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REPORT ON  
**GEOCHEMICAL SAMPLING AND PROSPECTING**  
**GRASS GROUP CLAIMS**  
**LIARD MINING DIVISION**  
**TELEGRAPH CREEK AREA, B.C.**

by  
**A.I. BETMANIS, P. Eng.**

**Owner:** Teck Corporation

**Operator:** Teck Explorations Ltd.

**Claims:** Grass #5150 (8 units)  
Winter #5151 (8 units)  
Cirque #5152 (20 units)  
Lake #5242 (20 units)

**NTS:** 104 G/14W

**Longitude:** 131°26'W

**Latitude:** 57°55'N

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

November 10, 1989  
Vancouver, B.C.

COMMERCIAL ORDER  
RECEIVED

NOV 10 1989

M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

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## INTRODUCTION

Teck Corporation acquired the Grass Group of mineral claims by staking in August and September 1988 following a government release of anomalous copper and gold values in silts from creeks draining the property. Part of the staked area overlaps previously staked claims, and the Grass Mountain property was subsequently reduced.

The claims lie northwest of old pyrrhotite-chalcopyrite with gold showings just north of Mount Glenora, west of Telegraph Creek, which have been explored intermittently since 1916. The area east of the Grass Group was explored briefly in the 1970's as a porphyry copper prospect.

During staking of the claims in 1988, partly oxidized chalcopyrite showings in both dioritic intrusives and andesitic volcanics were noted but not examined in detail at the time. In 1989 Teck Corporation contracted Coast Mountain Geological Ltd. to conduct a rock and stream silt sampling program, with coincidental geological observations, on the property as an initial evaluation for future exploration. Several zones of highly anomalous copper and gold were located. There is a possibility that the mineralization indicates an alkalic porphyry copper-gold system.

## LOCATION AND ACCESS

The Grass Mountain property is located on Grass Mountain, north of Winter Creek (previously known as Four Mile Creek), 10 kilometres north of Glenora and 17 kilometres west-northwest of Telegraph Creek, in the Liard Mining Division, B.C. The property is centred near latitude 57°55'N and longitude 131°26'W (NTS 104 G/14W).

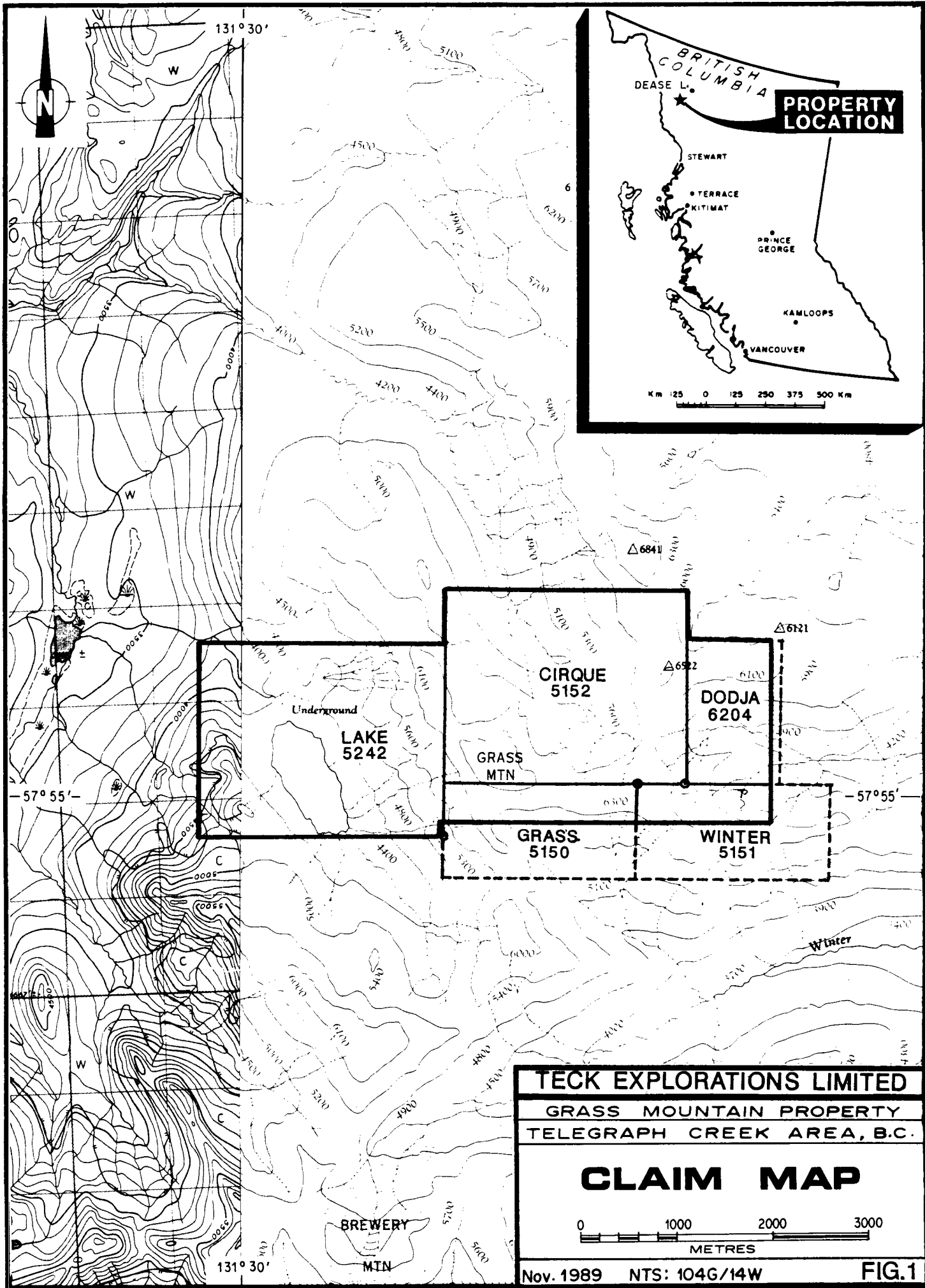
Access to the property is by helicopter from Dease Lake, a flying distance of approximately 110 kilometres. During summer months a helicopter is often based in Telegraph Creek. A number of good natural helicopter landing sites are available on the property.

