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Vancouver, B.C.  
Canada V6B 1N2  
(604) 688-1553

LOG NO: 1117	RD.
ACTION: 2300	Consulting Geologists and Engineers
FILE NO: 87-750-16563	

10/88

Soil Geochemical Survey of the JET Claim Group,  
Graham Island, Queen Charlotte Islands, B.C.

Claims: Sheila 5567(10)  
Wanda 5569(10)  
Wonder 5568(10)  
Jet 5570(10)  
Expot 5666(11)

Owner: B.D. Fairbank  
Operator: Noramex Minerals Inc.

NTS Ref: 103F/9W  
Longitude: 132° ~~20~~ 19'12"  
Latitude: 53° ~~35~~ 34'

Skeena M.D.

Consultant: Fairbank Engineering Ltd.  
Prepared by: R.J. Robinson, Geologist  
Work Dates: November 3 - 6, 1986  
Report Date: December 12, 1986

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**16,563**

SUB-RECORDER RECEIVED OCT 22 1987 M.R. # ..... \$ ..... VANCOUVER, B.C.
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INTRODUCTION

In November, 1986 a reconnaissance soil geochemical survey was carried out on the Jet, Wonder, Wanda and Sheila mineral claims on Graham Island, Queen Charlotte Islands, B.C. A total of 176 samples were taken at 100m intervals along the logging roads covering the area of interest.

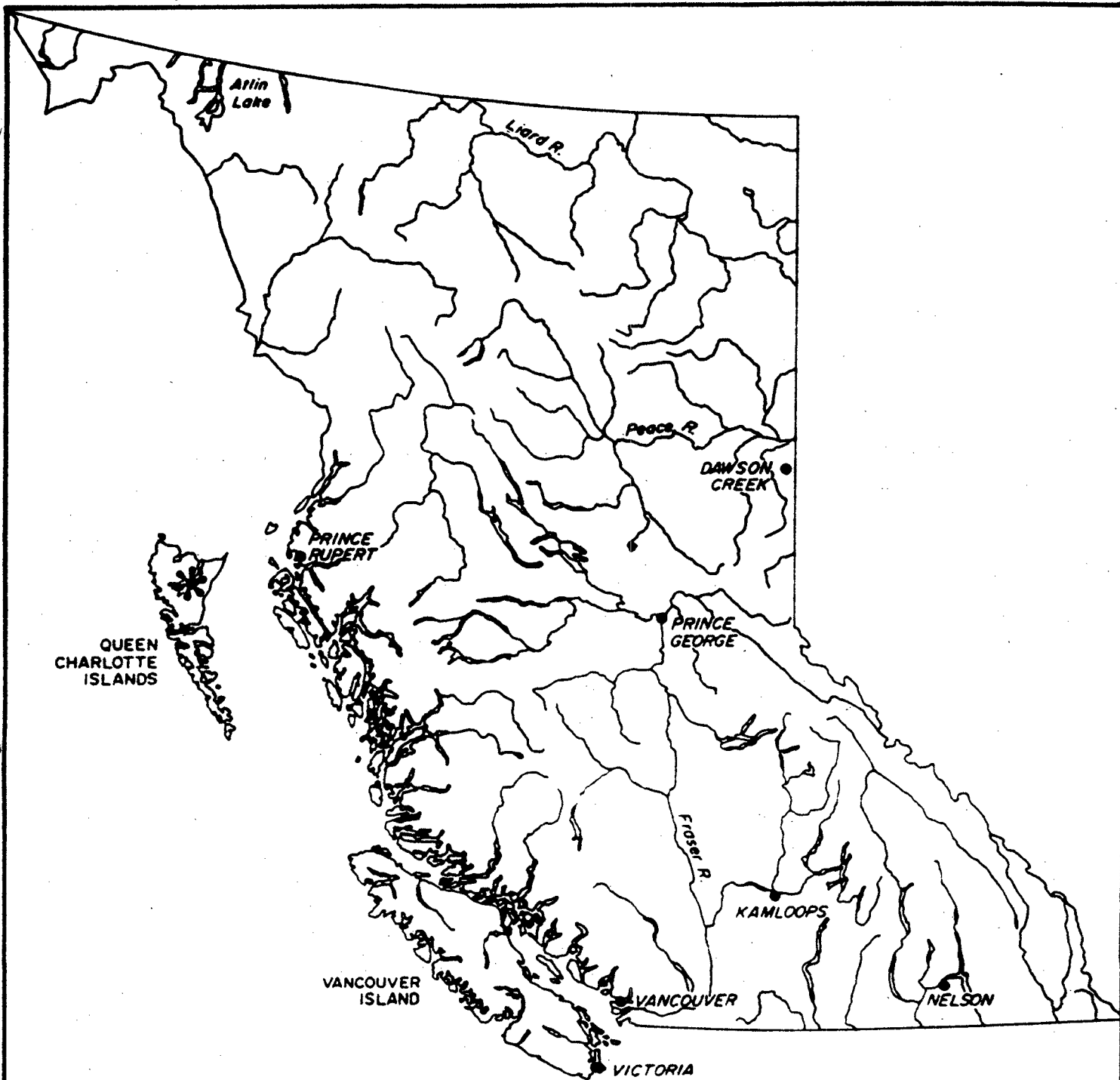
The claims are located in east-central Graham Island, approximately 17 air kilometers from Port Clements, and 6 kilometers due south of Juskatla, B.C. The claim area is well served by logging roads either from Port Clements to the north or Queen Charlotte City to the south, but as these are active logging roads, some restrictions apply.

