

87-588-16246  
6/88

REPORT ON

TRENCHING, STREAM SILT CONCENTRATE  
AND SOIL SAMPLING  
ON THE  
GEORGE GROUP

CARIBOO MINING DIVISION, B.C.

NTS: 93 J/8E, 9E  
LATITUDE: 54°31'<sup>48"</sup> North LONGITUDE: 122° 05'<sup>12"</sup> West

GEORGE GROUP: OLE 1 (7619), OLE 2 (7620),  
PG 2 (7719), LAKE (7949),  
GEORGE (7950)

OWNER:

TECK EXPLORATIONS LIMITED  
1199 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V6E 2K5

FILMED

OPERATOR:

TECK CORPORATION  
1199 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V6E 2K5

BY

GUDMUND LOVANG

AND

WILLIAM MEYER, P.Eng.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

SUB-RECORDER  
RECEIVED  
SEP 29 1987  
M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

Vancouver, B.C.

September, 1987

16,246

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## INTRODUCTION

The George Group, consisting of 5 claims, comprising a total of 80 units, is located about 80 kilometers northeast of Prince George in the vicinity of Wicheeda Lake. The claims were staked by Teck Explorations Limited in 1986.

Elevations on the group vary from 800 metres to 1400 metres a.s.l. Wicheeda Lake is about 850 metres a.s.l.

Present access to the claims is by helicopter from Prince George. An old logging road, in bad repair, extends from La Pas Lumber Company's Artic Camp to the north end of the Wicheeda Lake.

The location map and claim map are included as Figure 1 and Figure 2.

The work covered by this report was carried out by Teck personnel in the period from June 9 to June 19, 1987 and consisted of 87 meters of hand trenching in 3 trenches, 37 panned silt samples and 3 soil samples.

The purpose of the trenching was to sample the bedrock in areas of anomalous rare earth soil sample values. Further, high density silt sampling was carried out in an effort to isolate suspected targets based on previous high Nb values in stream sediments.

Most of the work was done on the PG 2 claim.

## PROPERTY DESCRIPTION

The George Group consists of 5 claims for a total of 80 units. Particulars as follows:

<u>CLAIM</u>	<u>RECORD NO.</u>	<u>STAKED</u>	<u>RECORDED</u>
01e 1 (20)	7619	April 21	April 25
01e 2 (20)	7620	April 21	April 25
PG 2 (20)	7719	June 3	June 19
Lake (16)	7949	August 25	September 5
George (4)	7950	August 25	September 5

The claims were staked by and are held by Teck Explorations Limited of Vancouver, B.C.

## PREVIOUS WORK

Geochemical and geophysical surveys as well as geological mapping were conducted by Teck Explorations Limited in 1986 (see assessment report with preliminary number 87-0396 prepared by A.I. Betmanis).