## PHYSIOGRAPHY AND CLIMATE

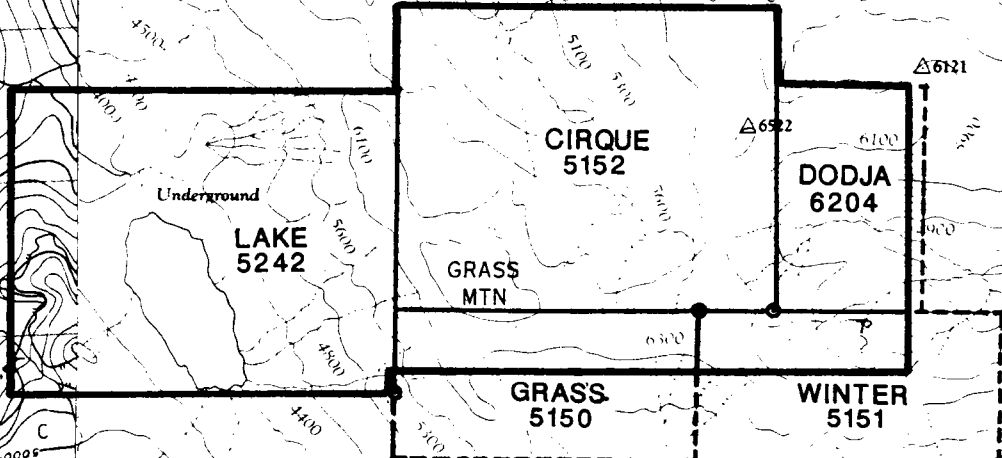
Elevations on the property vary from 1200 to 2100 metres above sea level. Slopes vary from moderate to locally steep and rugged. Northerly draining creeks terminate in old cirque basins.

Most of the property is above timber line and devoid of vegetation other than grass. Valley floors are moderately forested with balsam, spruce, and sub-alpine scrub and buck brush.

Summer months are generally cool and moderately dry. Snow can be expected at any time after September and persists until May.



**PROPERTY LOCATION**



**TECK EXPLORATIONS LIMITED**  
**GRASS MOUNTAIN PROPERTY**  
**TELEGRAPH CREEK AREA, B.C.**

**CLAIM MAP**



## CLAIMS AND OWNERSHIP

The claims comprising the Grass Group are listed below:

<u>Claim</u>	<u>Units</u>	<u>Record Number</u>	<u>Expiry Date</u> *
Grass	8	5150	24 Aug. 1990
Winter	8	5151	24 Aug. 1990
Cirque	20	5152	24 Aug. 1990
Lake	20	5242	2 Sep. 1990

\* Upon acceptance of recorded work.

Due to overlap with adjacent previously staked claims, the Grass and Winter claims were reduced to 8 units each from 16 unit claims as originally staked.

The Dodja claim of 6 units, record number 6204, was staked later as an addition to the property, but has not been grouped with the Grass Group. All claims are shown in Fig. 1.

Teck Corporation is the recorded owner of the claims.

## PREVIOUS WORK

First claims staked in the area were in 1916 and a copper-gold showing was uncovered. In 1929 and 1930 the claims were re-staked. A sample taken by the B.C. Ministry of Mines assayed 0.32 oz/ton Au, 2.1 oz/ton Ag, and 9.7% Cu from a massive pyrrhotite-chalcopyrite lens. A sample taken by the GSC assayed 0.12 oz/ton Au, 0.92 oz/ton Ag, and 5.8% Cu. The showings are believed to lie a short distance south or southeast of the property.

Activity was renewed in the mid 1970's when the area immediately southeast of the property was staked by Ecstall Mining Ltd. and explored by Texasgulf Canada Ltd. Work by Texasgulf included geological mapping, geochemical talus fines sampling, and trenching. Results were generally disappointing and the claims were dropped. There is no record of work done since.

## GENERAL GEOLOGY AND MINERALIZATION

The Grass Mountain area is included in regional mapping done by J.G. Souther (GSC Paper 71-44). Souther shows Grass Mountain as being underlain by Jurassic and/or Cretaceous granodiorite/quartz-diorite/diorite intruding Upper Triassic undifferentiated volcanic and sedimentary rocks. A small area of fine grained Upper Triassic sediments outcrops just north of the property.

Government aeromagnetic maps show a strong magnetic high centred over Grass Mountain.

Geological mapping by Texasgulf just east of the property encountered predominantly augite and feldspar porphyritic andesites and lesser fine grained tuffs intruded by minor monzonite and syenite. Predominant alteration is described as chloritization, serpentinization, and quartz-carbonate alteration.

Observed mineralization includes chalcopyrite fracture fillings and small massive pyrrhotite-chalcopyrite lenses. Pyrite is fairly wide spread. Although molybdenum values were modestly anomalous in talus fine geochemical samples, significant values were mainly in copper, gold and silver.

Observations by Teck during and prior to the current program indicate that most of the Grass Group is underlain by an intrusive or intrusives of variable composition ranging from granite through granodiorite to diorite. Intruded rocks are predominantly andesitic volcanics on the western part of the property. Migmatite and altered volcanics have been noted at the northeast corner of the property. The dioritic rocks are moderately to strongly magnetic. Alteration most noted was carbonate, quartz-carbonate, local silicification, and in the cirque area on the Cirque claim, strong epidotization.

Sulphide mineralization noted has been chalcopyrite variably oxidized to malachite and occasionally azurite. Pyrite is variable as fracture coatings and dissemination in intruded volcanics. Although the claims were not prospected thoroughly, no pyrrhotite was noted. The main zone of chalcopyrite was near the common Grass-Cirque claim line, and strikes west-northwest. Other north-northwest trends of chalcopyrite mineralization are indicated from geochemical rock sampling. Gold and weaker silver mineralization, but not molybdenum, accompanies copper mineralization. Best copper mineralization is associated with strong carbonate alteration.

#### **SUMMARY OF WORK**

Four days, July 31 to August 3, 1989 were spent on the property by a field crew consisting of a geologist, a prospector, and an assistant. Daily access was by helicopter from Telegraph Creek. Forty-five rock samples of float and outcrop were collected under the guidance of the geologist and prospector. Ten silt samples, predominantly from northern and eastern drainages, were collected. Geological notes were made at rock sample locations.

Rock samples were collected in plastic sample bags; silt samples were collected in Kraft wet strength gusset soil sample bags. All samples were shipped to Acme Analytical Laboratories in Vancouver. Rock samples were crushed and pulverized to minus 100 mesh and silt samples were dried and sieved for minus 80 mesh. A 0.5 gram sample of fines was digested as indicated on the appended certificates of analyses, and analysed by ICP for 30 elements. Separate gold analyses were made on 10 gram fine samples by atomic absorption following a hot aqua regia digestion. Several of the samples gave exceptionally high copper and gold geochemical analyses and should have been analysed by assay, but due to the preliminary nature of the program, no direct assaying was done.