The area comprising the claims is of generally low to moderate topographic relief with elevations ranging from 200 to 1000 feet ASL. The property is generally well drained (drainage being somewhat of a problem in this region), and road access is excellent. Tree cover ranges from 2-3 year old slash to dense 20-30 year old second growth, with the majority of the ground covered by about 10 year old second growth of cedar, hemlock and spruce.

The property is 100 percent owned and operated by Noramex Minerals Inc. of Vancouver, B.C. and the soil survey was conducted by a three-man crew from Fairbank Engineering Ltd. also of Vancouver, B.C., from November 3 - 6, 1986.

The claims have been intermittently explored since the late 1970's and a large airborne EM and mag survey was flown over the area in 1981 by Columbia Geophysical Services Ltd.

. . .



QUEEN CHARLOTTE ISLANDS

PRINCE RUPERT

DAWSON CREEK

PRINCE GEORGE

KAMLOOPS

VANCOUVER ISLAND

VANCOUVER

NELSON

VICTORIA

NORAMEX MINERALS INC.

# LOCATION MAP

FIGURE 1

DECEMBER 1986

FAIRBANK ENGINEERING LTD.



KILOMETERS



MILES



This survey discovered a magnetic anomaly on the Lark 6 (JET) claim, and another on the Lark 5 (Sheila) claim. The southwest corner of the property is approximately 3,500m northwest of the Consolidated Cinola (City Resources) deposit, along the inferred structural break that localized the deposit.

City Resources Ltd. is presently carrying out extensive surface and underground exploration to prove reserves for production. They currently report reserves of 40 million tonnes averaging 0.058 ounces/ton gold, or 2.3 million ounces of gold (Canadian Mines Handbook 1985-86).

Detailed claim information is as follows:

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>
Sheila	8	5567(10)	October 1, 1986
Wanda	20	5569(10)	October 1, 1986
Wonder	20	5568(10)	October 1, 1986
Jet	20	5570(10)	October 1, 1986
Expot	20	5666(11)	November 26, 1986

#### GEOLOGY

The strata underlying the claim area are comprised primarily of Masset Formation basalt flows and breccias, rhyolitic ash flows and minor dacite, all of Tertiary age (Figure 3). A prominent northwest trending linear structure, extending from the City Resources gold deposit, cuts across the property. In addition several cross faults are indicated by linears trending northeast-southwest.

