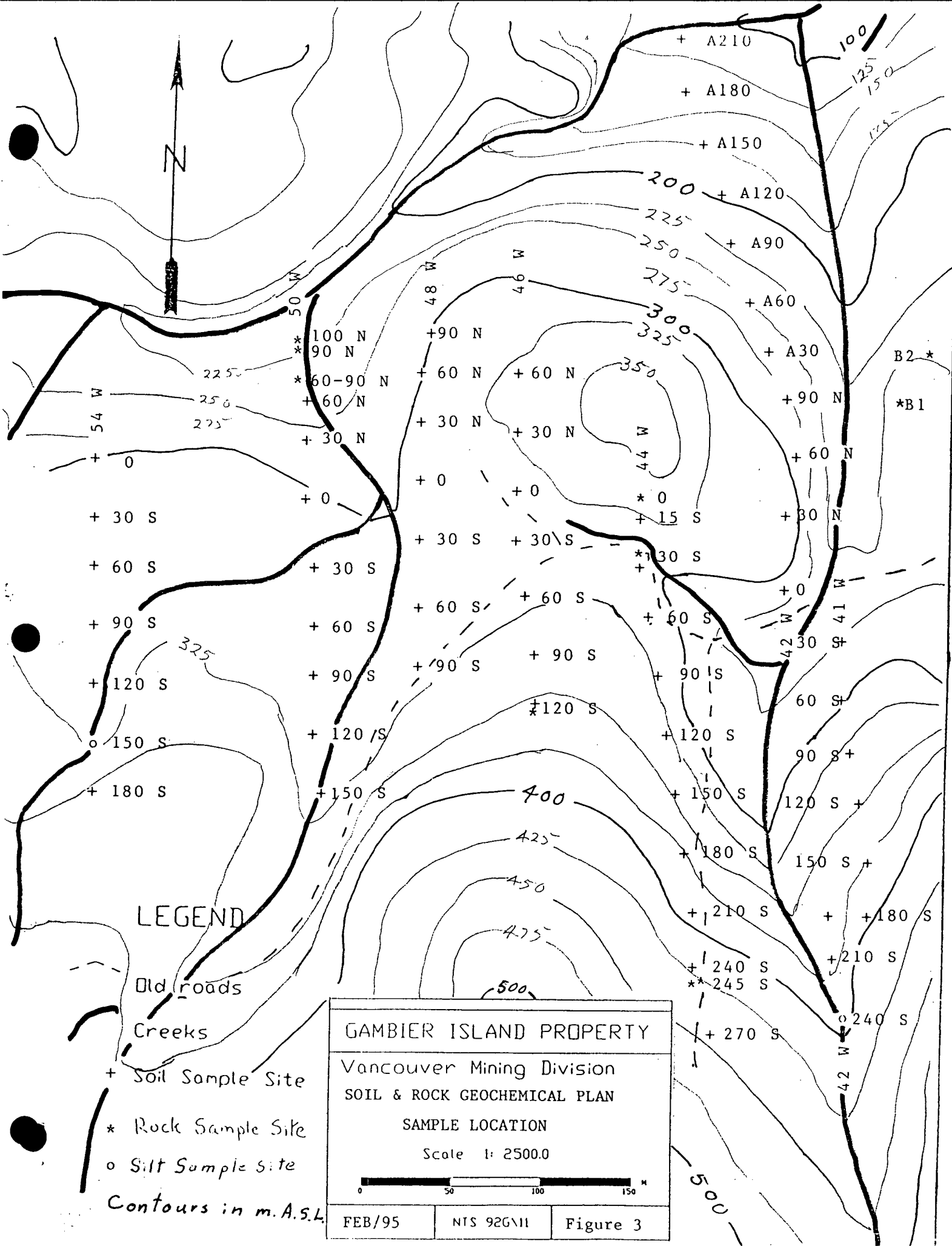
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LEGEND

-  Outline and name of areas gridded by the 1995 program.
-  Claim Boundaries

Date: Feb/95	NTS 92G\6&11	FIGURE 2
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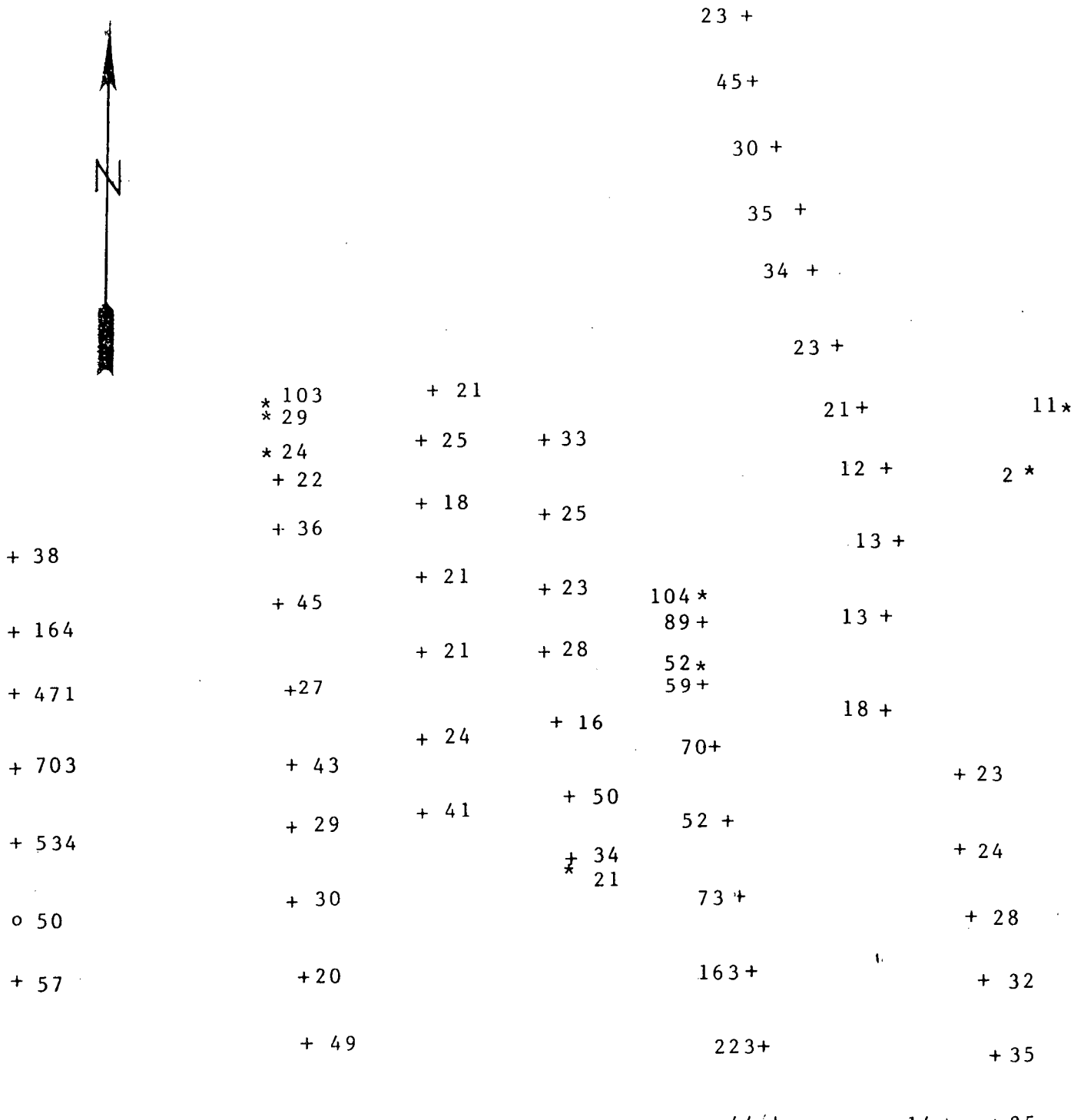
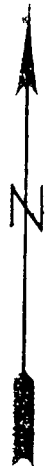
LEGEND