Sample locations and brief geological notes are shown in Figures 2 and 3.

#### **DISCUSSION OF RESULTS**

Rock sampling indicated three main areas of anomalous copper and associated gold mineralization. Most anomalous areas were apparent in the field due to malachite stain and carbonate alteration. However, at least one third of the claim area is talus covered, and mineralized zones may be more extensive.

No attempt was made to do a statistical analysis of results due to the small population, spatial irregularity of sampling, and classical erratic distribution of gold. However, there is a fairly definite correlation of high copper and gold values, with a correlation coefficient of 0.976 between the two metals. Higher silver partly, but not always, correlates with high gold. Higher molybdenum values occur only on the Cirque claim east of Grass Mountain. Lead and zinc values correlate poorly with gold and copper, and are not particularly high.

A rusty zone with high copper and gold values south of Grass Mountain and near the Grass-Cirque claim line is the most pronounced mineralized zone. It is related to strong carbonate alteration and may be shear related. It trends approximately N75°W and can be traced for about 900 metres. Best geochemical value from the zone would approximate 6.9% Cu, 48g/t Au, and 8g/t Ag.

A similar zone on the west facing slope of the east ridge of the Cirque claim has about the same strike and can be traced for approximately 300 metres. Best geochemical value would be equivalent to about 1.0% Cu, 5g/t Au, and 7g/t Ag.

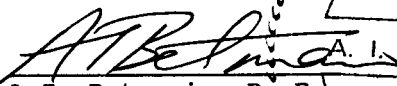
Additional copper-gold anomalous carbonate altered zones trend north-northwesterly, but are less well defined.

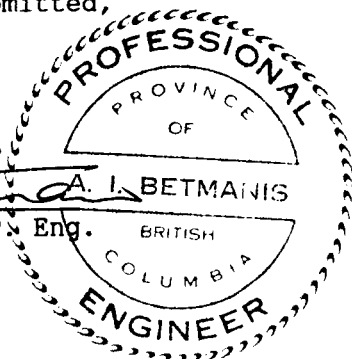
#### CONCLUSIONS

Two mineralized zones of copper and gold with associated silver, and possible subsidiary zones, have been identified on the Grass Group of claims. The mineralization does not appear to be associated directly with molybdenum. Although largely structurally controlled, the mineralization likely is related to the dioritic intrusive underlying Grass Mountain, and may indicate an alkalic porphyry copper-gold system.

The property warrants more exploration work. High grade sections indicated should be trenched for accurate sampling. Geological mapping, geochemical sampling, and magnetic and induced polarization geophysical surveys with grid control should be completed.

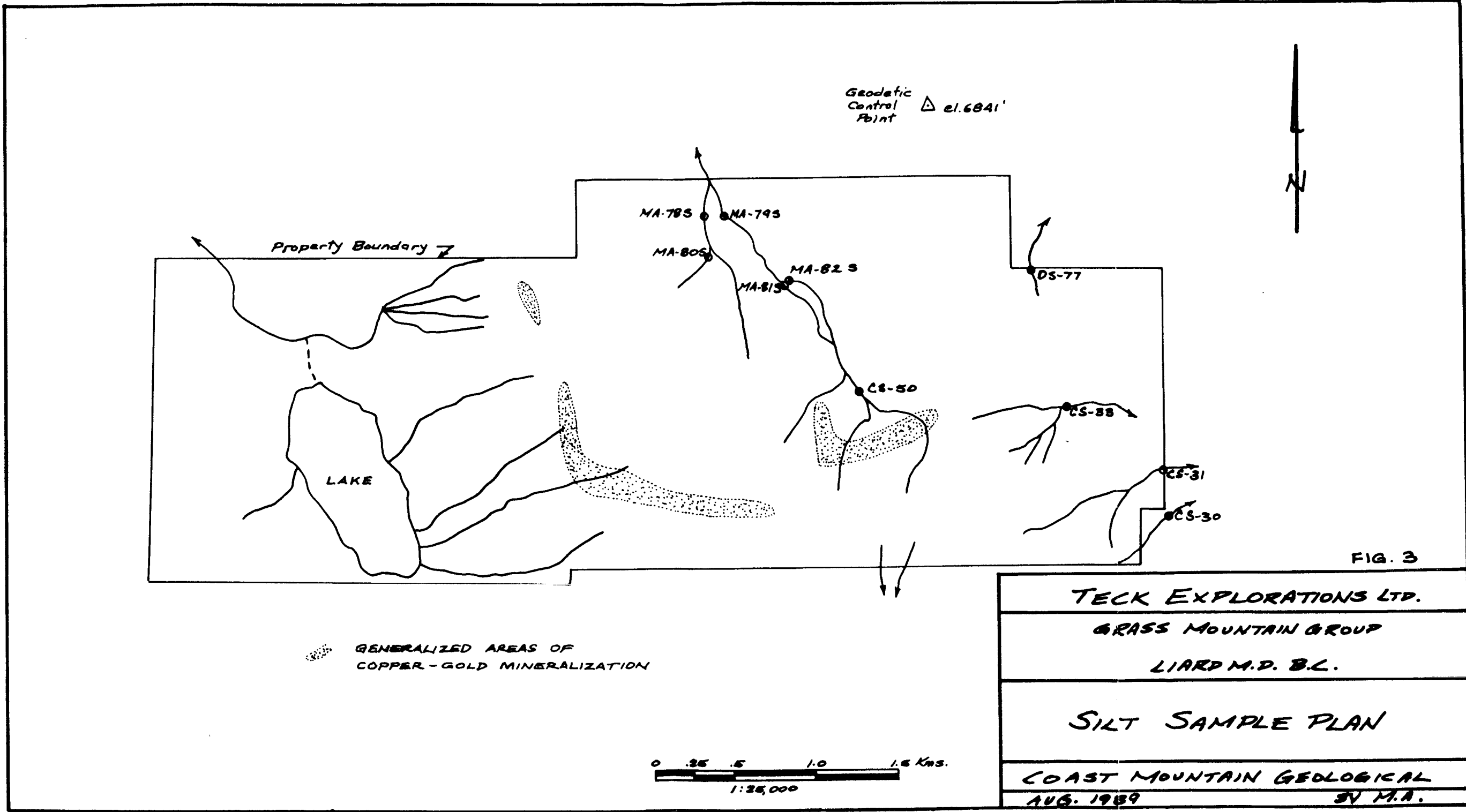
Respectfully submitted,

  
A.I. Betmanis, P. Eng.