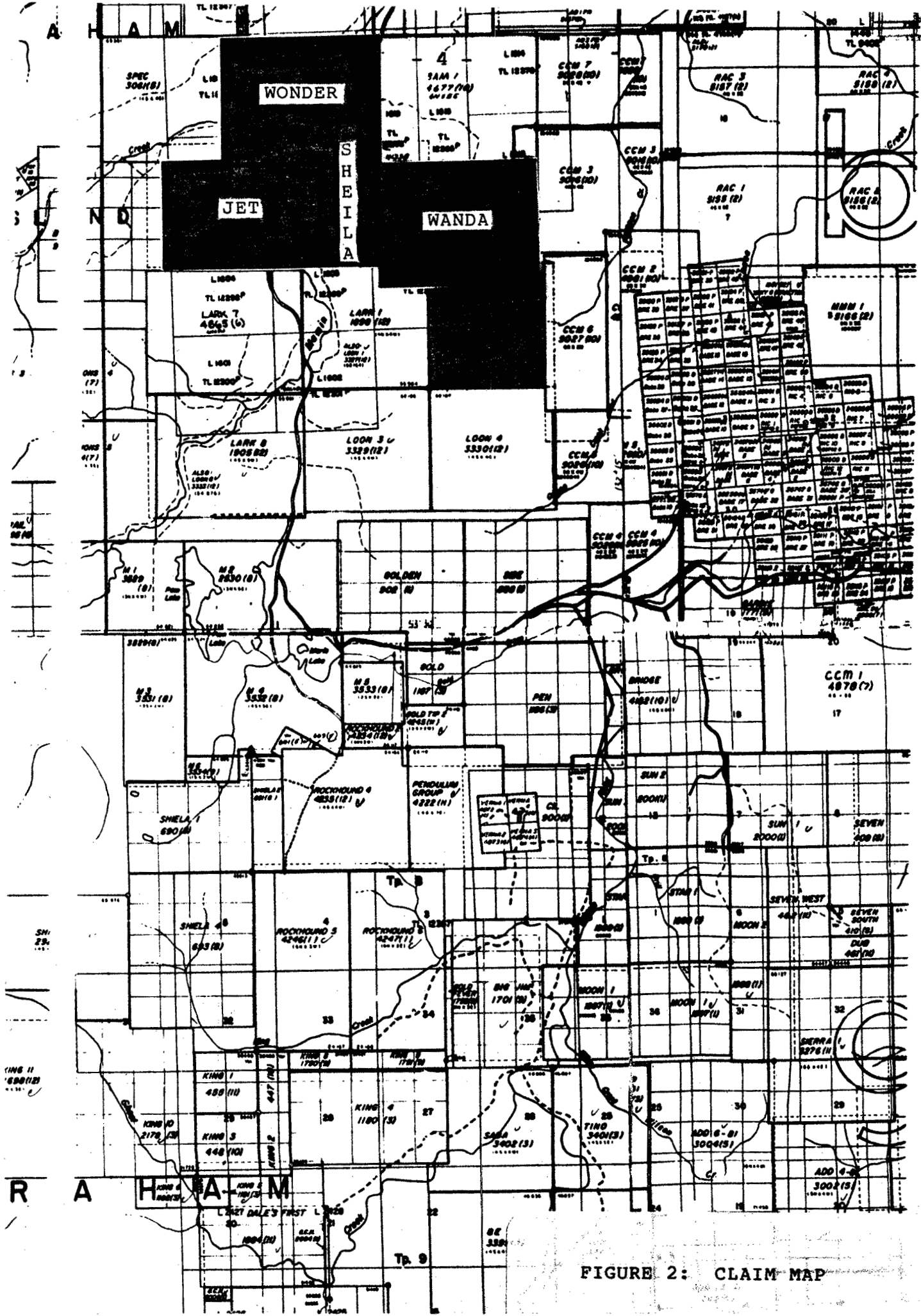
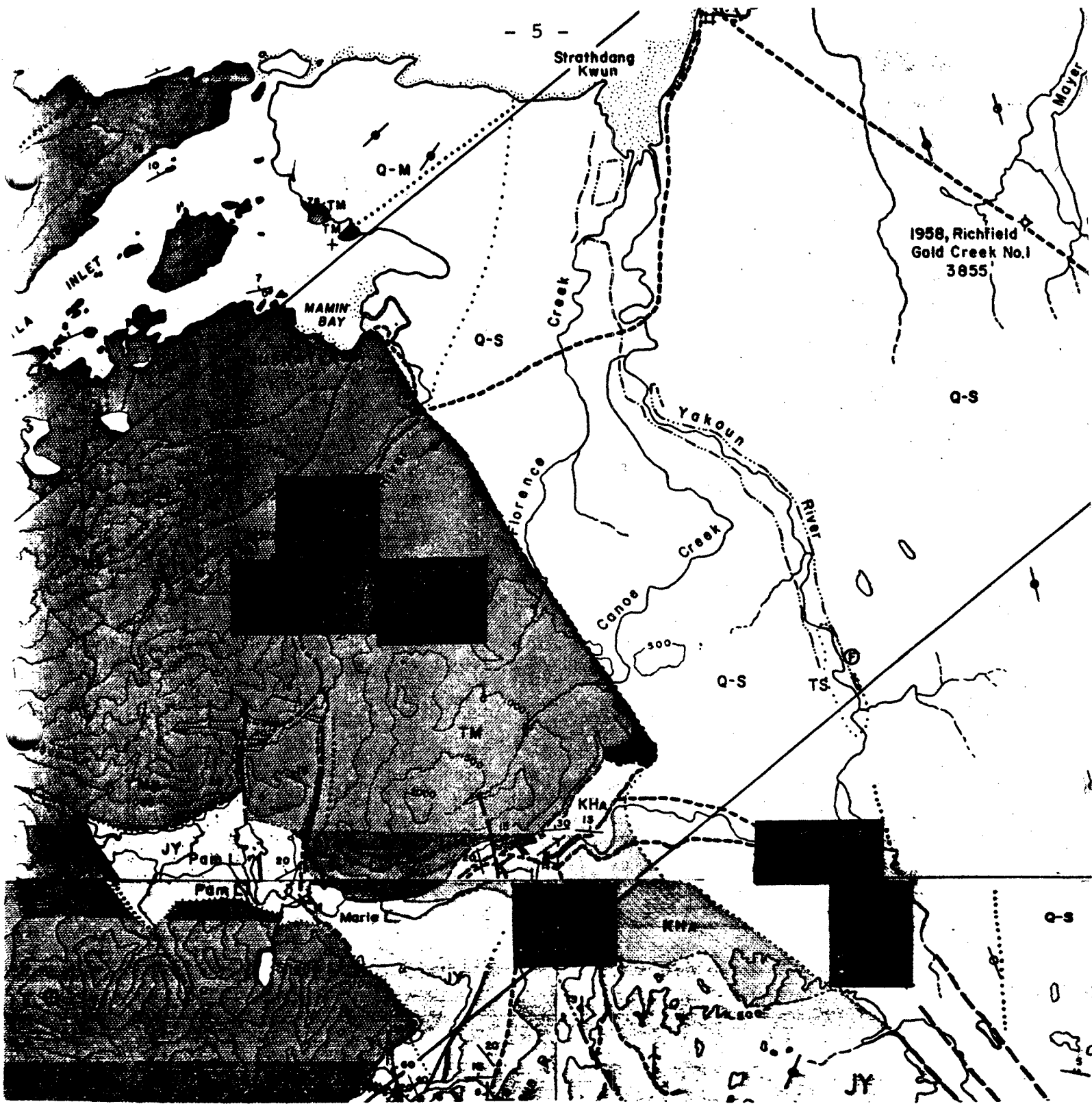