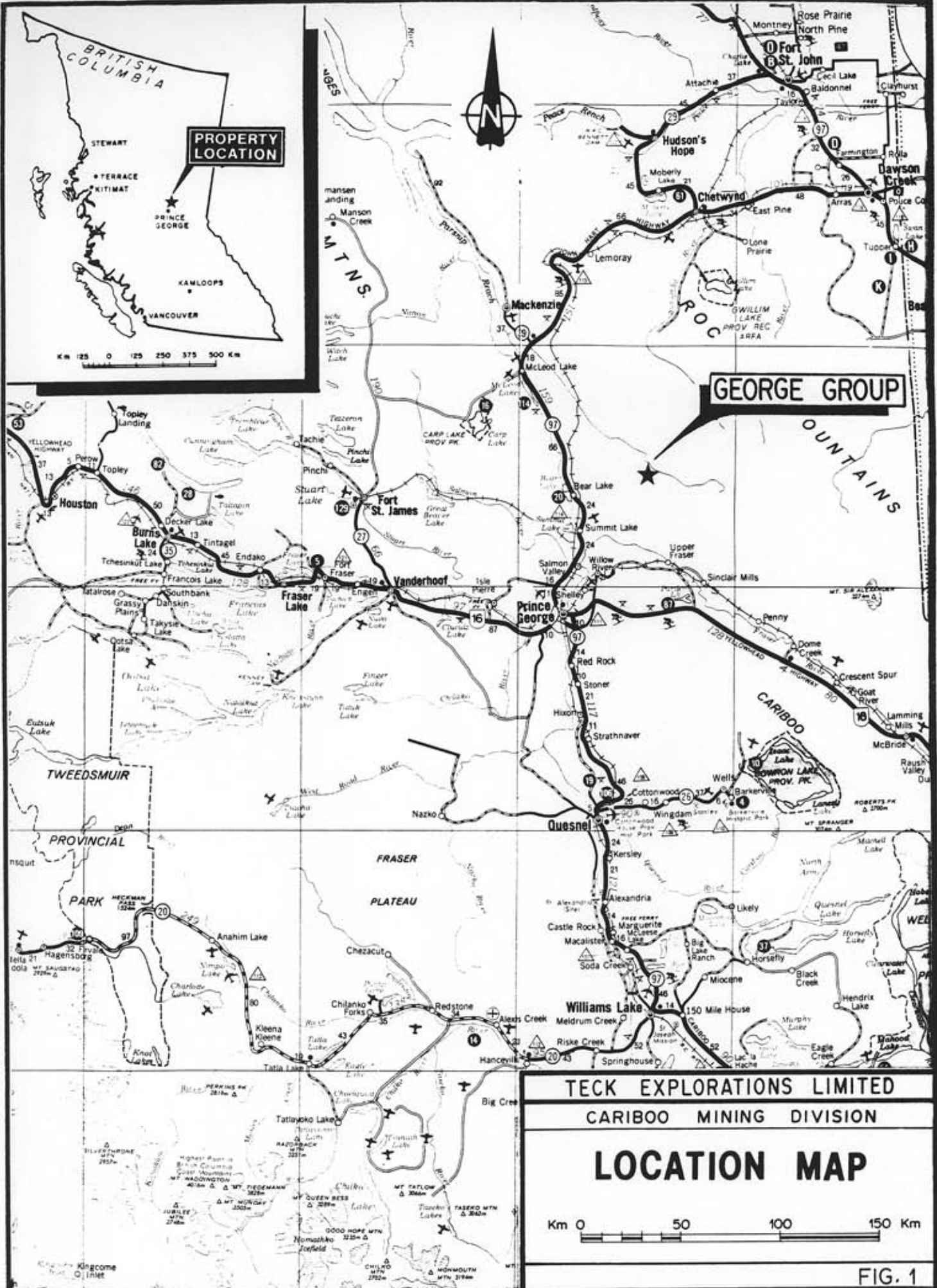


FIG. 1

TECK EXPLORATIONS LIMITED

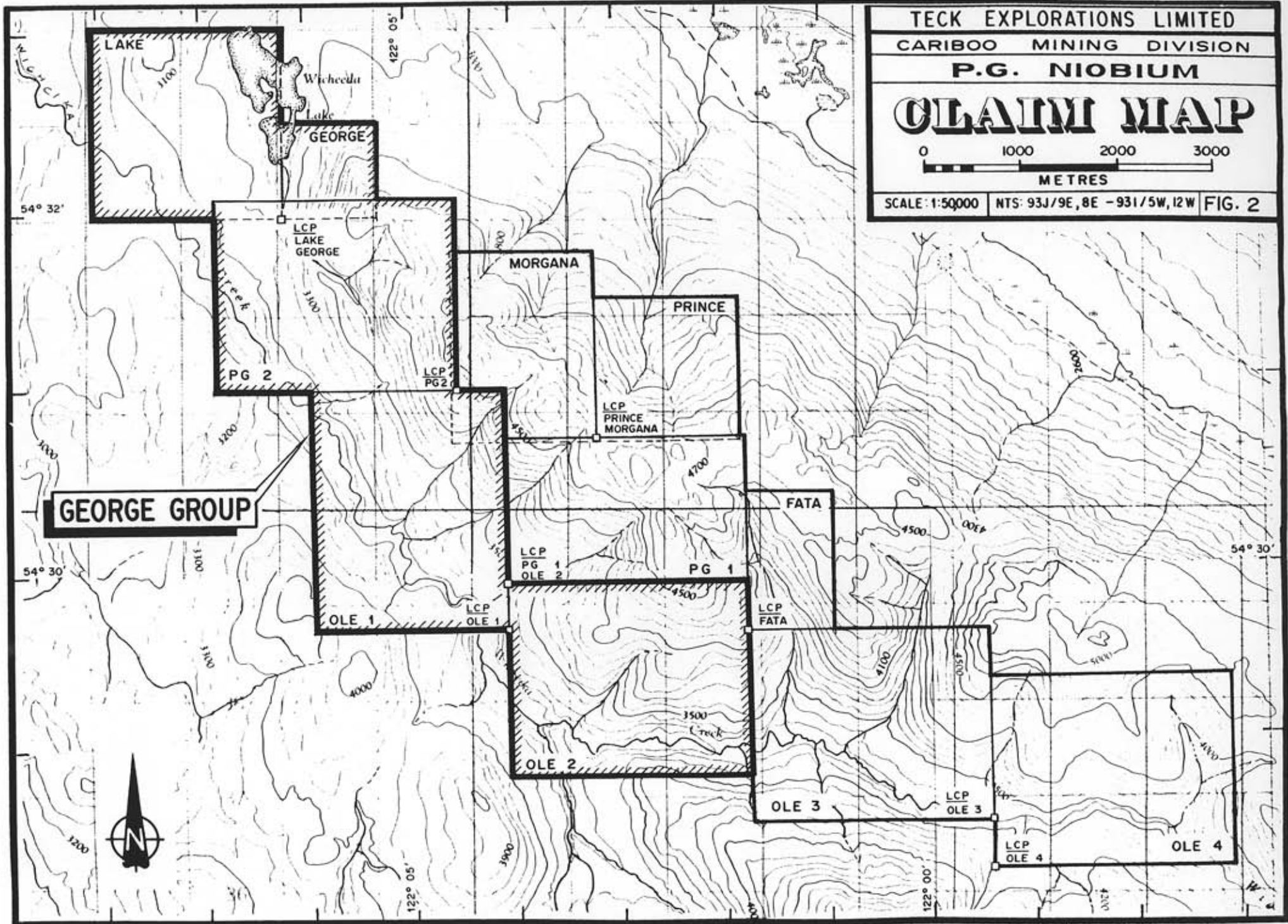
CARIBOO MINING DIVISION