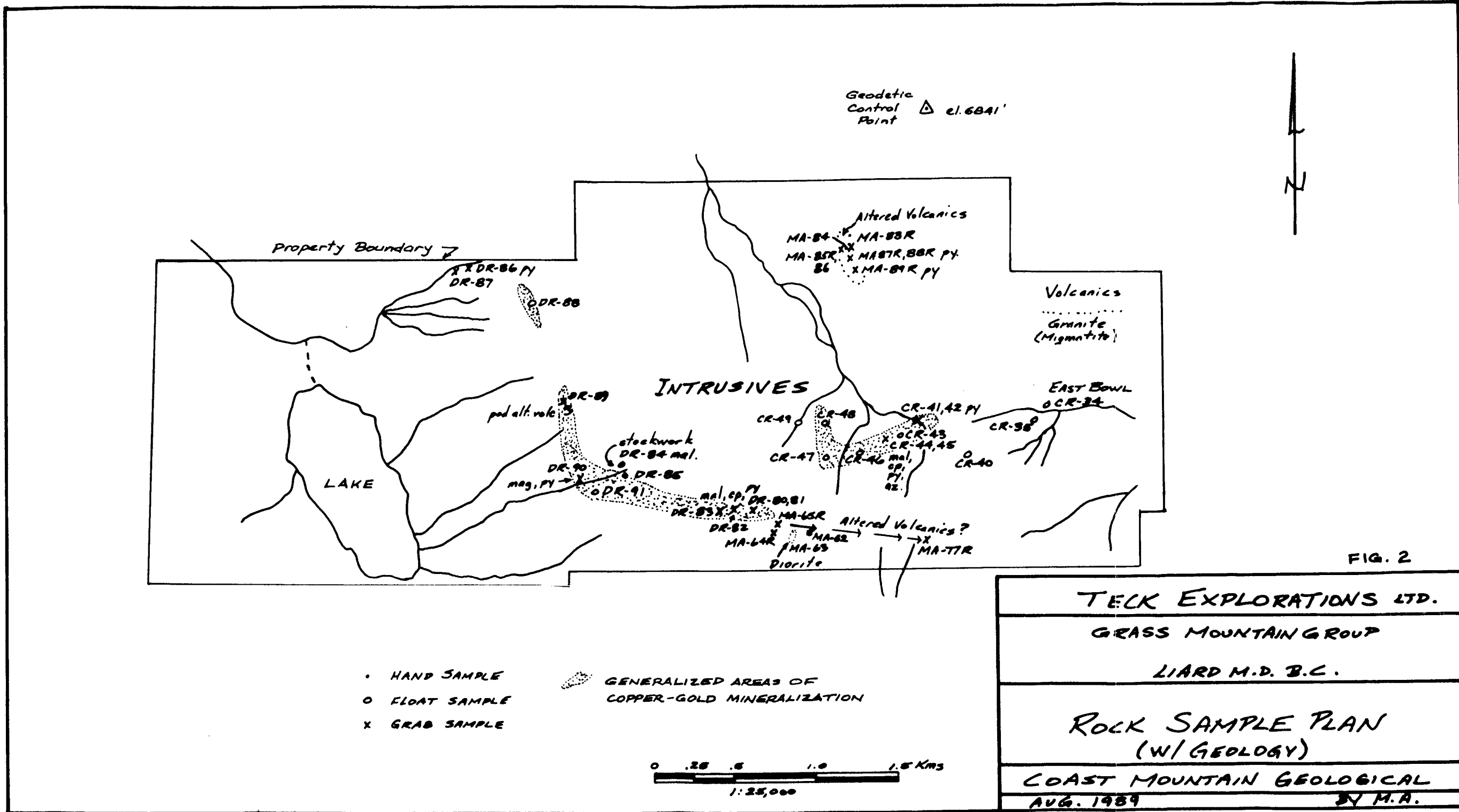
November 14, 1989

Vancouver, B.C.



19312





## REFERENCES

Donnelly, D.A. and Peatfield, G.R. (1976): **Report on Geological and Physical Work on the Kit Claim Group, Winter Creek, Telegraph Creek Area, B.C.; assessment report 6010, dated October 1976, by Texasgulf Canada Ltd.**

Kerr, F.A. (1948): **Lower Stikine and Western Iskut River Areas, British Columbia; GSC Mem. 246, pp 74-5**

Pearse, T.D. (1974): **Geological and Geochemical Report on the Kit Claim Group, Winter Creek, Telegraph Creek Area, B.C.; assessment report 5509, dated October 1974, by Texasgulf Canada Ltd.**

Souther, J.G. (1972): **Telegraph Creek Map Area, British Columbia; GSC Paper 71-44.**

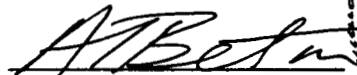
MMAR: 1916, p. K48; 1929, p. C116; 1930, p. A119

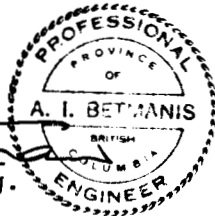
GEM: 1974, p. 340; 1975, pp. E 184-5; 1976, p. E186.

## STATEMENT OF QUALIFICATIONS

I, Andris I. Betmanis, do hereby certify that:

1. I am a geologist residing at 2600 Belloc Street, North Vancouver, B.C;
2. I am a graduate of the University of Toronto with a degree of BAsC in Applied Geology (1965);
3. I am a registered member of the Association of Professional Engineers of the Province of British Columbia, registration number 8336;
4. I have practiced my profession as an exploration geologist continuously for the past 24 years as an employee of Teck Explorations Limited or associated companies in various parts of Eastern and Western Canada, Western U.S.A., and South America;
5. I am familiar with and have visited the Grass Mountain property, and directed the exploration work on the property described in this report.

  
A.I. Betmanis, P. Eng.



**APPENDIX I**  
**STATEMENT OF COSTS**

## STATEMENT OF COSTS

Labour

M. Archambault, geologist, 4 days @ \$215/day	\$860.00
D. Ridley, prospector, 4 days @ \$190/day	760.00
C. Ridley, assistant, 4 days @ \$175/day	700.00
A.I. Betmanis, geologist, supervision, 1 day @ \$250/day	250.00

Transportation

Mobilization-demobilization, pro rated	1,592.90
Vehicle rental, 4 days @ \$30/day	120.00
Helicopter charter, 2.5 hrs @ \$655/hr	1,637.50

Accommodation

Room and board, 3 people, pro rated	750.24
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Analytical

45 rock sample analyses @ \$15 ea.	675.00
10 silt sample analyses @ \$13 ea.	130.00


Miscellaneous

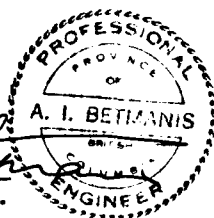
Communications, expediting, pro rated	196.16
Expendable equipment, fuel, etc, pro rated	304.40
Project preparation and summary (Coast Mountain)	200.00

Report Preparation	<u>600.00</u>
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Total	<u>\$8,776.20</u>
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The above costs were incurred and paid for by Teck Corporation on the Grass Group of mineral claims, and are applicable for assessment credits from work described in this report.

