

ASSESSMENT REPORT  
ON  
DIAMOND DRILLING  
ON THE  
GOOSMUS GROUP OF MINERAL CLAIMS  
GREENWOOD MINING DIVISION, B.C.  
BY  
A. I. BETMANIS, P.ENG.

Claim: Lexington, Lot 645  
Location: 49°00½'N, 118°36½'W  
NTS: 82E/2E  
Owner: Estey Agency  
Operator: Teck Explorations Ltd.  
Contrator: Bergeron Drilling Ltd.

part 1  
of 2

Vancouver, B.C.

May 26, 1983

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,365

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## INTRODUCTION

The following report describes part of a diamond drilling program conducted by Teck Explorations Ltd. on the Goosmus Group of mineral claims and leases (Grenoble, Teck, and Seraphim et al properties) located in southern Boundary District of the Greenwood area, B.C. The drilling program was started in December 1982 and completed in late May 1983.

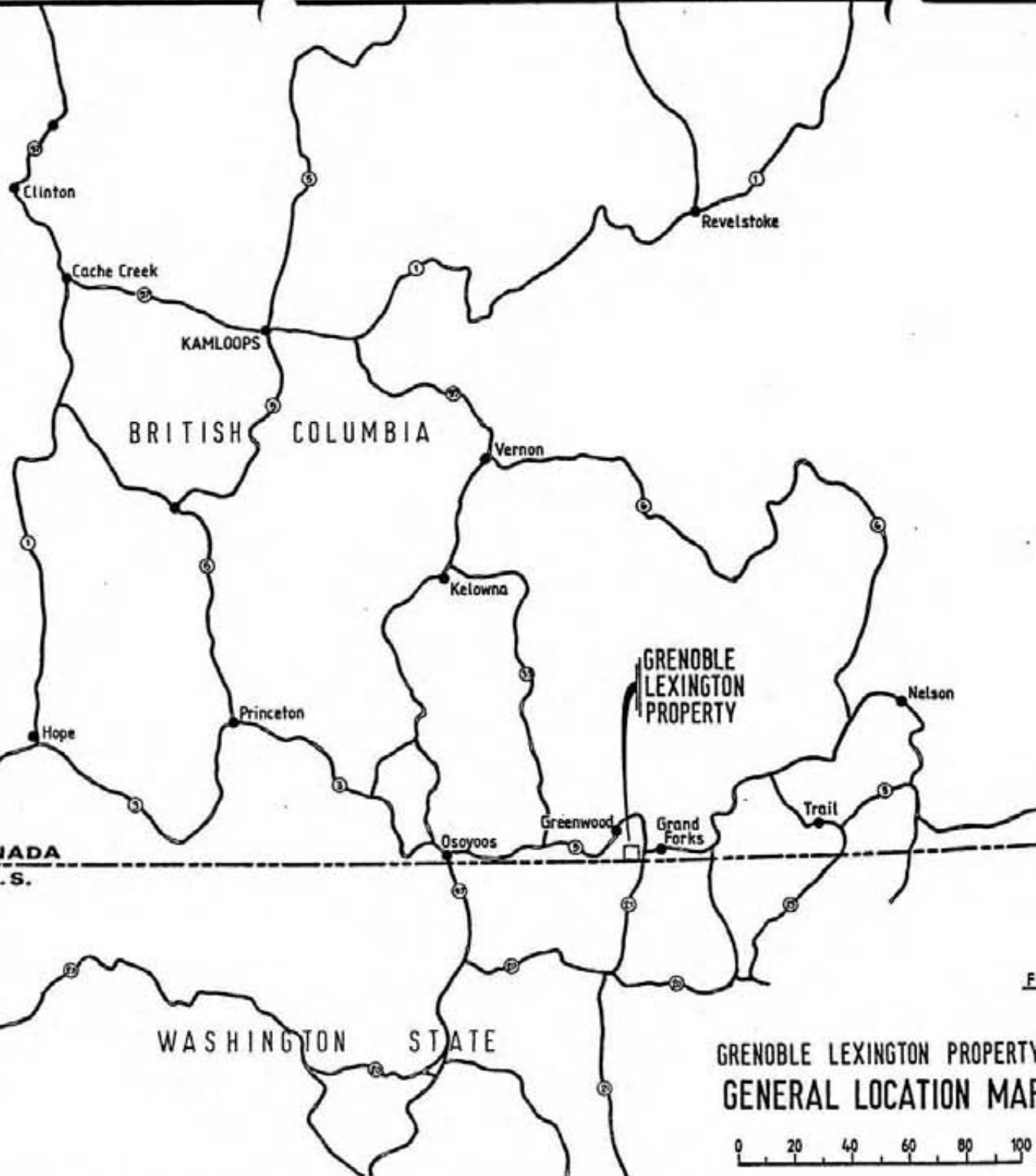
### a) Location and Access

The Goosmus Group is located between Mount Wright and the U.S. border, 10 kilometres southeast of the City of Greenwood, B.C., in the Greenwood Mining Division (see Fig. 1). The geographical co-ordinates of the approximate centre of the property are  $49^{\circ}00\frac{1}{2}'N$ ,  $118^{\circ}36\frac{1}{2}'W$ ; the NTS location is 82E/2E.

Access to the property is by good gravel road from Greenwood to the Phoenix Mine, and then southerly on the heavy-duty gravel haul road built to truck ore from the Lone Star Mine in Washington State to Phoenix, for a total distance of approximately 26 kilometres. About 0.7 km. north of the U.S. border, a dirt road best suitable for four-wheel-drive vehicles branches to the west and connects with a network of dirt roads which service all parts of the property.

### b) Property and Ownership

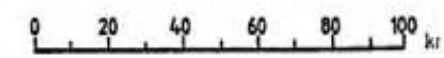