P.G. NIOBIUM

# CLAIM MAP



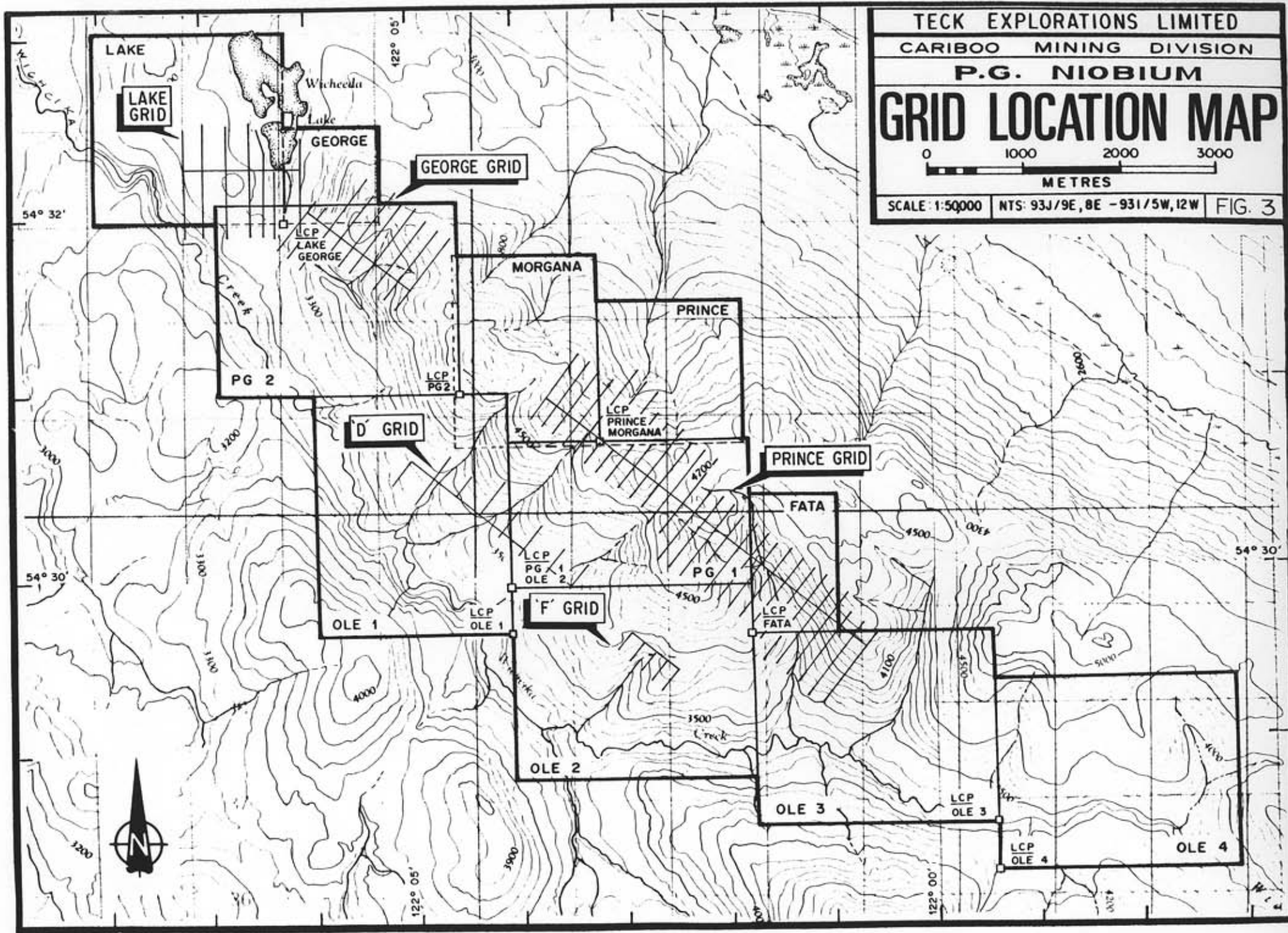
SCALE: 1:50000 NTS: 93J/9E, 8E - 93I/5W, 12W FIG. 2