FIGURE 2: CLAIM MAP



**FIGURE 3: GEOLOGY**

(After Sutherland-Brown, A. 1968: BCDM Bulletin #54,  
Geology of the Queen Charlotte Islands). Scale 1:125,000

TM = Masset Fm.    KH<sub>A</sub> = Haida Fm.    Q-S = Quaternary over Skonun  
KH<sub>O</sub> = Honna Fm.    JY = Yakoun Fm.

## PURPOSE

The purpose of the geochemical survey is to determine from regional sampling whether gold or arsenic is present in the soil and if there is a correlation between elevated arsenic and gold values.

## RESULTS

Samples were taken at 100m intervals along logging roads cross-cutting the claims. Sample sites were well back from the road to minimize contamination. At most sites the 'B' horizon was sampled by persistent digging using a grubhoe, however, in several instances, due to swamps, no sample could be obtained. The 'B' horizon was located anywhere from 15cm to in excess of 150cm down in a few organic-rich zones. The samples were placed in wet strength paper bags, air dried, and shipped via Pacific Western Airlines to Min-En Labs Ltd. of North Vancouver, B.C. where they were prepared and analyzed by standard analytical procedures (refer to Appendix A). Occasionally, due to the presence of clay, roots or rocks, it was necessary to analyze the -40 mesh instead of the usual -80 mesh fraction.

The detection limit for gold was 5ppb, the threshold limit was 10ppb and everything 15ppb or over was judged to be anomalous. For arsenic, the detection limit was 1ppm, threshold was 15ppm and greater than 20ppm was judged to be anomalous. Of 176 samples, seven arsenic and eight gold samples were anomalous. There does not appear any direct correlation between anomalous arsenic and gold values. There are no obvious patterns or groupings of anomalous values however that may be attributed to the sample distribution.

. . .



A high proportion of anomalous gold values are 40 mesh sample analyses. Those samples, especially four taken on Line R5, which did not contain enough material to provide an adequate 80 mesh fraction, when processed using the 40 mesh fraction, return anomalously high gold values. These results will be rechecked at a later date.