Old roads  
Creeks

- + Soil Sample Site
- \* Rock Sample Site
- o Silt Sample Site

Contours in m.A.S.L.

GAMBIER ISLAND PROPERTY		
Vancouver Mining Division		
SOIL & ROCK GEOCHEMICAL PLAN		
SAMPLE LOCATION		
Scale 1: 2500.0		
FEB/95	NTS 92G\11	Figure 3



**LEGEND**

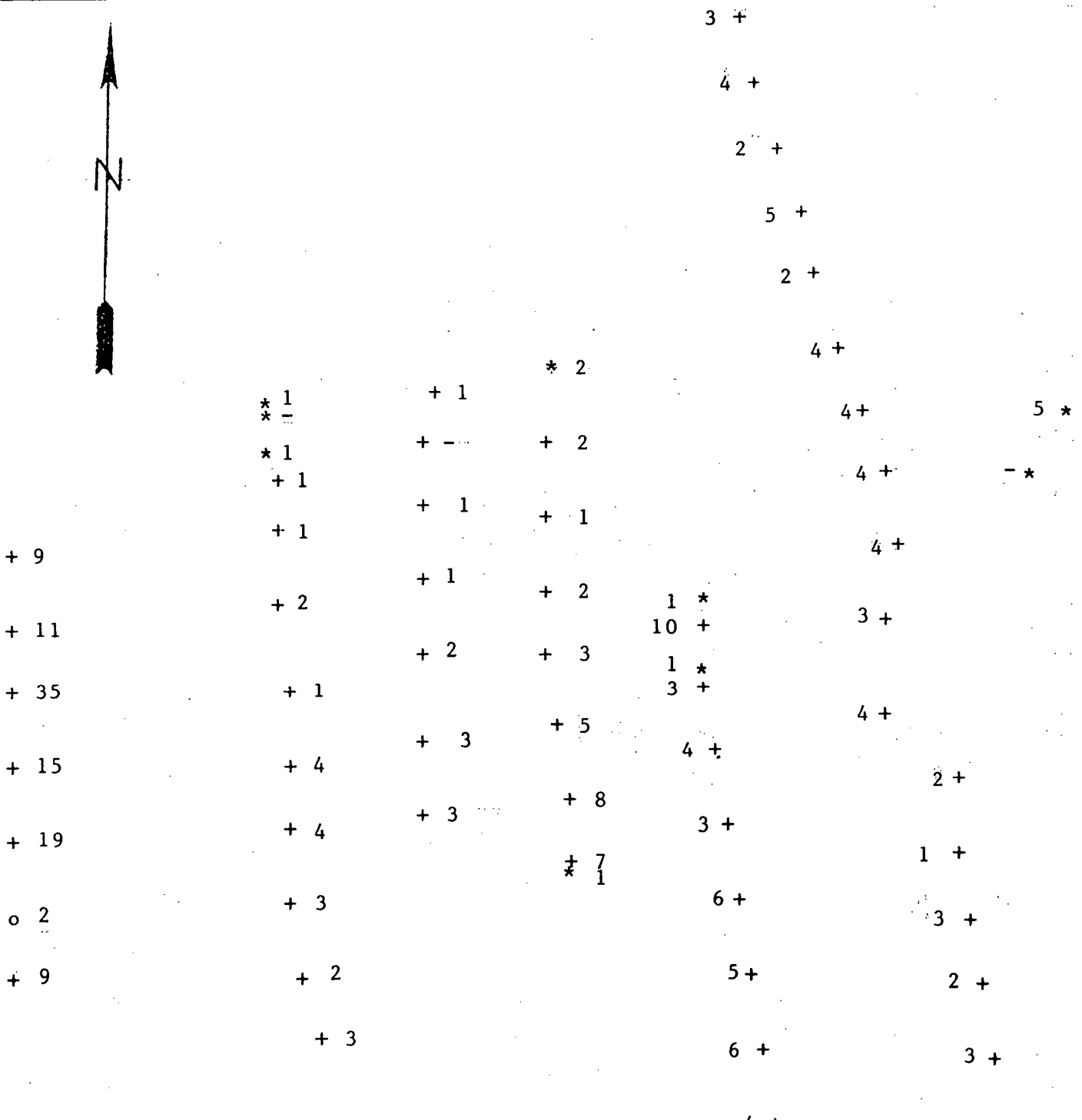
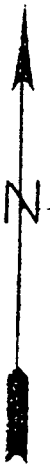
- - - Old roads
- ~ Creeks
- + Soil Sample Site
- \* Rock Sample Site
- o S.I.T Sample Site

<b>GAMBIER ISLAND PROPERTY</b>		
Vancouver Mining Division <b>SOIL &amp; ROCK GEOCHEMICAL PLAN</b>		
<b>COPPER (PPM)</b>		
Scale 1: 2500.0		
Feb. 1995	NTS 926N11	Figure 4