TECK EXPLORATIONS LIMITED  
 CARIBOO MINING DIVISION  
**P.G. NIOBIUM**  
**GRID LOCATION MAP**

0 1000 2000 3000  
 METRES

SCALE: 1:50000 NTS: 93J/9E, 8E - 93I/5W, 12W FIG. 3



## GEOLOGY

Regional geology by Muller (GSC Map 1204 A, McLeod Lake) indicates that the property is underlain by upper Cambrian Ketchika Group limestone, silty limestones, calcareous siltstones and calcareous schists. Geology by Taylor and Scott (GSC O.F. 630, Monkman Pass) however, indicates that the property may be underlain by lower Ordovician Chushina Formation limestone, argillaceous limestones and minor shale. The regional strike is N-50°-W with steep dips to the northeast and southwest.

## PROPERTY GEOLOGY

Within the property the sediments are intruded by a semi-circular plug of carbonatite about 250 metres in diameter as well as one or more smaller lenses or sills of carbonatite. The carbonatites contain anomalous values in REE and Nb, likely associated with the mineral pyrochlore.

## WORK DONE

### Trenching

Three hand trenches were excavated on L-72-W on the George Grid, see Figure 3 and Figure 4, for a total length of 87 metres as follows:

GT-1	L-72-W	from 0 + 25 S to 0 + 59 S	34 metres
GT-2	L-72-W	from 1 + 88 S to 2 + 30 S	42 metres
GT-3	L-72-W	from 2 + 67 S to 2 + 78 S	11 metres

The trenches were chip sampled, usually on 5 metre intervals. Preliminary analyses were undertaken by Chem Labs of North Vancouver for 8 REE, Nb and Y. The lab report from Chem is submitted in Appendix 1. Sample locations are shown in Figure 5. Nb and Y results are generally low, however results for the light REE (La, Nd and Ce) were encouraging.

### Silt/Soil Sampling

Thirty-seven silt samples were collected from the stream which enters Wicheeda Lake from the south. A Barakso pan with 20-mesh screen was used in an effort to concentrate the sample. Although the + 20 mesh fraction is eliminated in this manner, no further concentration of the sample was effectuated.

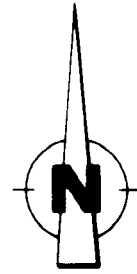
Sample numbers and locations are plotted on Figure 4 together with the Nb, F and Ba values.