  
A.I. Betmanis P. Eng.



**APPENDIX II**  
**GEOCHEMICAL SAMPLE SUMMARY AND ANALYTICAL REPORTS**

## GEOCHEMICAL SAMPLE SUMMARY

SAMPLE N <sup>o</sup>	ppm Cu	ppb Au	ppm Ag	REMARKS
MA-89-64R	13	47	.1	Intrusive, carbonat. altered
65R	21	4	.2	As above, west end rx sample line.
66R	3	5	.2	As above, 26m E. of GSR
67R	50	1	.1	As above, 50m E of GSR
68R	62	1	.1	As above, hematite, 74m E of GSR
69R	23	5	.1	As above, rusty, 206m E of GSR
70R	47	6	.1	As above, clayey, 261m E of GSR
71R	15	14	.1	Clayey, hematite, 224m E of GSR
72R	5	3	.1	Clayey, qtz v.lts., 515m E of GSR
73R	94	26	.3	As above, 552m E of GSR
74R	170	4	.1	Cb, bleached, 582m E of GSR
75R	28	4	.1	Rusty, hem. clay, 774m E of GSR
76R	124	18	.2	Cb, qtz v.lts., 774m E of GSR
77R	20	4	.2	Cb, 880m E of GSR
83R	85	10	.2	Mafic volc, rusty qtz-cb vein
85R	239	7	.4	Volcanic, rusty cb alt, 1% py
87R	66	1	.1	Volc, cb, trace py.
88R	87	4	.1	Volc., mafic, fresh, 1% py
89R	270	5	.2	Volc, mafic, 2-3% py.
89-DR-78	3	3	.1	Cb alt. zone, rusty, 1.0m sample
79	22	34	.1	Rusty alt. zone, 3.0m sample
80	69420	47800	8.2	Alt. volc float, py, cp, mal.
81	9733	250	.6	Alt. volc, lim, 5.0m sample
82	9315	100	1.1	Alt. dio with cp, mal.
83	2681	30	.4	Alt. dio, 1.5m chips
84	101	10	.4	Rusty gouge float.
85	302	12	.2	Dio with py bbs and fractz.
86	162	1	.1	Silicified volc, 3% py, sheared.
87	71	2	.1	Bleached volc., rusty, 3.0m sample
88	1587	144	.2	Dio float, mal, minor py, cp.
89	7798	290	4.7	Volc float, cherty and mafic, mal.
90	3423	57	4.8	Alt. volc. with mag-py lenses
91	3025	37	1.3	Basic volc float with mal.
89-CR-34	107	3	.1	Talus, andesite, minor py, mag.
35	169	11	.2	Talus, alt. granite, minor py.
40	402	30	.4	Float, alt. granite, pyritic.
41	110	11	.1	Granodiorite, pyritic
42	1409	12	.8	Andesite, v. pyritic, ep alt.
43	10252	5180	7.0	Float, diorite, mal, py, cp.
44	134	43	.2	Diorite, minor py, 0.5m chips.
45	749	530	1.0	Float, ultramafic, dissem py
46	823	76	.4	Float, mafic, CuO <sub>x</sub> , cp, py, mag.
47	343	18	.3	Float, diorite, CuO <sub>x</sub> , py, po.
48	983	54	.7	Altered diorite, pyritic
49	67	1	.1	Diorite, ep, py.

SILT SAMPLE LIST

<u>SAMPLE NR</u>	<u>PPM As</u>	<u>PPB Au</u>	<u>PPM Ag</u>	<u>REMARKS</u>
MA-89-78S	71	3	.1	Moss mat silt, 2-3 m bed.
79S	72	6	.1	Silt, 3 m bed, fast flow.
80S	118	6	.2	Moss mat silt, cascading flow.
81S	62	7	.1	Silt, 2 m bed.
82S	79	1	.4	Silt and gravel, 2 m bed
89-DS-77	32	3	.1	Silt, 15 cm headwaters seepage.
89-CS-30	118	26	.6	Silt, 1.5 m bed, fast flow
31	41	7	.3	Silt, 1 m bed, fast flow
33	53	1	.1	Silt, 0.5 m bed, moderate flow
50	129	4	.3	Silt, 1.5 m bed, fast flow.



**GEOCHEMICAL ANALYSIS CERTIFICATE**

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 MM FE SR CA P LA CR NG NA TI B V AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: P1 MOSS MAT P2 SILT P3-P4 ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE

DATE RECEIVED: AUG 16 1989 DATE REPORT MAILED: *Aug 26/89* SIGNED BY: *C. Long*...D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

TECK EXPLORATION PROJECT GRASS MTN File # 89-2965 Page 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	V	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
MA-89-78S	2	71	10	76	.1	9	10	828	3.09	2	5	ND	1	126	1	2	2	50	1.93	.109	12	12	.74	153	.03	10	2.95	.02	.14	3	3
MA-89-80S	1	118	10	75	.2	8	12	799	2.76	2	5	ND	1	102	1	3	2	47	2.00	.114	14	12	.84	130	.03	8	2.84	.02	.17	1	6

## TECK EXPLORATION PROJECT GRASS MTN FILE # 89-2965

Page 2

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Tb 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
MA089-79S	1	72	3	71	.1	6	14	781	4.67	2	5	ND	3	114	1	2	2	88	1.45	.103	9	7	.79	247	.08	7	2.25	.02	.06	1	6
MA089-81S	1	52	2	70	.1	5	12	814	4.33	2	5	ND	3	141	1	2	3	80	1.57	.099	8	8	.82	271	.07	13	2.45	.02	.07	1	7
MA089-82S	1	79	2	95	.4	7	17	1013	5.46	5	5	ND	3	104	1	2	2	106	1.39	.109	10	9	.98	181	.07	6	2.63	.02	.05	3	1
89-DS-77	1	32	8	98	.1	6	11	916	3.94	3	5	ND	2	84	1	2	4	61	.75	.092	8	7	.54	341	.04	2	1.96	.02	.05	1	3
89-CS-30	1	118	7	63	.5	12	19	667	4.40	4	5	ND	6	72	1	2	5	111	.98	.082	7	13	1.02	117	.11	2	3.52	.02	.05	1	26
89-CS-31	1	41	6	95	.3	5	12	819	4.13	2	5	ND	3	83	1	2	4	79	1.24	.122	9	6	.84	257	.04	5	1.98	.01	.05	1	7
89-CS-33	1	53	5	85	.1	4	13	676	5.18	3	5	ND	3	102	1	2	3	98	1.29	.123	10	5	.97	283	.06	6	2.49	.01	.04	1	1
89-CS-50	2	129	5	123	.3	8	25	2028	6.19	7	5	ND	2	80	1	2	3	96	1.24	.117	15	9	1.04	182	.05	9	2.58	.01	.05	1	4