44+ 14+ +25

47+ 13+  
54\*\* 36

39+ 31 o



**LEGEND**

--- Old roads

~ Creeks



+ Soil Sample Site

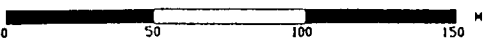
\* Rock Sample Site

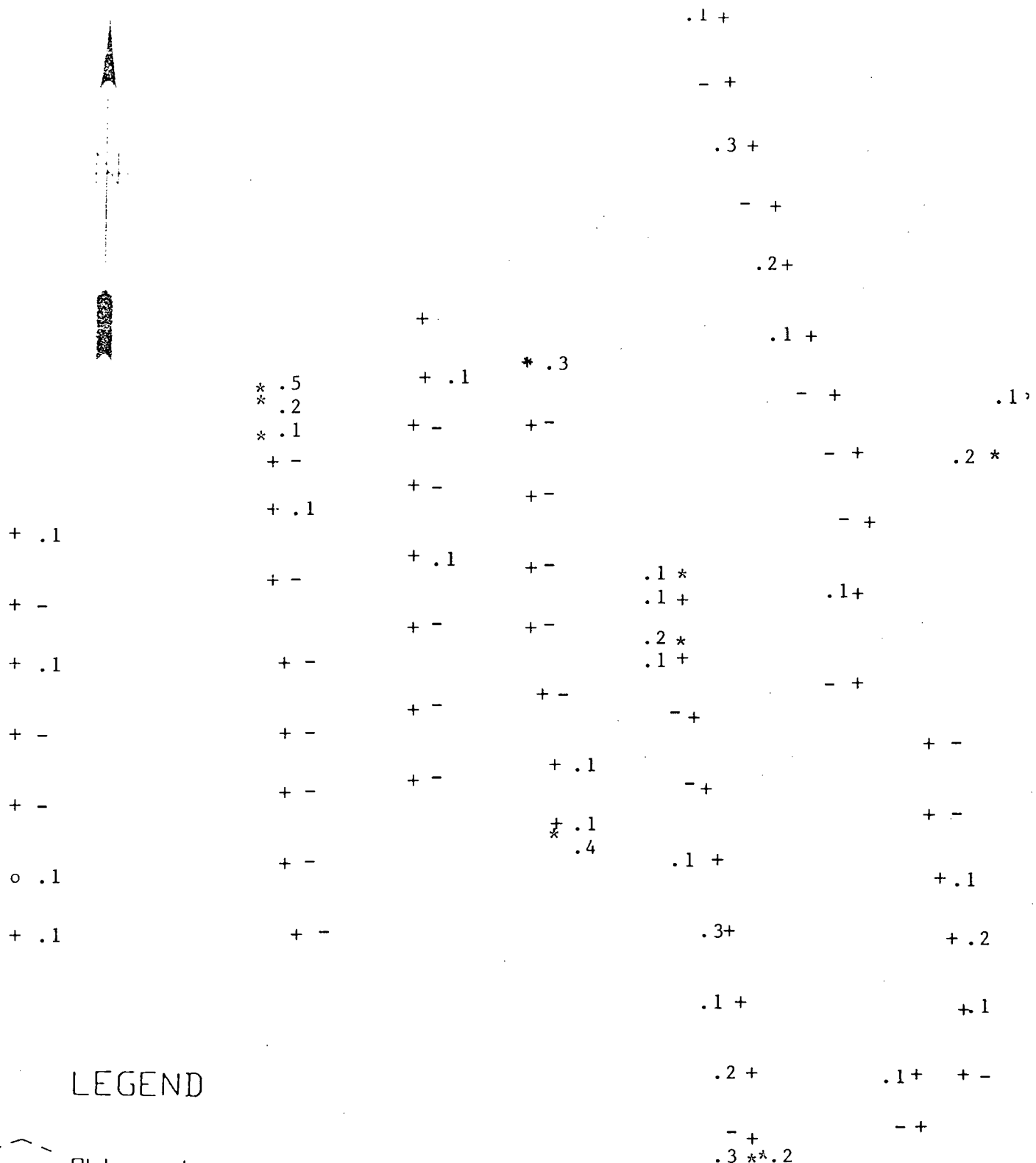
o Silt Sample Site

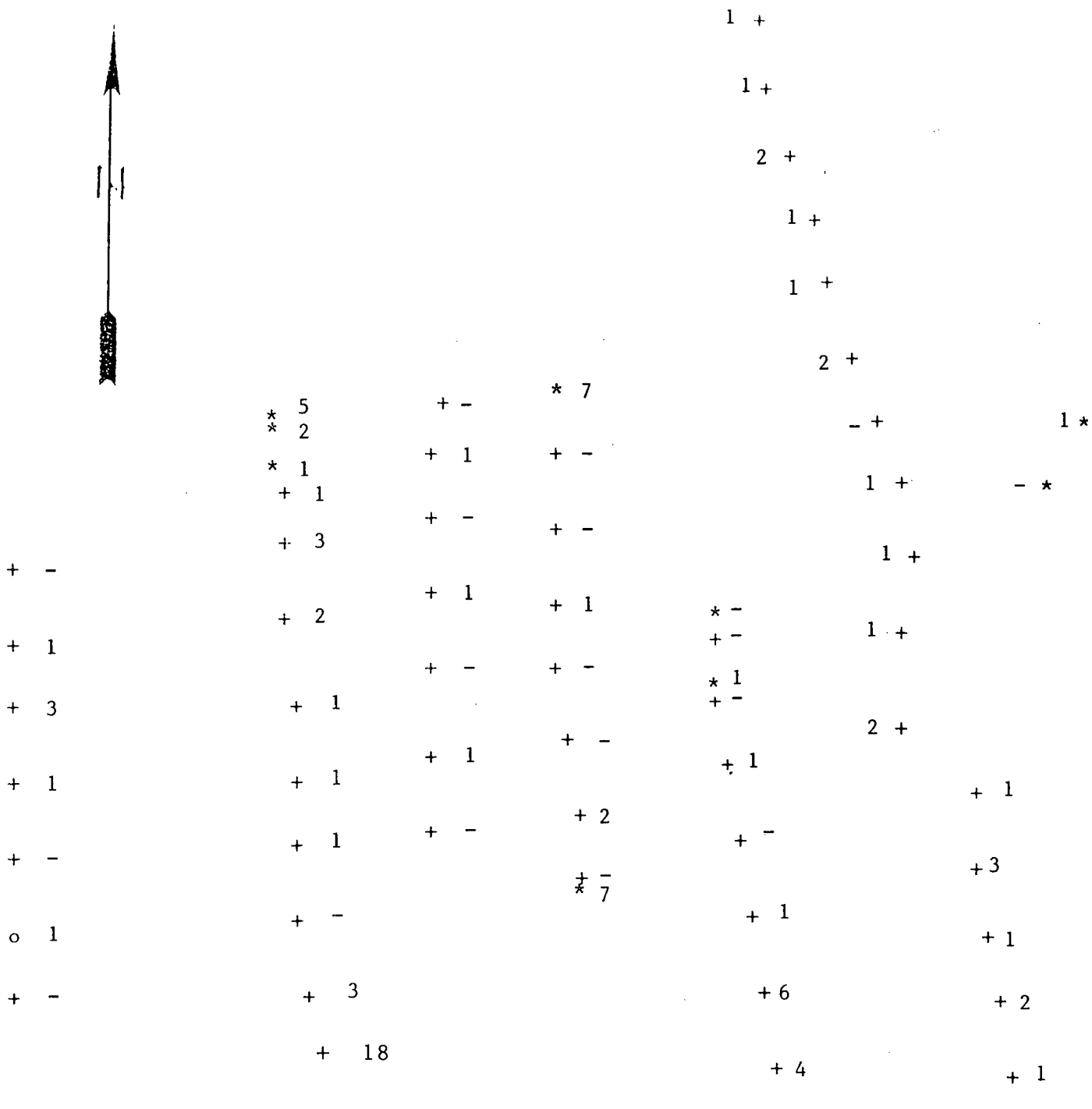
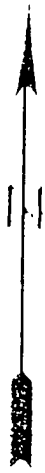
GAMBIER ISLAND PROPERTY		
Vancouver Mining Division SOIL & ROCK GEOCHEMICAL PLAN		
MOLYBDENUM (PPM)		
Scale 1: 2500.0		
Feb. 1995	NTS 92GN11	Figure 5