Three soil samples were collected from a tributary gully joining the main stream from the southeast. This gully is entirely dry and devoid of any silt material. Results are plotted on Figure 4.

The silt samples are designated AA and the soil samples AS.

TRENCH GT-1

SAMPLE N°	WIDTH (metres)
10863	5 m
864	5 m
10865	5 m
10866	5 m
867	4 m



L 72+00 W

1+00 S

TRENCH GT-2

SAMPLE N°	WIDTH (metres)
10878	2 m
877	10 m
876	5 m
875	3 m
874	7 m
873	5 m
872	5 m
10871	5 m

2+00 S

TRENCH GT-3

10870	3 m
10869	5 m
10868	3 m

FIG. 5

**TRENCH SAMPLE LOCATIONS**





## RESULTS

High concentrations of light rare earth elements were obtained in bedrock in the trenches.

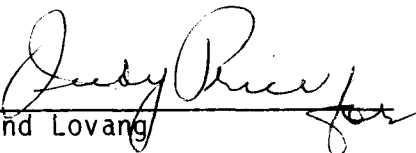
Results from the silt sampling indicates an area on the northeast branch of the creek as a possible Nb target. Three consecutive samples, AA-24, AA-25 and AA-26 have values ranging from 203 ppm to 229 ppm Nb and 980 ppm to 2,170 ppm La.

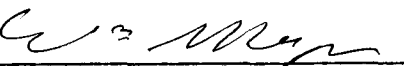
## CONCLUSIONS AND RECOMMENDATIONS

High REE values occur in a carbonatite plug on the George Grid. The plug appears circular in plan and measures about 250 metres in diameter. Re-sampling on 2 metre intervals and analyses to determined the various specific values, particularly the heavy REE, is recommended.

Three consecutive silt samples carries anomalous Nb values on the northeast branch of the creek. This area should be investigated in detail.

Respectfully submitted,

  
Gudmund Lovang

  
William Meyer, P.Eng.



APPENDIX I  
LABORATORY REPORTS



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

112 BROOKSBANK AVE., NORTH VANCOUVER,  
BRITISH COLUMBIA, CANADA V7J-2C1

PHONE (604) 984-0221

To: TECK EXPLORATIONS LIMITED

11TH FLOOR

1199 W. HASTINGS STREET

VANCOUVER, B.C.

V6E 2K5

A871650

Comments: ATTN: W. MEYER, CC: A. L. BETMANIS

**CERTIFICATE A8716509**

## ANALYTICAL PROCEDURES

TECK EXPLORATIONS LIMITED

PROJECT : 1344

P O # : NONE

Samples submitted to our lab in Vancouver, BC.

This report was printed on 23-JUL-87.

### SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	18	Rock & core: Ring

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
110	18	La ppm: Trace rock, soil	NAA	1	1000
128	18	Nd ppm: Trace rock, soil	NAA	5	1000
134	18	Sm ppm: Trace rock, soil	NAA	0.1	500
136	18	Lu ppm: Trace rock, soil	NAA	0.1	500
137	18	Eu ppm: Trace rock, soil	NAA	0.5	100.0
140	18	Dy ppm: Trace rock, soil	NAA	1	500
141	18	Tb ppm: Trace rock, soil	NAA	0.1	1000
135	18	Ce ppm: Trace rock, soil	NAA	2	10000
191	18	Nb ppm	XRF	5	10000
801	18	Y ppm	XRF	5	10000



# Chemex Labs Ltd.

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10: TECH EXPLORATIONS LIMITED  
1 FLOOR  
1 W. HASTINGS STREET  
VANCOUVER, B.C.  
V6E 2K5