TECK EXPLORATION PROJECT GRASS MTN FILE # 89-2965

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Mn PPM	Co PPM	Ni 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	Hg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
MA-89-64R	1	13	2	81	.1	3	15	1606	4.48	2	5	ND	1	74	1	2	2	19	15.50	.024	2	1	5.17	9	.01	9	.33	.01	.03	1	47
MA-89-65R	1	21	7	97	.2	5	18	1900	4.91	2	5	ND	1	103	1	2	2	25	14.47	.018	2	1	5.20	3	.01	4	.25	.02	.02	1	4
MA-89-66R	1	3	2	102	.2	5	17	2404	6.01	2	5	ND	1	64	1	2	2	29	17.03	.033	4	9	3.12	13	.01	7	.34	.01	.03	1	5
MA-89-67R	1	50	5	76	.1	1	15	1581	5.54	2	5	ND	1	43	1	2	2	47	13.81	.067	5	8	.65	28	.01	12	.49	.01	.06	1	1
MA-89-68R	1	62	2	32	.1	1	6	708	2.93	3	5	ND	1	75	1	2	3	33	2.98	.066	5	4	.22	36	.01	9	.75	.01	.06	1	1
MA-89-69R	1	23	10	55	.1	2	12	1244	4.63	2	5	ND	1	41	1	2	2	35	7.86	.057	6	8	1.29	188	.01	4	.37	.02	.04	1	5
MA-89-70R	1	47	2	87	.1	4	22	1551	7.70	2	5	ND	1	33	1	2	2	67	5.48	.087	8	16	1.28	25	.01	8	.70	.02	.04	1	6
MA-89-71R	1	15	3	47	.1	3	12	890	6.14	8	5	ND	1	10	1	2	2	138	4.31	.084	10	5	.06	57	.01	19	.77	.01	.02	1	14
MA-89-72R	1	5	3	57	.1	7	15	994	5.48	2	5	ND	1	96	1	2	2	46	14.13	.008	2	15	4.51	3	.01	2	.13	.02	.01	1	3
MA-89-73R	1	94	4	40	.3	3	12	609	4.53	3	5	ND	1	39	1	2	2	57	11.33	.053	6	5	.10	5	.01	9	.52	.01	.08	1	96
MA-89-74R	4	170	2	29	.1	2	7	477	4.26	3	5	ND	1	57	1	3	2	46	5.02	.081	4	10	1.80	16	.01	9	.45	.02	.11	2	4
MA-89-75R	1	28	9	42	.1	2	8	668	4.18	2	5	ND	1	513	1	3	2	40	10.22	.067	4	4	3.49	4	.01	8	.53	.02	.03	2	4
MA-89-76R	1	124	11	109	.2	6	19	994	5.57	8	5	ND	1	59	1	2	2	94	9.63	.033	3	12	3.08	5	.01	8	.38	.02	.03	1	18
MA-89-77R	2	20	11	142	.2	4	13	1385	6.45	2	5	ND	1	109	1	2	2	45	18.38	.006	2	5	4.33	6	.01	7	.30	.02	.02	1	4
MA-89-82R	1	85	2	53	.2	1	9	1187	5.17	2	5	ND	1	91	1	3	2	60	13.31	.027	3	12	2.45	442	.01	12	.41	.01	.04	1	10
MA-89-85R	1	239	6	113	.4	4	18	686	3.26	4	5	ND	1	23	1	2	2	35	2.76	.084	5	7	1.04	10	.01	16	.40	.03	.08	1	7
MA-89-87R	1	66	2	92	.1	2	7	720	3.74	2	5	ND	1	21	1	2	2	53	2.36	.085	9	7	.43	26	.01	5	.43	.03	.05	1	1
MA-89-88R	1	87	8	34	.1	7	12	199	2.55	5	5	ND	1	32	1	2	2	63	1.35	.088	4	8	.36	28	.15	6	1.52	.10	.08	1	4
MA-89-89R	1	270	2	22	.2	9	18	222	3.58	4	5	ND	1	27	1	2	2	76	1.54	.086	3	12	.34	23	.12	11	1.90	.10	.05	1	5
89-DR-78	1	3	3	31	.1	1	6	629	2.96	3	5	ND	1	31	1	2	2	46	4.16	.076	6	4	.31	27	.01	8	.50	.02	.09	1	3
89-DR-79	1	22	2	39	.1	1	7	445	3.44	4	5	ND	1	30	1	2	2	62	2.75	.077	5	8	.25	29	.01	15	1.07	.01	.08	2	34
89-DR-80	2	69420	2	146	8.2	12	49	854	10.79	16	5	43	1	4	5	2	27	13	1.16	.001	2	7	.07	10	.01	6	.59	.01	.13	1	47500
89-DR-81	1	9733	2	52	.6	3	8	2969	7.99	2	5	ND	1	26	1	2	3	62	10.09	.057	3	8	.42	9	.01	10	2.08	.01	.17	1	250
89-DR-82	2	9315	44	80	1.1	7	49	501	6.44	8	5	ND	1	127	4	2	6	108	4.26	.079	2	10	.99	3	.09	27	3.87	.01	.01	1	100
89-DR-83	1	2681	4	136	.4	2	5	810	2.84	2	5	ND	1	42	1	2	3	61	2.95	.086	4	10	1.46	12	.08	18	2.64	.06	.03	1	30
89-DR-84	1	101	57	37	.4	6	35	109	5.22	4	5	ND	1	238	1	2	2	98	1.13	.052	2	5	.23	30	.18	5	1.21	.02	.01	2	10
89-DR-85	3	302	6	109	.2	5	39	383	7.60	2	5	ND	1	58	1	2	2	156	2.53	.069	2	11	.76	16	.06	59	2.75	.05	.05	1	12
89-DR-86	1	162	2	25	.1	5	36	244	3.11	2	5	ND	1	26	1	2	2	35	1.38	.080	5	7	.43	31	.09	7	1.82	.06	.06	1	1
89-DR-87	1	71	2	65	.1	2	5	299	3.80	11	5	ND	1	15	1	2	2	54	1.18	.075	4	8	.55	159	.10	5	2.80	.03	.04	1	2
89-DR-88	1	1587	2	34	.2	11	8	373	3.44	2	5	ND	1	45	1	2	3	106	2.22	.048	2	23	.88	26	.14	15	2.57	.07	.04	2	144
89-DR-89	1	7798	8	113	4.7	9	19	277	3.11	20	5	ND	1	25	2	2	6	54	3.65	.042	4	14	.64	10	.13	13	3.60	.03	.02	1	290
89-DR-90	1	3432	107	250	4.8	19	280	1080	22.94	128	5	ND	1	16	1	2	2	110	.53	.019	2	23	2.77	3	.12	8	4.86	.01	.01	1	57
89-DR-91	1	3025	12	75	1.3	71	371	290	22.89	28	5	ND	1	51	1	2	2	120	.96	.065	2	38	.37	7	.07	10	3.10	.08	.02	1	37
89-CR-34	1	107	21	116	.1	7	31	575	6.17	5	5	ND	1	14	1	2	2	84	2.23	.121	4	12	1.17	27	.08	9	2.74	.03	.04	1	3
89-CR-35	1	169	2	30	.2	2	15	392	3.29	2	5	ND	1	41	1	2	2	41	2.19	.092	4	7	.81	12	.08	5	2.53	.03	.01	1	11
89-CR-40	2	402	2	47	.4	5	102	508	5.21	2	5	ND	1	34	1	3	2	44	2.21	.090	4	11	.72	4	.08	11	2.34	.03	.02	2	30
STD C/AU-R	18	63	36	132	6.8	71	30	956	4.09	42	23	8	37	48	18	15	23	58	.50	.096	38	55	.87	174	.07	37	1.95	.06	.14	12	500