#### INTERPRETATIONS

The highest soil gold result is 165ppb for the sample from the south-centre of the Wanda claim. A 15ppb gold sample occurs 500m to the northeast. These samples are on a projected fault line connecting the City Resources gold deposit. Four elevated gold values occur along Line R5 in the east-central portion of the Jet claim. Other anomalies appear to be randomly scattered.

#### CONCLUSIONS

Since this property is only several thousand meters from the City Resources deposit along the inferred extension of the Sandspit Fault Zone, all of these anomalies should be investigated in greater detail, through soil sampling on a grid pattern, geological mapping, prospecting, and ground geophysical surveys.

\* \* \* \* \*

REFERENCES

Canadian Mines Handbook 1985-1986.

Rolston, T., Timmins, W.G., 1981. Unpublished assessment report #9843, Marmin River Airborne Project, 1981.

Sutherland-Brown, A., 1968: BCDM Bulletin #54, Geology of the Queen Charlotte Islands, British Columbia.

APPENDIX A

ANALYTICAL PROCEDURES

## *MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicks  
705 WEST 15th STREET  
NORTH VANCOUVER, B.C.  
CANADA

### ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

### PROCEDURES FOR Mo, Cu, Cd, Pb, Mn, Ni, Ag, Zn, As, F

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at  $95^{\circ}\text{C}$  soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometers.

Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the  $\text{CH}_2\text{H}_2$ -Air flame combination but the Molybdenum determination is carried out by  $\text{C}_2\text{H}_2$ - $\text{N}_2\text{O}$  gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

For Arsenic analysis a suitable aliquote is taken from the above 1 gram sample solution and the test is carried out by Gutzeit method using  $\text{AgCS}_2\text{N}(\text{C}_2\text{H}_5)_2$  as a reagent. The detection limit obtained is  $1.2^5$  ppm.

Fluorine analysis is carried out on a 200 milligram sample. After fusion and suitable dilutions the fluoride ion concentration in rocks or soil samples are measured quantitatively by using fluorine specific ion electrode. Detection limit of this test is 10 ppm F.

APPENDIX B

CERTIFICATES OF GEOCHEMICAL ANALYSIS

**MIN-EN LABORATORIES LTD.***Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7N 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.

Project: QUEEN CHARLOTTE

Attention: R. J. ROBINSON

File: 6-1196/P3

Date: NOV. 25, 1986

Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB	
R3-05	NOV	7	5	
R3-06		11	5	
R3-07		14	5	
R3-08		11	5	
R3-09		15	10	
R3-10		14	5	
R3-11		19	5	
R3-12		18	5	40MESH
R3-13		18	10	
R4-00		19	5	
R4-01		10	5	
R4-02		11	5	
R4-03		12	5	
R4-04		11	5	
R4-05		10	10	
R4-06		7	5	
R4-07		5	5	
R4-08		12	5	
R4-09		10	5	
R4-10		8	10	
R4-11		14	5	
R4-12		7	5	
R4-13		5	5	
R4-14		17	10	
R4-15	NOV	18	10	
R5-00	JET	4	15	
R5-01		9	10	
R5-02		4	5	
R5-03		4	5	
R5-04	JET	3	5	

Certified by \_\_\_\_\_

  
 MIN-EN LABORATORIES LTD.

**MIN-EN LABORATORIES LTD.***Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7N 1T2

PHONE: (604) 980-5814 DR (604) 988-4524

TELEX: VIA USA 7601067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.

Project: QUEEN CHARLOTTE

Attention: R. J. ROBINSON

File: 6-1196/P4

Date: NOV. 25, 1986

Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB	
R5-05	JET	2	10	
R5-06		2	5	
R5-07		3	5	
R5-08		7	10	
R5-09		8	5	
R5-10		9	5	
R5-11		11	5	
R5-12		5	5	
R5-13		8	10	
R5-14		10	10	
R5-15		5	10	
R5-16		4	15	40MESH
R5-17		48	5	
R5-18		11	5	
R5-19		11	5	
R5-20		10	5	
R5-21		6	10	
R5-22		7	10	
R5-23		7	15	40MESH
R5-24		6	5	
R5-25		9	5	
R5-26		13	5	
R5-27		15	5	
R5-28		5	15	40MESH
R5-29		7	5	
R5-30		24	20	40MESH
R5-31		16	10	
R5-32		15	5	
R5-33		9	5	
R5-34	JET	6	10	

Certified by



MIN-EN LABORATORIES LTD.

# MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

## Certificate of GEOCHEM

Company: NORAMEX MINERALS LTD.  
Project: QUEEN CHARLOTTE  
Attention: R.J. ROBINSON

File: 6-1196/P5  
Date: NOV. 25, 1986  
Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB	
R5-35	JET	8	3	
R5-36		4	5	
R5-37		7	5	
R5-38		9	5	
R5-39		4	5	
R5-40		12	3	
R5-41		4	5	20MESH
R5-42		2	10	
R5-43		4	5	
R5-44		3	10	
R5-45		6	5	
R6-00		9	5	
R6-01		15	5	
R6-02		27	3	
R6-03		8	5	
R6-04		15	5	
R6-05		4	5	
R6-06		7	3	
R6-07		6	5	
R6-08		5	5	
R6-09		11	5	
R6-10		8	10	
R6-11		18	5	
R6-12		9	5	
R6-13		23	5	
R6-14		17	5	
R6-15		7	10	
R6-16		16	5	
R6-17		12	5	
R6-18	JET	9	5	

Certified by \_\_\_\_\_

  
MIN-EN LABORATORIES LTD.



**MIN-EN LABORATORIES LTD.**

*Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.  
Project: QUEEN CHARLOTTE  
Attention: R. J. ROBINSON

File: 6-1196/P6  
Date: NOV 26/86  
Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB
R6-19	JET	6	10
R6-20		13	5
R6-21		11	10
R6-22		5	5
R6-23		5	5
R6-24		8	5
R6-25		6	5
R6-26		13	5
R6-27		7	5
R6-28		12	10
R6-29		7	5
R6-30		12	5
R6-31		4	5
R6-32		9	5
R6-33		5	5
R6-34		6	10
R6-35		5	5
R6-36		9	5
R6-37		7	5
R6-38		5	10
R6-39	JET	6	5
R7-01	NOV	12	5
R7-02		13	5
R7-03		12	10
R7-04		12	5
R7-05		11	5
R7-06		10	20
R7-07		10	10
R7-08		9	5
R7-09	NOV	11	5

Certified by \_\_\_\_\_

  
MIN-EN LABORATORIES LTD.

**MIN-EN LABORATORIES LTD.**

*Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 989-4524

TELEX: VIA USA 7501067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.  
Project: QUEEN CHARLOTTE  
Attention: R.J. ROBINSON

File: 6-1196/P7  
Date: NOV 26/86  
Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB
R7-10	NOV	13	5
R7-11		3	5
R7-12		9	10
R7-13		2	5
R7-14		1	10
R7-15	NOV	12	5
RB-00	JET	13	5
RB-01		4	5
RB-02		14	10
RB-03		29	5
RB-04		7	10
RB-05		2	5
RB-06		7	15
RB-07		4	5
RB-08		6	5
RB-09		2	10
RB-10		5	5
RB-11		2	5
RB-12		6	5
RB-13		7	5
RB-14		3	10
RB-15		4	5
RB-16		3	10
RB-17		2	10
RB-18		2	5
RB-19		2	5
RB-20		2	5
RB-21		1	5
RB-22		1	5
RB-23	JET	2	5

Certified by \_\_\_\_\_

  
MIN-EN LABORATORIES LTD.

**MIN-EN LABORATORIES LTD.***Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 980-4524

TELEX: VIA USA 7601067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.  
 Project: QUEEN CHARLOTTE  
 Attention: R. J. ROBINSON

File: 6-1196/P8  
 Date: NOV 26/86  
 Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB
R8-24	JET	3	10
R8-25		3	5
R8-26		1	10
R8-27		2	5
R8-28		2	5
R8-29		3	5
R8-30		1	10
R8-31		1	10
R8-32		1	5
R8-33		2	5
R9-00		7	5
R9-01		8	5
R9-02		16	5
R9-03		17	5
R9-04		16	5
R9-05		13	10
R9-08		15	5
R9-09		9	5
R10-00		4	5
R10-01		3	5
R10-02		2	15
R10-03		2	5
R10-04		4	5
R10-05		3	5
R10-06		4	5
R10-07		3	10
R10-08		5	5
R10-09		4	5
R10-10		4	5
R10-11	JET	2	5

Certified by \_\_\_\_\_

MIN-EN LABORATORIES LTD.

# MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 DR (604) 988-4524

TELEX: VIA USA 7601067 UC

## Certificate of GEOCHEM

Company: NORAMEX MINERALS LTD.  
Project: QUEEN CHARLOTTE  
Attention: R.J. ROBINSON

File: 6-1196/P9  
Date: NOV. 26, 1986  
Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AS PPM	AU-WET PPB
R10-12 JET	6	5
R10-13	3	5
01	20	10
02	4	5
03	5	5
04	6	10
05	37	5
R11-00	1	5
R11-02	1	5
R11-03	2	5
R11-04	1	165
R11-05	3	5
R11-06	2	5
R11-07	2	5
R11-08	3	10
R11-09	2	5
R11-10	1	5
R11-11	2	5
R11-12	2	10
R11-13	3	5
R11-14	2	5
R11-15	2	15
R11-16	1	5
R11-17	3	5
R11-18	2	5
R11-19	2	10
R11-20	4	5
R11-21	1	10
R11-22	3	5
R11-23 JET	2	5

Certified by \_\_\_\_\_

  
MIN-EN LABORATORIES LTD.

**MIN-EN LABORATORIES LTD.**

*Specialists in Mineral Environments*

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

**Certificate of GEOCHEM**

Company: NORAMEX MINERALS LTD.  
Project: QUEEN CHARLOTTE  
Attention: R.J. ROBINSON

File: 6-1196/P10  
Date: NOV. 26, 1986  
Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number		AS PPM	AU-WET PPB
R11-24	JET	2	5
R11-25		1	5
R11-26		1	5
R11-27		1	10
R11-28		3	5
R11-30	JET	2	5

Certified by \_\_\_\_\_

  
MIN-EN LABORATORIES LTD.

## APPENDIX C

## STATEMENT OF COSTS

<u>LABOUR</u>	<u>JET</u>	<u>NOV</u>	<u>TOTAL</u>
R.J. Robinson, 3 days @ \$200/day	400.00	200.00	600.00
A. Lawrence, 4 days @ \$175/day	525.00	175.00	700.00
A. Smith, 4 days @ \$175/day	525.00	175.00	700.00
Mobilization/demobilization	<u>405.00</u>	<u>135.00</u>	<u>540.00</u>
Sub Total	1855.00	685.00	2540.00
 <u>DISBURSEMENTS</u>			
Golden Spruce Motel, 2 days @ \$89.45/day	134.17	44.73	178.90
Golden Dyke Camp, 8 man-days @ \$45/man/day	270.00	90.00	360.00
Groceries and meals	131.93	43.98	175.91
Truck Rental: 4 days @ \$136.47/day	409.41	136.47	545.88
Gasoline	61.21	20.41	81.62
Air photos: 45 @ \$3.44 each	116.10	38.70	154.80
Maps	8.25	2.75	11.00
Field supplies	86.33	28.77	115.10
Air freight	54.13	18.04	72.17
Air fares	461.51	153.83	615.34
Analyses	<u>2007.84</u>	<u>669.28</u>	<u>2677.12</u>
Sub Total	3740.88	1246.96	4987.84
Report preparation	<u>350.00</u>	<u>200.00</u>	<u>550.00</u>
TOTAL	\$5945.88	\$2131.96	\$8077.84

NOTE: As this project was carried out in conjunction with another in the same area at the same time, the costs have been apportioned on the basis of 3:1, JET:NOV. This is a reasonable ratio as that is the ratio of man-hours spent on each project.