Project: 1344

Comments: ATTN: W. MEYER, CC: A.L. BITMANIS ✓

Page No.: 1  
Tot. Page: 1  
Date: -JUL-87  
Invoice #: 1-8716509  
P.O. #: NONE

## CERTIFICATE OF ANALYSIS A8716509

SAMPLE DESCRIPTION	PREP CODE	La NAA ppm	Nd NAA ppm	Sm NAA ppm	Lu NAA ppm	Eu NAA ppm	Dy NAA ppm	Tb NAA ppm	Ce NAA ppm	Nb (XRF) ppm	Y (XRF) ppm
10861	205 ---	>1000	>1000	316	< 0.2	67.4	48	7.4	>10000	71	71
10862	205 ---	>1000	>1000	310	< 0.1	65.7	40	6.2	9950	40	64
10863	205 ---	>1000	>1000	204	0.5	42.3	35	6.5	6260	73	64
10864	205 ---	496	187	25.8	0.5	7.0	18	1.9	550	75	57
10865	205 ---	470	146	24.1	0.7	5.3	< 1	1.2	553	41	41
10866	205 ---	>1000	>1000	145.0	< 0.1	22.8	< 1	4.7	4790	58	20
10867	205 ---	>1000	>1000	160.0	< 0.1	34.6	< 1	4.6	5120	< 5	12
10868	205 ---	202	104	12.2	0.4	2.0	< 1	0.8	254	28	19
10869	205 ---	273	156	21.2	0.5	4.4	< 1	2.2	479	649	44
10870	205 ---	>1000	>1000	156.0	0.4	38.2	40	7.4	3750	276	110
10871	205 ---	>1000	>1000	192.0	0.5	51.5	48	9.4	7390	61	105
10872	205 ---	>1000	>1000	359	0.6	75.1	48	9.5	>10000	58	87
10873	205 ---	>1000	>1000	>500	< 0.1	>100.0	73	15.2	>10000	63	120
10874	205 ---	>1000	870	63.5	0.4	14.2	< 1	1.1	3530	22	31
10875	205 ---	>1000	>1000	252	< 0.1	53.5	39	8.6	>10000	69	47
10876	205 ---	>1000	>1000	213	< 0.1	47.4	< 1	5.5	>10000	66	44
10877	205 ---	>1000	>1000	381	0.9	82.6	35	11.6	>10000	55	68
10878	205 ---	>1000	>1000	344	< 0.1	56.6	35	7.1	>10000	65	73

NOTE: High concentrations of some rare earth elements may cause low results for other elements.

*Bring: I am sending these samples to X-Ray Labs for total REE assaying*

CERTIFICATION: Hart Buchler



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

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TECK EXPLORATIONS LIMITED  
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VANCOUVER, B.C.  
V6E 2K5

A8716759

Comments: ATTN: BILL MEYER CC ANDY BETMANIS

## CERTIFICATE A8716759

TECK EXPLORATIONS LIMITED

PROJECT : 1344

P.O.# : NONE

Samples submitted to our lab in Vancouver, BC.

This report was printed on 16-JUL-87.

### SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
235	37	Pan concentrate: Ring pulverize

### ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
4	37	Pb ppm: HNO <sub>3</sub> -aqua regia digest	AAS-BKGD CORR	1	10000
5	37	Zn ppm: HNO <sub>3</sub> -aqua regia digest	AAS	1	10000
6	37	Ag ppm: HNO <sub>3</sub> -aqua regia digest	AAS-BKGD CORR	0.1	200
21	37	F ppm: Carbonate-nitrate fusion	SPECIFIC ION	20	10000
25	37	Ba ppm: HClO <sub>4</sub> -HNO <sub>3</sub> -HF digestion	AAS	10	10000
110	37	La ppm: Trace rock, soil	NAA	1	1000
191	37	Nb ppm	XRF	5	10000
801	37	Y ppm	XRF	5	10000