# LEGEND

-  Old roads
-  Creeks
- + Soil Sample Site
- \* Rock Sample Site
- o Soil Sample Site

GAMBIER ISLAND PROPERTY		
Vancouver Mining Division SOIL & ROCK GEOCHEMICAL PLAN		
SILVER (PPM)		
Scale 1: 2500.0		
		
Feb. 1995	NTS 92G\11	Figure 6

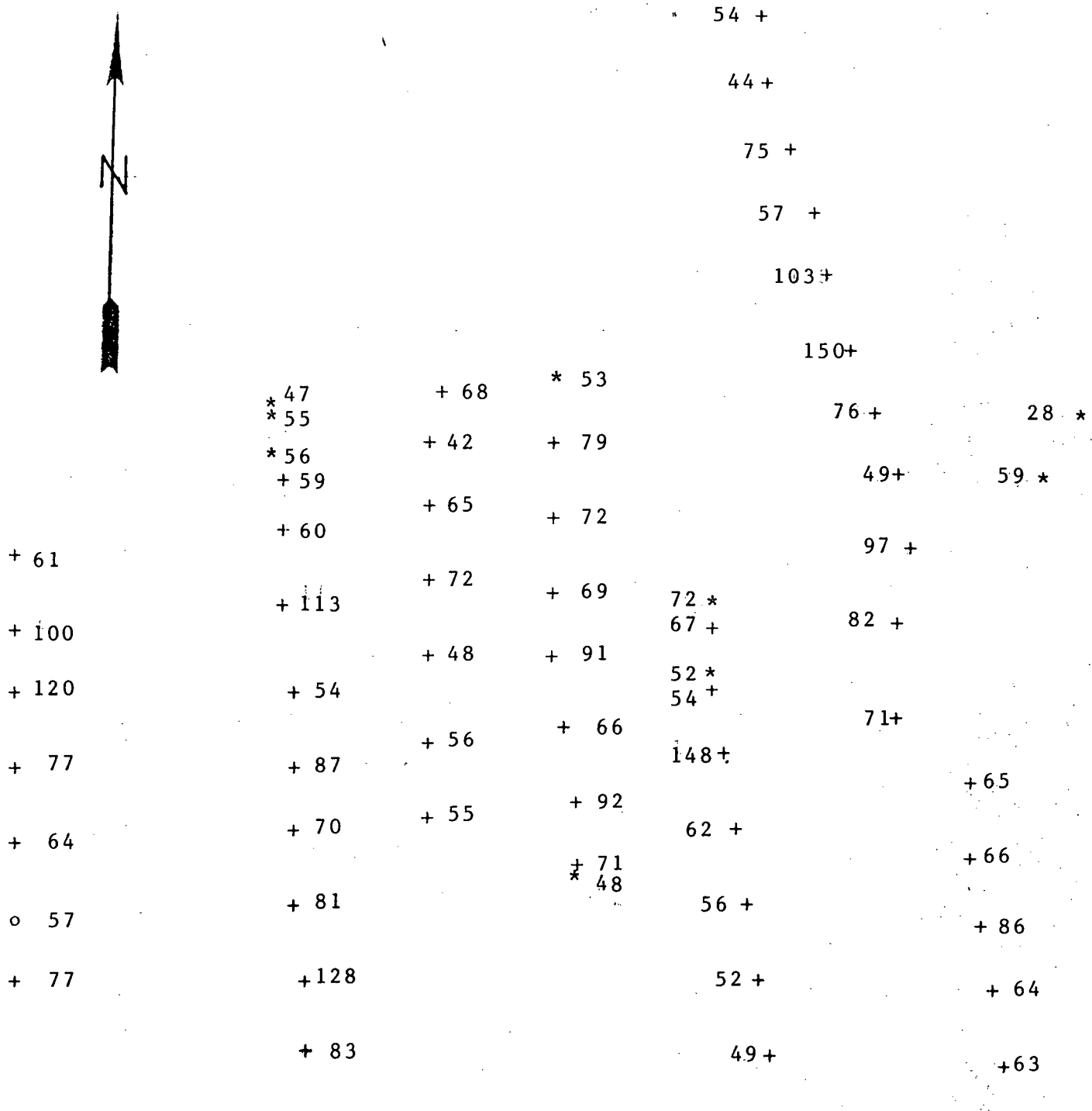
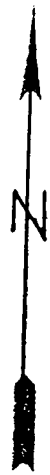




LEGEND

- - - Old roads
- ~ Creeks
- + Soil Sample Site
- \* Rock Sample Site
- o Silt Sample Site

