PROSPECTING
GEOLOGICAL REPORT
on the
BIRTHDAY CLAIM

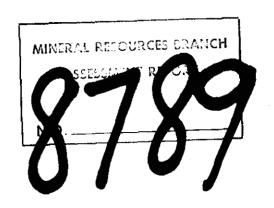
Osoyoos Mining Division 82 E/4W 49⁰07'N 119⁰50'W

Owner:

P. Folk

Operator: Teck Explorations Limited

By P. Folk, P. Eng.



December, 1980

Vancouver, B.C.

TABLE OF CONTENTS

			-	<u>.</u>	aye	
INTRODUCTION						
Location and	d Access				1	•
History					1	
Claim					1	
Work Done					2	
			·			
GEOLOGICAL SUI	RVEY					
Geology					2	
Mineralizat	ion		* .		3	
Drill Resul	ts				3	
			•			
CONCLUSIONS					4	
RECOMMENDATIO	NS .				4	
ITEMIZED COST	STATEMENT				4	
APPENDIX I	Statement of Qualifications	•	, ♦ - ₹	•		9
APPENDIX II	Diamond Drill Hole Logs					
Figure 1	Location Map				ing Pag	
Figure 2	Detailed Location Map				ing Fig	
Figure 3	Drill Hole Location Map			Follow	ing Pag	e 2

INTRODUCTION

Location and Access

The property is located near Joe Lake, a small alpine lake about 24 kilometers southwest of Keremeos, B.C. Indian Reserve 13 bounds the claim on the north.

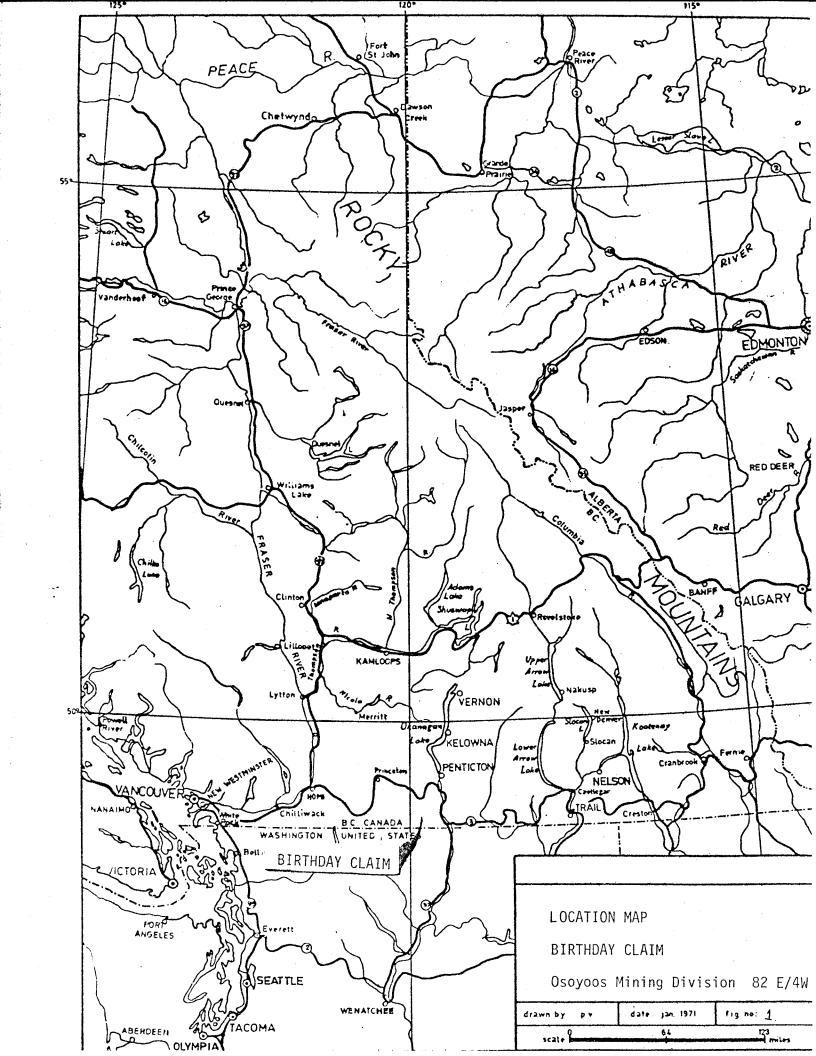
A logging road running through the Indian reserve comes within about 5 kilometers of Joe Lake at about 7,200 feet (2,195 meters) elevation. The terrain is alpine grazing land with sparse timber and moderate relief.