The property consists of 13 Crown-granted claims, 15 located and reverted single unit claims, and two located claims of 29 units total which comprise the Goosmus Group, and four mineral leases. The property, other than the Teck wholly-owned claims, is under option to Teck Corporation. The Goosmus Group claims are shown in Fig. 2, and the claims and their ownership are listed in Appendix III.



CANADA  
 U.S.

WASHINGTON STATE

FIG  
 GRENOBLE LEXINGTON PROPERTY  
 GENERAL LOCATION MAP



The drilling described in this report was done on the Lexington Crown-granted Lot 645.

c) Previous Work

The City of Paris, Lincoln, and Lexington Mines, which are a part of this property, were active between 1892 and 1901, during which time a total of 113 metres of shaft sinking, 1,580 metres of drifting and crosscutting, and 213 metres of raising were done, principally on the City of Paris and Lincoln. Recorded production is 2,100 tons grading 3.12% Cu, 0.40 oz./ton Au, and 2.1 oz./ton Ag. Further minor production from high-grade gold-silver veins was realized in the mid 1930's.

Since then the claims now comprising the property have been controlled by or optioned to King Midas Mines Ltd., Lexington Mines Ltd., Silver Standard Mines Ltd., Granby Mining Company Ltd., Aalenian Resources Ltd., Grenoble Energy Ltd., and most recently Teck Corporation.

Up to the start of the most recent diamond drilling program by Teck, numerous geophysical and geochemical surveys have been performed, bulldozer trenches cut, and 11.8 kilometres of diamond drilling and 5.3 kilometres of percussion drilling done on the property.

d) Current Work

Bergeron Drilling Ltd. of Greenwood, B.C. were contracted to drill additional holes to explore (a) extensions of previously indicated mineralized zones, and (b) geologically favourable but inadequately tested areas. Drilling was done using wire-line diamond drilling equipment to recover NQ core.

The program was started on December 1, 1982, and was completed on May 18, 1983. A total of 3,228.7 metres was drilled. The core is stored in wooden core boxes on private property in Greenwood. Location of drill hole collars is shown on Fig. 3.