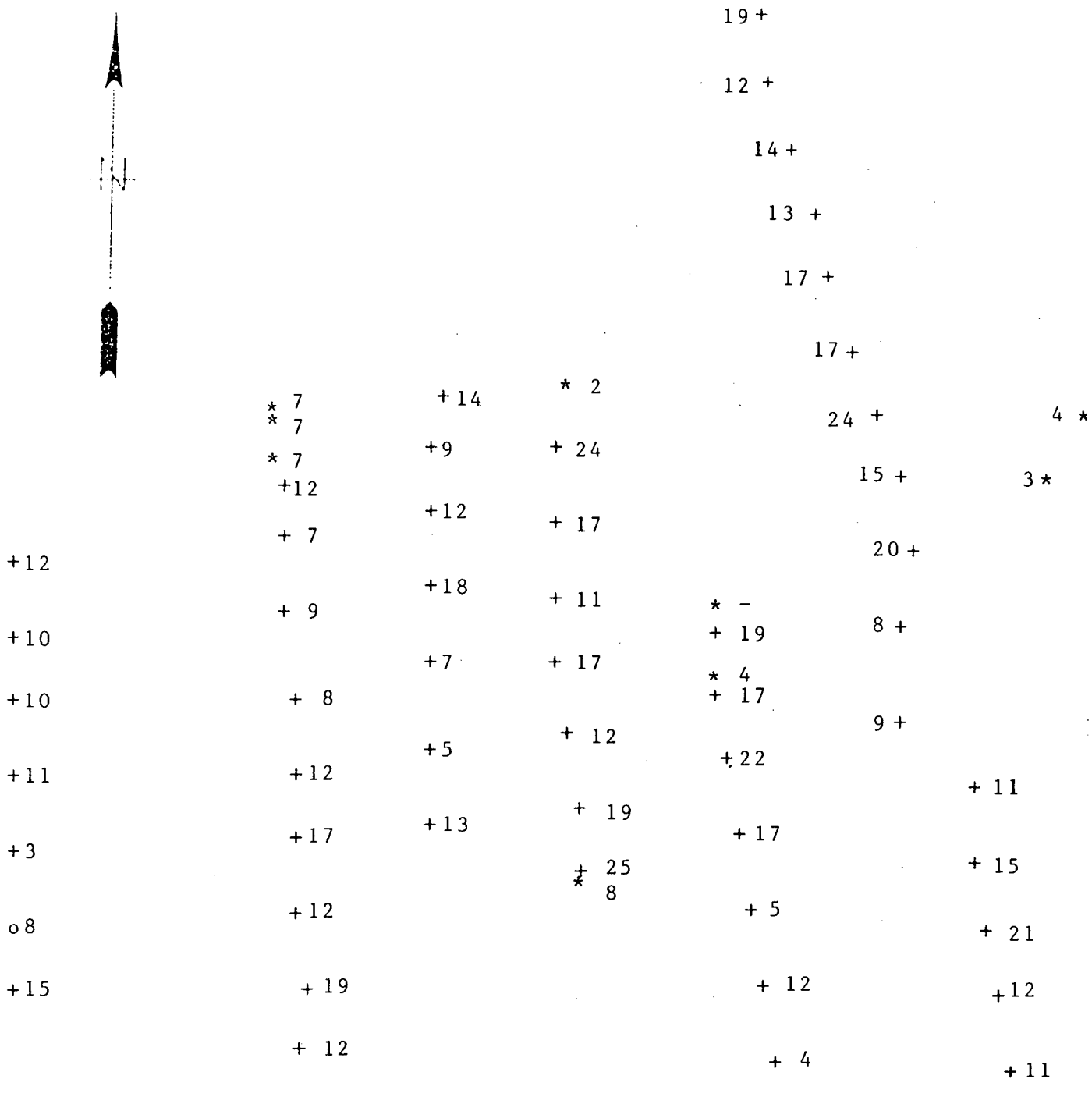
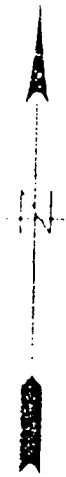
GAMBIER ISLAND PROPERTY		
Vancouver Mining Division SOIL & ROCK GEOCHEMICAL PLAN		
GOLD (PPB)		
Scale 1: 2500.0		
Feb. 1995	NTS 92G11	Figure 7








**LEGEND**

- - - Old roads
- ~ Creeks
- + Soil Sample Site
- \* Rock Sample Site
- o Silt Sample Site

<b>GAMBIER ISLAND PROPERTY</b>		
Vancouver Mining Division SOIL & ROCK GEOCHEMICAL PLAN		
ZINC (PPM)		
Scale 1: 2500.0		
Feb. 1995	NTS 92G\11	Figure 8



### LEGEND

-  Old roads
-  Creeks
-  Soil Sample Site
-  Rock Sample Site
-  Silt Sample Site

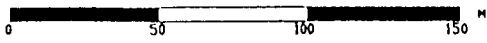
GAMBIER ISLAND PROPERTY		
Vancouver Mining Division SOIL & ROCK GEOCHEMICAL PLAN		
LEAD (PPM)		
Scale 1: 2500.0		
		
Feb. 1995	NTS 92G11	Figure 9



TABLE 1

SOIL COPPER ANALYSIS

Value in ppm	Number in interval	
0 - 20	9	+++++++
21 - 40	29	+++++
41 - 60	10	+++++
61 - 100	3	+++
101 - 200	2	++
201+	4	++++

TABLE 2

SOIL MOLYBDENUM ANALYSIS

Value in ppm	Number in interval	
0 - 1	10	+++++
2 - 3	20	+++++
4 - 5	14	+++++
6 - 9	8	+++++
10 - 13	2	++
14+	3	+++

TABLE 3  
SOIL SILVER ANALYSIS

Value in ppm	Number in interval	
.0 - .09	35	+++++
.1 - .19	18	+++++
.2 - .29	3	+++
.3 - .39	2	++

TABLE 4  
SOIL GOLD ANALYSIS

Value in ppm	Number in interval	
< 1	17	+++++
1 - 1.9	24	+++++
2 - 2.9	9	+++++
3 - 3.9	3	+++
4 - 4.9	1	+
5 - 5.9	1	+
>6	2	++

TABLE 5

SOIL ZINC ANALYSIS

Value in ppm	Number in interval	
0 - 50	6	+++++
51 - 75	29	+++++
76 - 100	12	+++++
101 - 125	3	+++
125+	3	+++

TABLE 6

SOIL LEAD ANALYSIS

Value in ppm	Number in interval	
0 - 5	4	++++
6 - 10	8	+++++
11 - 15	22	+++++
16 - 20	14	+++++
21 - 25	4	++++

APPENDIX 1  
ITEMIZED COST STATEMENT  
GAMBIER GROUP

Technical Staff

Senior geologist - J.P. McGoran, B.Sc., P.Geo. 4 days (December 16-19, 1994) @ \$400/day	\$1600.00
Geological Assistant - D. Javorski 3 days (December 16,17, 1994) @ \$175/day	\$525.00
Room and Board - 7 man days (December 16 & 19, 1994) @ \$45/day	\$315.00
Geochemical Analyses (See Appendix 1a)	\$999.81
Transportation - water taxi (Dec. 16 & 17, 1994)	\$363.80
Radio & field equipment rental - 4 days @ \$20./day	\$ 80.00
Misc. - batteries, fuel, sample bags	\$200.00
Report preparation & drafting	\$700.00
 TOTAL	 \$4783.61
 Recorded on claims	 \$4500.00
from PAC account	\$1350.00

**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

Phone: (604) 253-3158 Fax: (604) 253-1716

Our GST # R100035377

**J.P. MCGORAN & ASSOCIATES**

305 - 455 Granville St.