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VANCOUVER, B.C.  
V6E 2K5

Project: 1344

Comments: ATTN: BILL MEYER CC ANDY BETMANIS

Page No.  
Tot. Pag.  
Date: 16-JUL-87  
Invoice #: I-8716759  
P.O. #: NONE

## CERTIFICATE OF ANALYSIS A8716759

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R	F ppm	Ba ppm	La NAA ppm	Nb (XRF) ppm	Y (XRF) ppm		
	235	---	163	345	0.1	970	3200	538	135	46	
	235	---	141	295	0.1	860	2700	779	208	44	
	235	---	142	280	0.1	1160	2500	521	151	43	
	235	---	138	284	0.1	990	2400	591	178	40	
	235	---	124	252	0.1	1040	2500	593	163	39	
	235	---	118	243	0.1	960	2100	485	133	37	
	235	---	130	260	0.1	1050	2100	436	126	37	
	235	---	122	247	0.1	1210	2000	431	119	38	
	235	---	105	206	0.1	1150	2000	455	137	36	
	235	---	102	207	0.1	1030	2000	476	140	34	
	235	---	102	200	0.1	1160	1840	581	174	40	
	235	---	92	185	0.1	1050	1820	436	136	42	
	235	---	93	185	0.1	1150	1880	809	231	55	
	235	---	81	161	0.1	840	1780	333	127	46	
	235	---	58	140	0.1	840	1600	218	93	38	
	235	---	185	355	0.1	980	3600	977	203	51	
	235	---	181	319	0.1	890	3600	847	178	49	
	235	---	216	395	0.1	1040	4100	1060	173	50	
	235	---	200	370	0.1	1050	5000	1590	252	61	
	235	---	209	380	0.1	1000	4800	1090	160	51	
	235	---	110	260	0.1	800	2400	815	140	38	
	235	---	34	155	0.1	630	1300	398	91	38	
	235	---	137	315	0.1	790	2800	1570	199	45	
	235	---	171	376	0.1	880	4000	2170	229	55	
	235	---	170	400	0.1	900	3000	1330	219	51	
	235	---	109	310	0.1	840	2600	980	203	58	
	235	---	44	241	0.1	720	1900	483	109	58	
	235	---	415	610	0.3	1390	7500	1520	218	70	
	235	---	273	345	0.1	1160	4900	918	192	54	
	235	---	97	190	0.1	900	2000	438	143	54	
	235	---	122	210	0.1	890	1800	318	84	52	
	235	---	162	195	0.1	810	2600	926	128	62	
	235	---	50	161	0.1	850	1600	297	107	45	
	235	---	48	141	0.1	780	1520	390	117	43	
	235	---	41	124	0.1	760	1300	192	73	41	
	235	---	16	85	0.1	650	840	236	58	32	
	235	---	12	79	0.1	590	880	234	50	34	

CERTIFICATION :

*Paul Buchler*



# Chemex Labs Ltd.

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V6E 2K5

A8716760

Comments: ATTN: BILL MEYER CC: ANDY BETMANIS

## CERTIFICATE A8716760

TECK EXPLORATIONS LIMITED

PROJECT : 1344

P O # : NONE

Samples submitted to our lab in Vancouver, BC.

This report was printed on 16-JUL-87.

### SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	3	Dry, sieve -80 mesh, soil, sed.

### ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
4	3	Pb ppm: HNO <sub>3</sub> -aqua regia digest	AAS-BKGD CORR	1	10000
5	3	Zn ppm: HNO <sub>3</sub> -aqua regia digest	AAS	1	10000
6	3	Ag ppm: HNO <sub>3</sub> -aqua regia digest	AAS-BKGD CORR	0.1	200
21	3	F ppm: Carbonate-nitrate fusion	SPECIFIC ION	20	10000
25	3	Ba ppm: HClO <sub>4</sub> -HNO <sub>3</sub> -HF digestion	AAS	10	10000
110	3	La ppm: Trace rock, soil	NAA	1	1000
191	3	Nb ppm	XRF	5	10000
801	3	Y ppm	XRF	5	10000





# Chemex Labs Ltd.

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1199 W. HASTINGS STREET  
VANCOUVER, B.C.  
V6E 2K5