ASSAY REQUIRED FOR CORRECT RESULT -

## TECK EXPLORATION PROJECT GRASS MTN FILE # 89-2965

Page 4

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Tb PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Tl %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
89-CR-41	1	110	2	14	.1	5	14	258	2.75	2	5	ND	1	34	1	2	2	47	1.89	.074	4	6	.32	13	.08	5	1.55	.04	.05	1	11
89-CR-42	1	1409	6	62	.8	8	67	303	9.75	2	5	ND	1	18	1	2	2	45	.67	.064	3	7	.22	12	.07	5	1.21	.03	.06	1	12
89-CR-43	1	10252	40	200	7.0	4	42	226	4.29	2	5	10	4	36	7	2	2	44	1.12	.015	77	5	.38	15	.10	4	1.33	.02	.06	1	5180
89-CR-44	1	134	6	41	.2	11	18	301	6.72	2	5	ND	1	53	1	2	2	240	2.18	.054	2	39	.61	16	.10	13	2.51	.13	.05	2	43
89-CR-45	68	749	15	16	1.0	9	80	114	4.23	2	5	ND	1	102	1	2	2	76	1.20	.274	66	7	.24	1	.03	6	.45	.01	.01	1	530
89-CR-46	34	833	7	49	.4	9	66	283	11.86	2	5	ND	1	45	1	2	2	229	1.53	.075	19	28	.71	12	.10	10	1.87	.05	.03	1	76
89-CR-47	15	343	11	60	.3	4	22	380	4.70	2	5	ND	1	28	1	2	2	63	1.86	.122	5	7	.65	113	.11	8	1.94	.03	.04	1	19
89-CR-48	2	983	21	24	.7	6	10	251	3.15	4	5	ND	1	28	1	2	2	31	1.65	.061	3	7	.32	3	.07	2	1.71	.03	.01	1	54
89-CR-49	1	67	2	32	.1	3	9	366	2.66	2	5	ND	1	49	1	2	2	48	1.94	.083	5	6	.54	18	.08	11	1.88	.03	.04	1	1
STD C/AU-R	18	62	37	133	6.7	66	31	957	4.26	41	21	7	37	48	19	15	20	58	.50	.093	38	55	.87	174	.07	35	2.06	.06	.14	12	510

APPENDIX III  
APPLICATION TO REDUCE  
NOTICE TO GROUP  
STATEMENT OF WORK



Province of British Columbia  
 Ministry of Energy, Mines and Petroleum Resources  
 MINERAL RESOURCES DIVISION - TITLES BRANCH

DOCUMENT No. \_\_\_\_\_  
 OFFICE USE ONLY

Mineral Tenure Act  
 SECTION 21

APPLICATION TO REDUCE THE SIZE  
 OF A 4 POST CLAIM

SUB-RECORDER  
 RECEIVED  
 AUG 16 1989  
 M.R. # ..... \$ .....  
 VANCOUVER, B.C.  
 RECORDING STAMP

I, Karen L. Dunfee  
 (Name)  
1199 W. Hastings St.  
 (Address)  
Vancouver, B.C.  
687-1117 V6E 2K5  
 (Telephone) (Postal Code)  
 Valid subsisting FMC No. 280574  
 FMC Code Dunfkl

\*Agent for Teck Corporation  
 (Name(s) of Lessee(s))  
1199 W. Hastings St.  
 (Address)  
Vancouver, B.C.  
687-1117 V6E 2K5  
 (Telephone) (Postal Code)  
 Valid subsisting FMC No. 280562  
 FMC Code Tecoo

make application to reduce the under listed 4 post claims in the Liard Mining Division by dropping units in accordance with the regulation. The unit numbering system shown on the reverse of the application has been used to denote the unit(s) to be dropped.

Name of claim	Title No.	Units to be dropped	OFFICE USE ONLY Value of exploration and development to be credited to reduced claim
Grass	5150	3, 4, 13, 14, 19, 20, 24, 25	
Winter	5151	17-20 incl., 24-27 incl.	

Total \$ .....

August 15, 1989  
 (Date)  
Karen L. Dunfee



**Province of British Columbia**  
Ministry of Energy, Mines and Petroleum Resources  
MINERAL RESOURCES DIVISION - TITLES BRANCH

**Mineral Tenure Act**  
SECTION 28

**NOTICE TO GROUP**

INDICATE TYPE OF TITLE

**MINERAL**  
(Mineral or Placer)\*

DOCUMENT No. \_\_\_\_\_  
OFFICE USE ONLY

**SUB-RECORDER  
RECEIVED**  
**AUG 16 1989**  
M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.  
  
RECORDING STAMP

I, Karen L. Dunfee  
(Name)  
1199 W. Hastings St.  
(Address)  
Vancouver, B.C.