Vancouver, BC

V6C 1T1

File: **94-4540**

Date: Jan 9 1995

QTY	ASSAY	PRICE	AMOUNT
71	30 ELEMENT ICP ANALYSIS @	5.70	404.70
71	GEOCHEM AU ANALYSIS BY ACID LEACH (10 gm) @	5.85	415.35
11	ROCK SAMPLE PREPARATION @	3.85	42.35
58	SOIL SAMPLE PREPARATION @	1.20	69.60
2	SILT SAMPLE PREPARATION @	1.20	2.40
			<hr/>
			934.40
			7.00 % GST
			65.41
			<hr/>
			<b>999.81</b>
			<hr/>



GEOCHEMICAL ANALYSIS CERTIFICATE



J.P. McGoran & Associates File # 94-4540 Page 1

305 - 455 Granville St., Vancouver BC V6C 1T1

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
50W 100N	<1	102	7	47	.5	11	17	374	4.08	3	<5	<2	<2	185	<.2	<2	<2	151	3.54	.016	2	21	1.88	108	.14	<2	6.93	.67	.37	3	4
RE 50W 100N	1	104	4	48	.5	8	17	389	4.29	<2	<5	<2	<2	191	.3	<2	4	154	3.74	.016	2	20	1.99	109	.15	2	7.36	.69	.38	2	6
50W 90N	<1	29	7	55	.2	10	23	397	5.34	<2	<5	<2	<2	234	.2	<2	4	182	4.03	.039	<2	26	2.44	46	.11	<2	8.07	.87	.07	<1	2
50W 60-90N	1	24	7	56	.1	5	17	461	4.49	5	<5	<2	<2	76	.2	<2	3	156	1.67	.041	3	22	1.70	36	.14	5	3.16	.36	.05	1	1
46W 120N	<1	454	2	53	.3	13	17	438	3.94	6	<5	<2	<2	101	.6	2	2	140	1.92	.057	4	13	1.75	50	.12	5	3.78	.37	.16	2	7
46W 120S	1	21	8	48	.4	4	7	157	3.86	2	<5	<2	2	21	<.2	<2	4	44	.31	.101	5	5	.57	71	.03	4	2.11	.05	.39	<1	1
44W 0	1	104	<2	72	.1	14	16	698	4.89	9	<5	<2	<2	70	.9	3	2	144	1.40	.052	4	18	2.12	36	.13	2	3.62	.26	.07	1	<1
44W 30S	1	52	4	52	.2	16	16	410	3.95	<2	<5	<2	<2	140	.5	<2	10	145	2.49	.045	4	24	1.93	50	.10	3	5.15	.64	.09	2	1
44W 245S	1	54	13	58	.3	8	9	409	5.07	4	<5	<2	<2	184	.2	<2	8	82	2.36	.060	3	11	1.46	31	.08	<2	5.60	.64	.03	<1	<1
44W 245SF	1	36	7	46	.2	6	9	340	4.03	10	<5	<2	<2	167	1.0	3	6	77	1.99	.053	3	9	1.33	36	.08	3	5.21	.56	.04	2	1
B1	<1	2	3	59	.2	17	20	882	6.09	<2	<5	<2	<2	22	.2	<2	4	50	.38	.045	2	10	2.83	75	.16	3	3.79	.07	.19	1	1
B2	5	11	4	28	.1	11	4	196	1.13	7	<5	<2	<2	55	<.2	<2	<2	24	.71	.022	<2	10	.33	178	.12	5	.97	.03	.05	3	<1
STANDARD C/AU-R	19	57	39	128	7.1	69	33	1053	3.96	41	22	6	35	49	18.3	15	22	62	.49	.096	39	60	.92	187	.08	34	1.88	.06	.15	11	470

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: P1 ROCK P2 TO P3 SOIL P4 SILT AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.  
 Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: DEC 23 1994 DATE REPORT MAILED: *Jan 5/95* SIGNED BY: *C. Leong* .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ACME ANALYTICAL