APPENDIX D

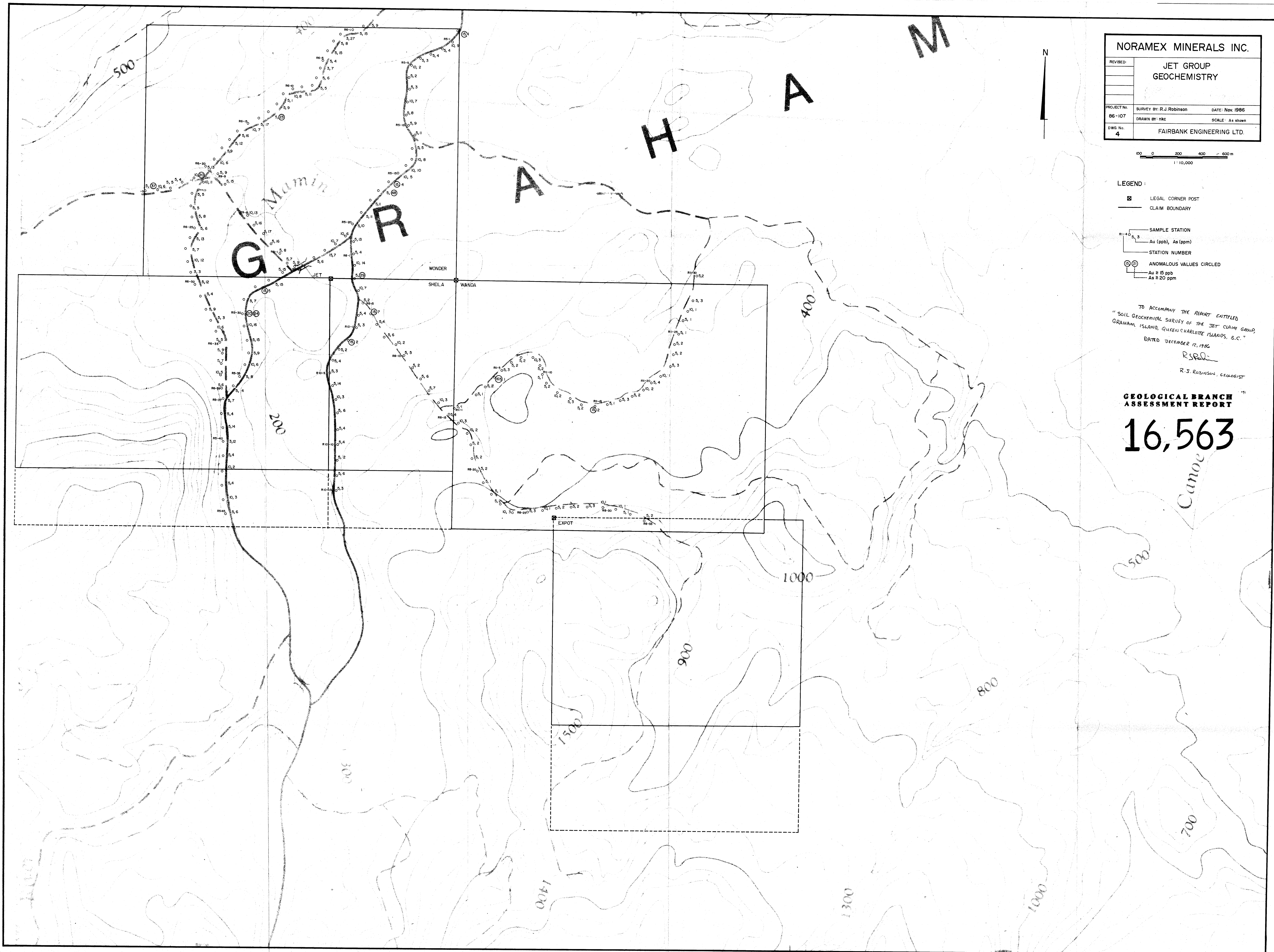
Statement of Qualifications

I, R.J. Robinson of #407-428 Agnes Street, New Westminster, BC hereby certify that:

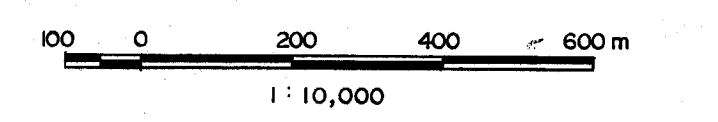
1. I am an exploration geologist and a graduate of the University of British Columbia, with a B.Sc. in geology 1985.
2. I have practiced my profession during the summers from 1981 to 1985, and continuously since 1985 for a number of companies, including Esso Minerals Canada, Vancouver, B.C., Reg Resources Corp., Richmond, B.C. and Fairbank Engineering Ltd., Vancouver, B.C.
3. The details of this report are based on work done by me and a 2-man crew under my supervision from November 2-6, 1986.

  
R.J. Robinson, B.Sc.,

December 1986



NORAMEX MINERALS INC.		
REVISED:	JET GROUP GEOCHEMISTRY	
PROJECT No.	SURVEY BY: R.J. Robinson	DATE: Nov. 1986
86-107	DRAWN BY: nlc	SCALE: As shown
DWG. No.	FAIRBANK ENGINEERING LTD.	
4		



- LEGEND:
- ☒ LEGAL CORNER POST
  - CLAIM BOUNDARY
  - SAMPLE STATION
  - Au (ppb), As (ppm)
  - STATION NUMBER
  - ⊙ ANOMALOUS VALUES CIRCLED
  - ⊙ Au ≥ 15 ppb
  - ⊙ As ≥ 20 ppm

TO ACCOMPANY THE REPORT ENTITLED  
 "SOIL GEOCHEMICAL SURVEY OF THE JET CLAIM GROUP,  
 GRAHAM ISLAND, QUEEN CHARLOTTE ISLANDS, B.C."  
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