The drill hole described in this report was drilled to locate the extension of mineralization encountered in an earlier hole, TG-81, which averaged 1.485% Cu and 0.494 oz./ton Au over 4.8 metres.



#### PROPERTY GEOLOGY AND MINERALIZATION

The property and area have been mapped by N. B. Church, and his findings are published in the 1970 edition of Geology, Exploration and Mining in British Columbia.

The property is underlain by a north-northwest trending and gently easterly dipping dacite body of approximately 200-metres thickness lying between argillites of early Mesozoic or late Paleozoic Attwood Formation to the west of gneissic and schistose basement metamorphic rocks to the east. Both contacts of the dacite are intruded by serpentinite. Late diorite irregularly intrudes all of the above rocks.

From recent petrographic studies and examination of drill core, the dacite has been identified as a series of andesitic to dacitic fragmental and welded tuffs. Although variations between tuff beds have been identified, no specific marker bed has been recognized.

Mineralization occurs as pyrite and chalcopyrite variably disseminated in the tuffs, and as a concentration of semi-massive to massive pyrite and chalcopyrite at or near the lower serpentinite-tuff contact. Gold and silver values occur with the sulphides, and are more common with chalcopyrite than with pyrite.



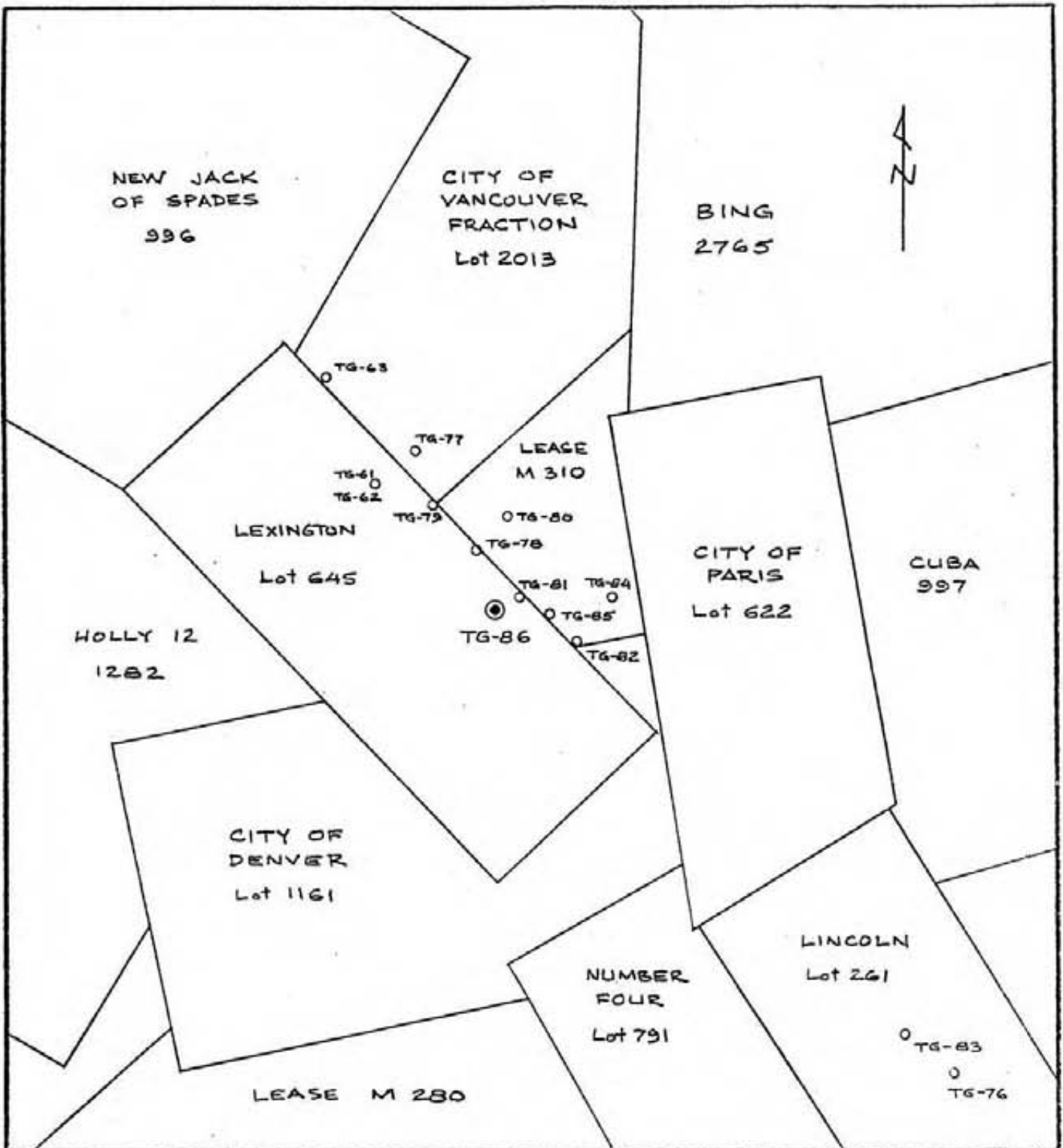
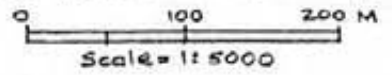