## J.P. McGoran &amp; Associates

FILE # 94-4540

Page 2



ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
54W 0S	9	38	12	61	.1	18	6	225	3.74	2	<5	<2	<2	22	.6	3	<2	104	.12	.040	6	23	.12	59	.26	5	2.76	.01	.03	<1	<1
54W 30S	11	164	10	100	<.1	15	9	320	3.80	<2	<5	<2	2	16	.4	<2	<2	64	.13	.142	7	21	.34	59	.21	<2	7.83	.02	.05	<1	1
54W 50S	35	471	10	120	.1	15	20	1224	4.17	4	<5	<2	<2	29	.5	5	<2	84	.20	.098	6	24	.46	96	.20	3	4.40	.02	.07	1	3
54W 90S	15	703	11	77	<.1	25	5	270	2.38	<2	<5	<2	<2	29	.3	<2	2	48	.29	.124	5	17	.47	136	.16	<2	4.26	.02	.09	<1	1
54W 120S	19	534	3	64	<.1	14	5	223	3.72	4	<5	<2	<2	15	.5	5	<2	73	.12	.055	4	21	.25	48	.21	<2	6.47	.02	.03	2	<1
54W 180S	9	57	15	77	.1	19	10	369	4.75	<2	<5	<2	2	43	.3	<2	<2	123	.33	.044	7	21	.31	64	.27	<2	3.14	.02	.06	<1	<1
50W 60N	1	22	12	59	<.1	19	6	372	2.73	<2	<5	<2	2	15	<.2	<2	<2	60	.13	.065	4	16	.26	46	.16	<2	3.56	.02	.03	<1	1
50W 40N	1	36	7	60	.1	15	8	304	3.21	<2	<5	<2	3	18	.4	<2	<2	62	.17	.045	6	19	.39	61	.17	2	5.67	.02	.05	<1	3
50W 0S	2	45	9	113	<.1	24	14	779	3.73	15	<5	<2	2	25	.6	7	<2	88	.22	.092	9	29	.58	182	.20	<2	7.46	.02	.10	2	2
50W 30S	1	27	8	54	<.1	25	8	310	2.84	3	<5	<2	2	17	.7	5	<2	58	.16	.113	7	19	.37	53	.16	2	8.24	.02	.05	2	1
50W 60S	4	43	12	87	<.1	15	16	1518	4.28	<2	<5	<2	<2	14	.5	5	<2	82	.12	.120	10	24	.18	51	.20	<2	6.13	.01	.03	2	1
50W 90S	4	29	17	70	<.1	30	23	905	3.58	<2	<5	<2	<2	19	1.0	<2	<2	77	.16	.113	8	21	.25	38	.20	2	7.38	.01	.03	1	1
50W 120S	3	30	12	81	<.1	38	14	759	4.29	<2	<5	<2	2	19	.5	<2	3	90	.18	.093	10	22	.39	56	.20	2	6.38	.01	.06	<1	<1
50W 150S	2	20	19	127	<.1	31	15	1804	3.75	6	<5	<2	<2	24	.8	4	3	73	.18	.051	6	27	.60	269	.20	<2	5.23	.02	.07	1	5
RE 50W 150S	2	20	18	129	<.1	28	14	1764	3.69	<2	<5	<2	<2	23	.6	<2	<2	70	.17	.048	5	26	.59	260	.20	<2	5.11	.02	.07	<1	<1
50W 180S	3	49	12	83	<.1	15	11	550	3.02	2	<5	<2	<2	22	.5	4	<2	63	.21	.052	5	20	.43	71	.16	3	3.72	.02	.06	<1	18
48W 90N	1	21	14	68	.1	17	8	536	3.53	2	<5	<2	3	12	<.2	<2	<2	53	.12	.118	3	19	.30	45	.16	<2	8.12	.01	.04	<1	<1
48W 60N	<1	25	9	42	<.1	13	7	375	2.57	8	<5	<2	2	17	.2	7	<2	57	.16	.109	7	19	.33	54	.16	3	7.44	.02	.03	4	1
48W 30N	1	18	12	65	<.1	11	7	665	3.14	5	<5	<2	2	20	<.2	<2	2	68	.15	.039	6	18	.14	48	.19	<2	2.83	.02	.03	<1	<1
48W 0S	1	21	18	72	.1	9	8	563	3.59	14	<5	<2	<2	22	.5	6	<2	67	.18	.086	6	19	.22	56	.17	<2	3.67	.01	.03	2	1
48W 30S	2	21	7	48	<.1	5	3	281	2.76	<2	<5	<2	<2	11	.3	<2	<2	49	.09	.093	7	15	.12	27	.16	<2	4.24	.01	.02	<1	<1
48W 60S	3	24	5	56	<.1	9	7	324	3.52	7	<5	<2	<2	15	1.0	5	<2	82	.14	.123	7	19	.22	32	.16	4	7.45	.01	.03	3	1
48W 90S	3	41	13	55	<.1	12	11	439	3.21	<2	<5	<2	2	13	<.2	<2	2	88	.12	.100	8	19	.25	35	.18	<2	5.71	.02	.03	<1	<1
46W 60N	2	33	24	79	<.1	17	7	525	4.20	7	<5	<2	2	13	.7	3	<2	83	.15	.320	5	18	.17	40	.21	<2	4.02	.01	.03	<1	<1
46W 30N	1	25	17	72	<.1	32	8	324	3.88	<2	6	<2	2	15	.7	<2	<2	86	.13	.045	4	22	.28	53	.24	<2	4.44	.01	.04	<1	<1
46W 0	2	23	11	69	<.1	26	12	738	3.54	8	<5	<2	<2	50	.6	<2	2	71	.31	.029	10	24	.58	178	.23	2	5.46	.02	.06	2	1
46W 30S	3	28	17	91	<.1	32	14	1544	3.97	8	<5	<2	<2	29	.8	3	3	98	.20	.137	6	29	.36	126	.20	<2	4.41	.02	.08	<1	<1
46W 60S	5	16	12	66	<.1	7	13	473	4.22	5	<5	<2	<2	13	.2	5	<2	70	.11	.108	9	19	.11	34	.17	2	5.22	.01	.02	1	<1
46W 90S	8	50	19	92	.1	14	22	1093	4.43	3	<5	<2	<2	16	.8	2	<2	84	.15	.089	19	17	.21	43	.17	5	4.09	.01	.04	<1	2
46W 120S	7	34	25	71	.1	7	9	490	6.80	15	<5	<2	2	8	.3	4	<2	83	.07	.248	7	19	.15	32	.16	6	4.05	.01	.03	<1	<1
44W 15S	10	89	19	67	.1	34	14	870	2.85	5	<5	<2	2	71	.8	<2	<2	70	.36	.053	20	39	.70	264	.16	3	6.26	.03	.20	<1	<1
44W 30S	3	59	17	54	.1	29	5	214	1.53	8	<5	<2	<2	34	.8	4	<2	43	.21	.059	9	21	.23	147	.10	<2	3.05	.02	.09	2	<1
44W 60S	4	70	22	148	<.1	36	20	1703	4.18	12	<5	<2	<2	38	1.0	<2	<2	79	.30	.100	10	22	.35	95	.17	4	4.38	.02	.07	<1	1
44W 90S	3	52	17	62	<.1	14	14	484	2.98	17	<5	<2	<2	17	.6	3	<2	65	.15	.066	7	16	.30	42	.14	3	2.73	.01	.05	1	<1
44W 120S	6	73	5	56	.1	5	19	506	3.44	<2	<5	<2	3	9	.5	<2	<2	54	.09	.111	21	16	.21	35	.17	5	9.00	.01	.02	<1	1
STANDARD C/AU-S	20	58	36	127	6.7	66	31	1067	3.96	39	19	6	37	52	18.1	15	18	60	.49	.096	40	61	.93	182	.09	34	1.88	.06	.15	10	52