Project: 1344

Comments: ATTN: BILL MEYER CC: ANDY BETMANIS

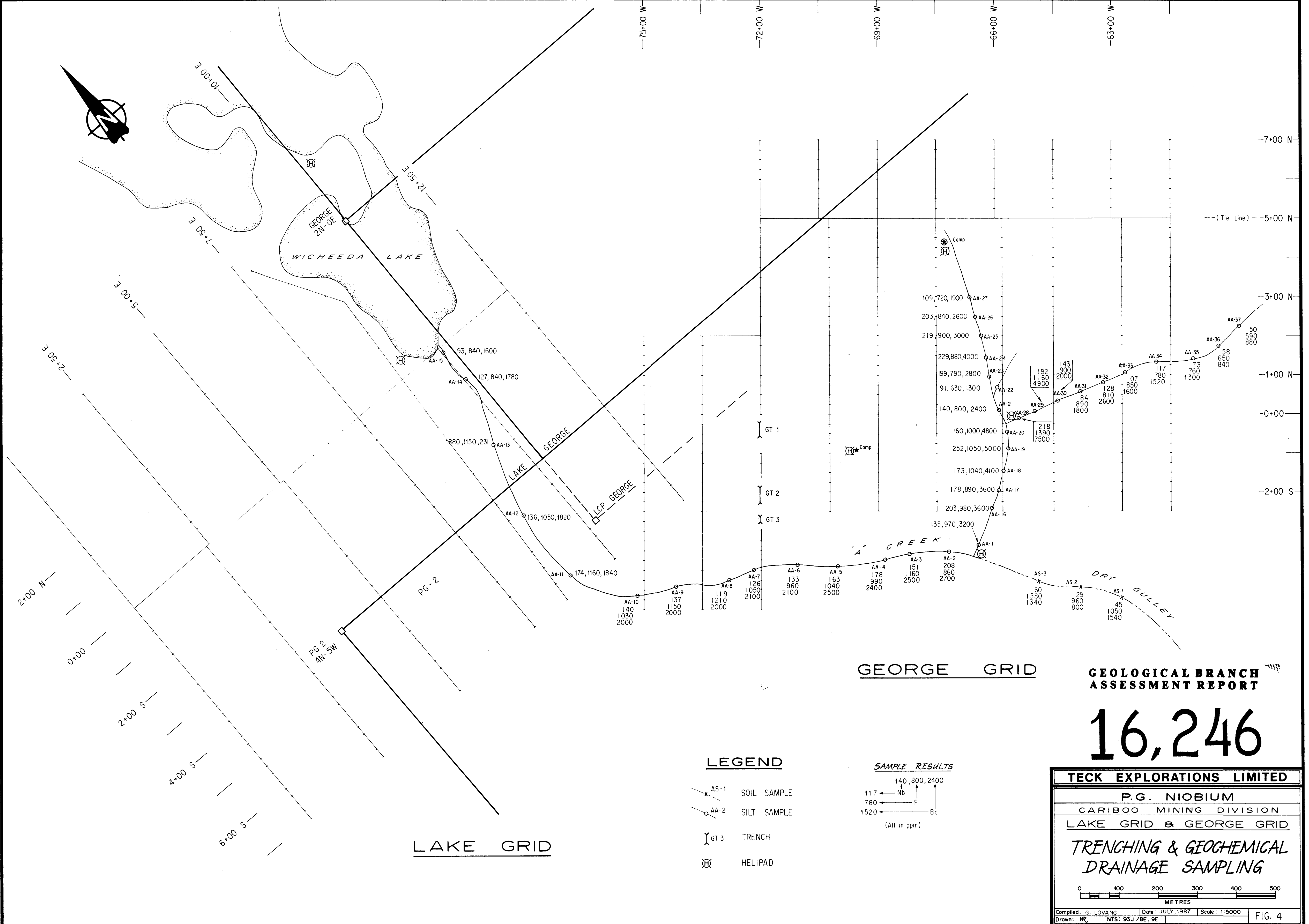
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Tot. Pa.  
Date: 16-JUL-87  
Invoice #: I-8716760  
P.O. #: NONE

## CERTIFICATE OF ANALYSIS A8716760

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R	F ppm	Ba ppm	La NAA ppm	Nb (XRF) ppm	Y (XRF) ppm		
AS -1	201 ---	31	80	0.1	1050	1540	61	45	34		
AS -2	201 ---	9	40	0.1	960	800	48	29	36		
AS -3	201 ---	26	113	0.1	1580	1340	52	60	31		

CERTIFICATION

*Hart Buchler*



GEORGE GRID

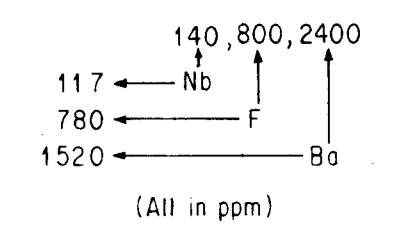
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,246

LEGEND

- AS-1 SOIL SAMPLE
- AA-2 SILT SAMPLE
- GT 3 TRENCH
- H HELIPAD

SAMPLE RESULTS



**TECK EXPLORATIONS LIMITED**

P.G. NIOBIUM  
CARIBOO MINING DIVISION  
LAKE GRID & GEORGE GRID  
*TRENCHING & GEOCHEMICAL  
DRAINAGE SAMPLING*

Compiled: G. LOVANG Date: JULY, 1987 Scale: 1:5000  
Drawn: *WR* NTS: 93J/8E, 9E

FIG. 4