FIG. 3

- DRILL HOLES 1982-83
- ⊙ DRILL HOLE REPORTED
- └ CLAIM BOUNDARY

TECK EXPLORATIONS LTD.  
**GOOSMUS GROUP**  
 GREENWOOD MINING DIVISION, B.C.  
 NTS 82E/2E  
 DRILL HOLE LOCATION MAP



RESULTS OF DRILLING

Drill hole TG-86 was drilled 23 metres S60°W from drill hole TG-81. A detailed geological log with assays from TG-86 is given in Appendix IV.

DDH TG-81 intersected a strongly chloritized zone containing semi-massive chalcopyrite a few metres below the serpentinite contact. A similar chloritic zone was intersected in DDH TG-86 at approximately the same horizon, but had a predominance of pyrite mineralization over chalcopyrite. A comparison of the zones is shown below.

DDH TG-81					DDH TG-86				
Width, m.	Oz./t Au	%Cu	Rock	DEPTH	Rock	%Cu	Oz./t Au	Width, m.	
			Dacite	70.2	51.0	Dacite			
			Serp.	71.4					
			And.	75.2		Andesite			
			Serp.	78.0					
4.8	0.494	1.485	Chl. Zone	82.8	62.0				
			Serp.		67.6	Serp.			
					70.9	Chl. Zone	0.658	0.059	3.4
						Serp.			

It appears that the two chlorite zones correlate, and that the decrease of chalcopyrite and increase of pyrite in DDH TG-86 corresponds with a decrease of gold as well as copper values.

CONCLUSIONS

The same mineralized zone as located previously by drill hole TG-81 was intersected in drill hole TG-86, but in the fairly short distance of 23 metres, horizontally there was a marked decrease of copper and gold mineralization. This has been shown also by other drilling in the proximity of TG-81, and indicates that the high-grade intersection of hole TG-81 is localized.

Respectfully submitted,



A. I. Betmanis, P.Eng.

May 26, 1983

Vancouver, B.C.

REFERENCES

- Betmanis, A. I. (1983): Report on the 1982/83 Diamond Drilling Exploration Program, Grenoble and Seraphim et al Properties, Greenwood Mining Division, B.C., dated May 6, 1983; private report for property owners.
- Church, N. B. (1970): B.C. Department of Mines reports Lexington and Richmond properties in GEM 1970, pp 413-427.
- Page, R. O. (1982): Assessment Report on Diamond Drilling on the Goosmus Group of Claims, Greenwood Mining Division, B.C., dated June 18, 1982.
- Phendler, R. W. (1982): Exploration Report on the Grenoble/Lexington, Seraphim et al Properties, Greenwood Mining Division, B.C., dated August 25, 1982; private report for Grenoble Energy Ltd.