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
44W 150S	5	163	12	52	.3	8	13	229	3.33	10	<5	<2	<2	8	.5	5	6	55	.08	.061	13	18	.10	33	.14	2	5.20	.01	.01	5	6
44W 180S	6	223	4	49	.1	8	14	297	2.99	<2	<5	<2	2	11	.3	<2	2	52	.10	.068	15	16	.22	21	.15	3	6.21	.01	.02	1	4
44W 210S	4	44	12	62	.2	5	15	333	5.62	15	<5	<2	2	12	.8	8	<2	85	.11	.042	5	17	.18	29	.23	2	3.97	.01	.02	3	2
44W 240S	4	47	18	64	<.1	8	9	291	2.88	3	<5	<2	<2	16	<.2	<2	<2	48	.14	.060	5	12	.26	40	.10	<2	4.08	.02	.03	<1	1
44W 270S	7	39	8	50	<.1	8	8	159	4.04	11	<5	<2	<2	17	.4	3	2	71	.16	.041	5	12	.26	29	.14	<2	3.61	.02	.03	4	2
42W 90N	4	12	15	49	<.1	7	8	308	4.23	<2	<5	<2	2	11	<.2	<2	7	57	.10	.061	4	21	.19	29	.20	<2	7.69	.01	.01	<1	1
42W 60N	4	13	20	97	<.1	8	11	1015	3.74	13	<5	<2	<2	17	.6	3	<2	75	.15	.055	7	17	.28	51	.21	<2	3.53	.02	.03	2	1
42W 30N	3	13	8	82	.1	10	9	630	3.84	4	<5	<2	2	12	.3	<2	<2	68	.10	.070	4	19	.17	40	.23	2	5.42	.01	.03	<1	1
42W 0N	4	18	9	71	<.1	9	7	445	3.42	<2	<5	<2	2	15	<.2	<2	<2	57	.12	.102	12	20	.39	31	.20	2	8.36	.01	.04	<1	2
42W 180S	1	14	8	60	.1	11	7	347	3.43	16	<5	<2	<2	15	<.2	7	3	72	.13	.039	5	18	.19	48	.18	2	3.74	.02	.03	2	2
42W 210S	3	13	2	63	<.1	5	6	302	5.40	3	<5	<2	2	14	<.2	2	<2	137	.12	.032	4	16	.37	34	.33	<2	3.28	.01	.03	<1	1
41W 30S	2	23	11	65	<.1	8	7	356	2.80	10	<5	<2	<2	21	<.2	3	2	59	.17	.074	5	15	.27	54	.19	<2	4.64	.01	.04	3	1
41W 60S	1	24	15	66	<.1	13	6	411	2.72	8	<5	<2	<2	19	<.2	<2	<2	56	.18	.053	5	16	.27	34	.16	<2	2.78	.02	.04	<1	3
41W 90S	3	28	21	86	.1	9	9	885	3.71	26	<5	<2	<2	15	.4	<2	3	54	.13	.111	6	16	.29	57	.17	2	7.46	.01	.04	1	1
41W 120S	2	32	12	64	.2	11	6	385	3.44	7	<5	<2	2	15	<.2	<2	<2	74	.13	.063	9	19	.27	31	.19	2	4.47	.01	.04	<1	2
41W 150S	3	35	11	63	.1	8	7	376	3.67	10	<5	<2	<2	13	<.2	<2	<2	74	.11	.071	7	20	.24	25	.21	<2	5.85	.01	.03	2	1
41W 180S	8	25	16	132	<.1	9	28	810	4.62	12	<5	<2	<2	16	.6	<2	<2	105	.14	.051	9	18	.34	42	.29	<2	4.13	.02	.04	<1	<1
RE 41W 180S	9	26	19	129	.1	11	28	806	4.60	10	<5	<2	<2	16	.3	3	2	104	.14	.049	9	18	.34	42	.28	<2	4.09	.01	.03	1	<1
A30	4	21	24	76	<.1	12	9	414	3.70	10	<5	<2	<2	14	<.2	4	<2	103	.13	.042	4	19	.20	45	.17	2	1.51	.01	.03	<1	<1
A60	4	23	17	150	.1	22	16	464	4.41	9	<5	<2	<2	14	<.2	<2	<2	82	.16	.059	4	23	.31	51	.23	2	4.20	.02	.04	<1	2
A90	2	34	17	103	.2	13	10	468	4.77	8	<5	<2	<2	9	<.2	<2	<2	85	.10	.317	5	23	.17	42	.18	<2	4.52	.01	.03	2	1
A120	5	35	13	57	<.1	4	8	861	6.10	2	<5	<2	2	7	.6	<2	<2	102	.07	.188	5	22	.12	25	.18	<2	8.12	.01	.02	<1	1
A150	2	30	14	75	.3	13	8	607	4.25	9	<5	<2	2	19	<.2	<2	5	98	.22	.069	4	22	.19	67	.16	<2	3.60	.02	.03	<1	2
A180	4	45	12	44	<.1	10	14	332	4.08	9	<5	<2	<2	13	.3	2	<2	84	.11	.058	10	21	.21	33	.25	<2	4.70	.01	.03	2	1
A210	3	23	19	54	.1	13	4	233	4.66	8	<5	<2	2	17	<.2	<2	4	117	.12	.035	9	21	.14	53	.26	<2	3.48	.01	.03	<1	1
STANDARD C/AU-S	19	56	38	126	6.7	72	32	1022	3.96	44	17	5	36	50	18.0	14	21	60	.50	.092	39	59	.89	190	.08	33	1.88	.06	.15	10	51

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.





ACME ANALYTICAL

J.P. McGoran &amp; Associates FILE # 94-4540

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ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
5400W 150S	2	50	8	57	.1	8	9	346	2.01	6	<5	<2	<2	29	.2	2	2	43	.36	.040	4	11	.40	71	.11	2	1.86	.03	.06	1	1
42W 240S	1	31	15	62	<.1	17	15	454	2.73	8	<5	<2	2	35	<.2	3	<2	52	.37	.045	5	15	.52	138	.15	<2	3.66	.04	.08	<1	2
RE 42W 240S	1	32	13	62	<.1	17	17	470	2.80	11	<5	<2	2	36	.4	5	<2	55	.38	.047	5	15	.54	138	.15	3	3.77	.03	.09	1	3

Sample type: SILT. Samples beginning 'RE' are duplicate samples.

APPENDIX 1V

STATEMENT OF QUALIFICATIONS

I, John P. McGoran of 2111 West 34th Avenue, Vancouver, B.C., hereby certify that:

1. I am a graduate of Carleton University (1972) and hold a B.Sc. Degree in Geology.
2. I am a member in good standing of the following associations:  
  
Canadian Institute of Mining and Metallurgy  
Geological Association of Canada  
American Institute of Mining Engineers  
Prospectors and Development Association of Canada  
Association of Professional Engineers and Geoscientists
3. I have been employed in my profession as an exploration geologist, geochemist and consultant for the last forty years.

DATED at Vancouver, British Columbia,  
this 16th day of February, 1995



John P. McGoran, B.Sc., P.Geo. (Geologist)