Agent for Teck Corporation  
(Name)  
1199 W. Hastings St.  
(Address)  
Vancouver, B.C.

687-1117 V6E 2K5  
(Telephone) (Postal Code)

687-1117 V6E 2K5  
(Telephone) (Postal Code)

Valid subsisting FMC No. 280574

Valid subsisting FMC No. 280562

FMC Code Dunfkl

FMC Code Tecco

request that the following mineral titles be grouped under group name Grass

Mining Division Liard

Map No. 104 G/ 14 W

Name of Claim	No. of Units	Title Number
Grass	8	5150
Winter	8	5151
Cirque	20	5152
Lake	20	5242

Name of Claim	No. of Units	Title Number

Karen L. Dunfee  
(Signature of Applicant)

\*Note: Mineral claim(s) and lease(s) cannot be grouped with placer claims and leases



**Province of British Columbia**  
**Ministry of Energy, Mines and Petroleum Resources**  
 MINERAL RESOURCES DIVISION – TITLES BRANCH  
**MINERAL ACT**

DOCUMENT No. _____ OFFICE USE ONLY
SUB-RECORDER RECEIVED
AUG 16 1989
M.R. # _____ \$ _____
VANCOUVER, B.C. REGARDING STAMP

## Statement of Work – Cash Payment

I, <u>Karen L. Dunfee</u> <small>(Name)</small> Valid subsisting FMC No. <u>280574</u> <u>1199 W. Hastings St.</u> <small>(Address)</small> <u>Vancouver, B.C.</u> <u>V6E 2K5</u> <u>687-1117</u> <small>(Postal Code)</small> <small>(Telephone Number)</small>	Agent for <u>Teck Corporation</u> <small>(Name)</small> Valid subsisting FMC No. <u>280562 Tecco</u> <u>1199 W. Hastings St.</u> <small>(Address)</small> <u>Vancouver, B.C.</u> <u>V6E 2K5</u> <u>687-1117</u> <small>(Postal Code)</small> <small>(Telephone Number)</small>
---	---

STATE THAT: [NOTE: If only paying cash in lieu, turn to reverse and complete columns G to J and S to V]

1. I have done, or caused to be done, work on the Grass, Winter, Cirque, and Lake (Grass Group)  
 \_\_\_\_\_ Claim(s)

Record No(s) 5150, 5151, 5152, and 5242

Situate at Grass Mountain in the Liard Mining Division.

Work was done from August 1, 19 89 to August 4, 19 89

TYPE OF WORK

**PHYSICAL:** Work such as trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails. Details as required under section 13 of the Regulations, including the map and cost statement, must be given on this statement.

**PROSPECTING:** Details as required under section 9 of the Regulations must be submitted in a technical report. Prospecting work can only be claimed once by the same owner of the ground, and only during the first three years of ownership.

**GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL, DRILLING:** Details must be submitted in a technical report conforming to sections 5 through 8 (as appropriate) of the Regulations.

**PORTABLE ASSESSMENT CREDIT (PAC) WITHDRAWAL:** A maximum of 30% of the approved value of geological, geophysical, geochemical and/or drilling work on this statement may be withdrawn from the owner's or operator's PAC account and added to the work value on this statement.

TYPE OF WORK <small>(Specify Physical (include details), Prospecting, Geological, etc.)</small>	VALUE OF WORK		
	Physical	*Prospecting	*Geological etc.
Geochemical sampling and prospecting (report to follow)			6,375.00
<b>TOTALS</b>	<b>A</b>	<b>+ B</b>	<b>+ C 6,375.00- D 6,375.00</b>
PAC WITHDRAWAL -- Maximum 30% of Value in Box C Only			<b>E      → E</b>
from account(s) of _____			<b>TOTAL      F 6,375.00</b>
* Who was the operator (provided the financing)? Name <u>Teck Corporation</u> Address <u>1199 W. Hastings Street</u> <u>Vancouver, B.C.</u> Phone: <u>687-1117</u>			Transfer amount in Box F to reverse side of form and complete as required.



\$ 6,375.00

I WISH TO APPLY \$ 5,600.00 OF THE  
TOTAL VALUE FROM BOX F AS FOLLOWS:

Columns G through R inclusive MUST BE COMPLETED before work credits can be granted to claims.  
Columns G through J and S through V inclusive MUST BE COMPLETED before a cash payment or  
rental payment can be credited.  
Columns not applicable need not be completed.

### Cash Payment

#### CLAIM IDENTIFICATION

G	H	I	J
CLAIM NAME (one claim/fees per line)	RECORD No	No. OF UNITS <sup>1</sup>	CURRENT EXPIRY DATE
Grass	5150	8	24/8/89
Winter	5151	8	24/8/89
Cirque	5152	20	24/8/89
Lake	5242	20	2/9/89

#### APPLICATION OF WORK CREDIT

K	L	M	N	O	P	Q	R
WORK TO BE APPLIED		EXCESS CREDIT	RECORDING FEES	PENALTY FEES	PRIOR EXCESS CREDIT BEING USED	NEW EXPIRY DATE	EXCESS CREDIT REMAINING
VALUE	YEARS		5% OF K	10% OF K			
800.00	1		40.00			24 Aug. 90	
800.00	1		40.00			24 Aug. 90	
2,000.00	1		100.00			24 Aug. 90	
2,000.00	1		100.00			02 Sept. 90	
5,600.00			280.00				
TOTAL OF K			TOTAL OF N	TOTAL OF O			

#### CASH IN LIEU OF WORK OR LEASE RENTAL

S	T	U	V	
CA.	RECORDING FEE 10% OF S	MINERAL LEASE RENTAL	NEW EXPIRY DATE	
TOTAL OF S			TOTAL OF T	TOTAL OF U

NOTICE TO GROUP No. \_\_\_\_\_ RECORDED Aug. 15, 1989

<sup>1</sup> 2 POST FRACTION. REV GROWN GRANT ARE 1 UNIT EACH

Value of work to be credited to portable assessment credit (PAC) account(s).  
(May only be credited from the approved value of Box C not applied to claims.)

Name

AMOUNT

\$775.00

Name of  
operator

1. Teck Corporation

2.

3.

I, the undersigned Free Miner, hereby acknowledge and understand that it is an offence to knowingly make a false statement or provide false information under the Mineral Act. I further acknowledge and understand that if the statements made, or information given, in this Statement of Exploration and Development are found to be false and the exploration and development has not been performed, as alleged in this Statement of Exploration and Development, then the work reported on this statement will be cancelled and the subject mineral claim(s) may, as a result, forfeit to and vest back to the Province.

*Thomas J. D'Amico*