AUTHOR'S CERTIFICATE

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

I am a geologist residing at 1988 Arroyo Court, North Vancouver, B.C.;

I am a graduate of the University of Toronto with a B.A.Sc. degree in Applied Geology;

I am a registered member of the Association of Professional Engineers of the Province of British Columbia;

I have practiced my profession in geology and mineral exploration for the past 18 years, and since 1970 in British Columbia for Teck Explorations Limited;

I supervised the diamond drilling program on the Goosmus Group of claims described in this report between December 1982 and May 1983.

May 26, 1983

  
A. I. Betmanis, P.Eng.

APPENDIX I

PERSONNEL AND DATES

A. I. Betmanis, P.Eng. of Vancouver, B.C. supervised the program, laid out the drill sites and logged all of the drill core.

K. Pasco of Greenwood, B.C. was employed on a temporary basis as required to split drill core for assay purposes.

Bergeron Drilling Ltd. of Greenwood, B.C. was the drilling contractor.

Min-En Laboratories Ltd. of North Vancouver, B.C. performed the assaying of samples from DDH TG-86.

The duration of the drilling program was from December 1, 1982 (first hole collared) to May 18, 1983 (last hole completed); and the dates of drilling of the hole described in this report were May 12 to May 18, 1983.

APPENDIX II

DRILLING COSTS

Under the drilling contract between Bergeron Drilling Ltd. and Teck Explorations Ltd. dated November 25, 1982 for the drilling of NQ wireline core holes on the Goosmus Group in the Greenwood area, the basic cost of drilling to 1,000 feet (304.8 metres) depth was \$23.00/ft. (\$75.46/m). The cost of drilling claimed in the Statement of Exploration and Development for the work covered by this report is the basic cost, and does not include bulldozer work for site preparation, assaying supervision, accommodation, etc., which are also applicable to assessment cost requirements.

DDH TG-86, 96.9 metres @ \$23.00/ft. = \$7,314.00

  
A. I. Betmanis, P.Eng.

APPENDIX III

GROUPING NOTICE

AND

NOTICE OF EXPLORATION AND DEVELOPMENT



MINERAL ACT  
 FORM 1

SUB-RECORDER  
 RECEIVED

JUL 31 1981

M.R. v 16:199e5 1120m  
 VANCOUVER, B.C.

NOTICE TO GROUP

Mining Division GREENWOOD Location GOOSMUS CREEK

Name of group GOOSMUS GROUP Map No. 82 E/2

We, the undersigned owners\* of the following adjoining claims, desire to group them according to the provisions of the Mineral Act:-

NAME OF CLAIM	No. of Units	Record No.	Month of Record	SIGNATURE OF OWNER*	Free Miner Certificate No.
New Jack of Spades	1	996	April	Alan J. Reed <i>Alan J. Reed</i>	203597
Cuba	1	997	April		
St. Lawrence	1	1000	April	Agent for	
Holly 1	1	1271	Aug.	E.J. Harrison	209612
Holly 3	1	1273	Aug.		
Holly 12	1	1282	Aug.		
Excelsior	1	1351	Oct.		
Bing	20	2765	June		
Bruce	9	2766	June	Teck Corporation	203630
Goosmus Fr.	1	2767	June		
City of Paris C.G.	1	L 622			
Lincoln	1	L 621			
Number Four	1	L 791			
City of Vancouver Fraction	1	L 2013			
Lexington	1	L 645			
City of Denver	1	L 1161		Estey Agency	209966
N.D. Des Mines Fr.	1	L 1095			
Oro	1	L 614			
Oro Fraction	1	L 1096			
Puyallup	1	L 1152			
Golden Gate Fr.	1	L 955			
LSE 1	1	1286	July		
LSE 2	1	1287	July	W.G. Hallauer, Jr.	184036
LSE 3	1	1288	July		
LSE 4	1	1289	July		
St. Maurice Fr.	1	2577	Dec.	W.E. McArthur, Jr.	199351
Jean Fr.	1	25229	May	R.H. Seraphim	191290
Jean #11	1	25420	June		
New St. Maurice	1	L 682		W.E. McArthur, Jr.	199351
Richmond	1	L 2918			

\* May be signed by agent on behalf of owner.



<b>C. DRILLING</b>	(Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	<b>COST</b>
96.9 metres. NQ diamond drilling in one hole (TG-86)		.. \$7,314.00 .....
<b>D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL</b>	(Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
.....		
.....		
.....		
TOTAL OF C AND D		.. \$7,314.00 .....

Who was the operator (provided the financing)?

Name ... Teck Explorations Ltd. .....

Address ... 1199 West Hastings Street .....

Vancouver, B.C. V6E 2K5 .....

<b>Portable Assessment Credits (PAC) Withdrawal Request</b>		<b>AMOUNT</b>
Amount to be withdrawn from owner(s) account(s):		
	<b>Name of Owner</b>	
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)	1. ....	.....
	2. ....	.....
	3. ....	.....
	4. ....	.....
TOTAL WITHDRAWAL		.....
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		.....

I wish to apply \$ 3,200.00 ..... of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

Two years to each of:

..... New Jack of Spades, record number 996 (April) .....

..... Cuba, record number 997 (April) .....

..... St. Lawrence, record number 1000 (April) .....

..... Ten years to Jean Fraction, record number 25229 (May) .....

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

	<b>Name</b>	<b>AMOUNT</b>
In owner(s) name.	1. ....	.....
	2. ....	.....
	3. ....	.....
In operator(s) name (party providing the financing).	1. ....	.....
	2. ....	.....
	3. ....	.....

..... A. P. [Signature] .....

(Signature of Applicant)

APPENDIX IV

DRILLING LOGS

DDH TG-86





# TECK EXPLORATIONS LTD.

 PROPERTY: GRENOBLE

 LOCATION: LEXINGTON LC45

## DIAMOND DRILL LOG

 HOLE NUMBER: TG-86

 SHEET 3 OF 5

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION	GRAPHIC LOG DEPTH IN METRES	STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'Y VY WT. IN GRAMS CORE %	SAMPLE NUMBER	ASSAY RESULTS						
									g/t Cu	oz/ST Au	oz/ST Ag			m Sulf	
As above				As above		4511	$\frac{3.10}{102}$								
47.80-51.00 Dacite similar to above but lighter gray and finer grained		48		Fract ~10/m Py 0.5-1% increasing as streaks w. chloritized fract // foliation		4816	$\frac{2.97}{37}$								
51.00 ANDESITE; fine grained, med. gray, occasional angular chloritized frags ~ 0.3cm φ, frequent fine chl frags, w/ to mod. magnetic, upper contact chloritized w. cb streaks for 0.2m., occasional qtz-cb v/b		51		Fract ~ 10/m. Py < 0.3%		5121	$\frac{2.68}{88}$								
53.30 inc. friper phenoxth or fine Alite frags		54													
54.00-54.25 qtz-cb alt., almost resembles dacite. 54.25 andesite as above but frequent qtz-cb v/b.				As above No sulphides		5425	$\frac{2.84}{95}$								
56.50 ANDESITE, similar to above but slightly coarser grained w. inc. angular chl frags., occasional qtz-cb v/b		57													
As above				As above.		5730	$\frac{2.57}{84}$								
		60													
As above				As above Inc. fract to >20/m near lower contact		6035	$\frac{2.24}{73}$								
62.00 SERPENTINITE, med. grained near contact w. magnetite and cb alt.		63		Gouge and lost core at contact 62.30-62.60 occasional small ep streaks				62.0 1472.1 62.0	0.182	0.012	0.01				1.0