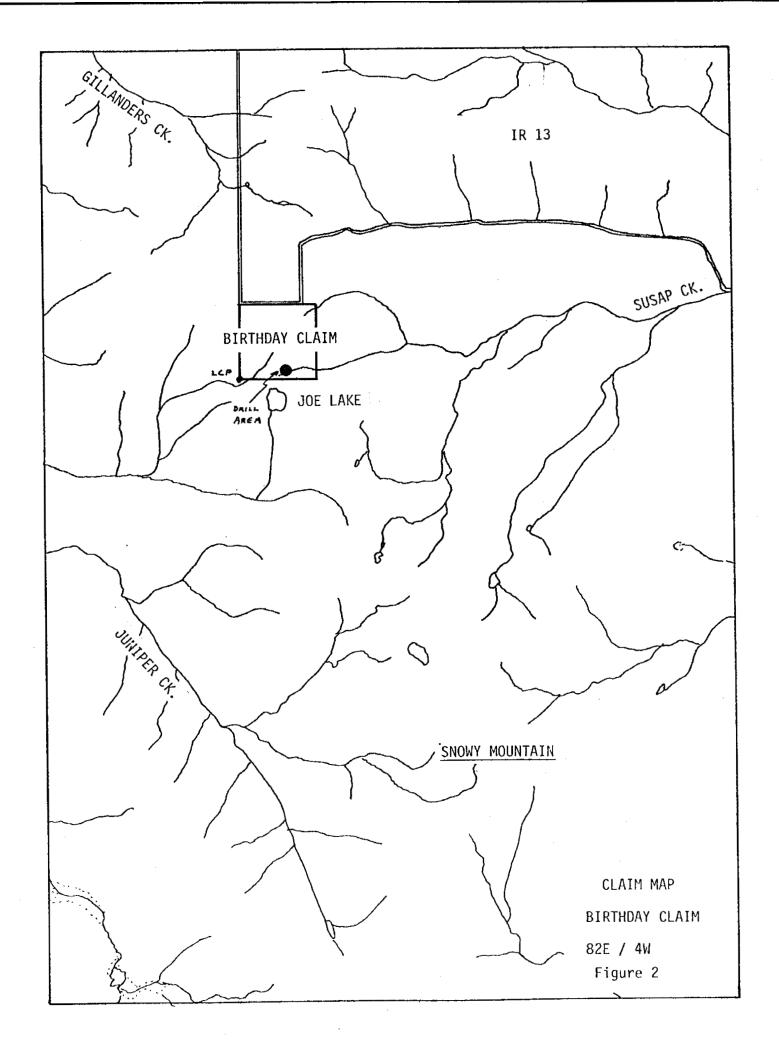
History

Ron Schneider discovered scheelite mineralization in 1978 and optioned the claims to Dankoe Mines. Subsequently an agreement was signed with Black Giant Mines which conducted a drill program in the summer of 1979. The claims were unwittingly allowed to lapse in September of 1979 without filing assessment work. In November of 1979 P. Folk restaked the key ground as the Birthday claim.

Claim

The work which is described in the following report was done for assessment purposes on the Birthday claim, 4 units, Osoyoos Mining division, record number 952 recorded December 19 of 1979. The location is shown on Figure 2.





42, 300 N

1F5

MINERAL RECOURCES BRANCH
ASSESSMENT REPORT

BIRTHDAY CLAIM DIAMOND DRILL HOLE DATA (METRES)

#	LENGTH	DIP	AZIMUTH	NORTHING	EASTING	ELEVATION
_	115.2 83.5	-45 - 4 5	265 265	42,234.98 42,231.64	87,683.32	
3 4	76.2 113.4	-45 -30	265 220	42,219.96 42,217.84	•	2158.98
•	39.6	-30	1 42	42,286.98	87,547.01	2190.98
6 7	33.2 128.0	-45 -45	163 65	42,286.64 42,315.68	•	

• #3

女7

• #4

42, 200 N

• #1

10 20 30 M

F16, 3

Work Done

Core from seven BQ diamond drill holes which had been drilled in 1979 were re-logged, split and sampled. Accurate survey data and geological notes provided by E.T. Lonegran, P. Eng., were used as a guide to compile the resulting information.

GEOLOGICAL SURVEY

Geology

The claim is underlain by Triassic or earlier Independence Formation chert and greenstone and Shoemaker Formation chert, tuffs and greenstone. In addition, a brief examination by the author indicates that a small volume of very hard, siliceous, possibly Tertiary tuff-breccia and a small dyke-like body of porphyritic diorite of unknown age are present. A large granodiorite pluton of the Nelson batholith (Mesozoic) intrudes the Independence and Shoemaker formations about 2 kilometers east of the claim.

The strata has undergone folding with the porphyritic diorite having been emplaced along the north-south near vertical axial plane of a poorly defined anticline. A thin sill(?) of rhyolite porphyry has also been noted on surface and in drill core.

Metamorphism has affected the strata on a regional basis producing a pervasive foliation. Chlorite, epidote, pyrite and thin skarn bands are present on a regional scale. Geology has not been mapped in detail.

Mineralization

Scheelite occurs in narrow bands and lenses within pyritized and silicified strata. Small occurrences of scheelite bearing epidote skarn and scheelite bearing quartz veinlets are widespread.

The altered diorite porphyry also contains minor amounts of disseminated and quartz-fracture related scheelite.

The best scheelite occurs in exposures along a small ravine to the north of Joe Lake. These occurrences take the form of high grade pods or lenses which have assayed up to 0.61% W over 8 feet (2.4 meters), 0.5% W over 10 feet (3 meters) and close to 2% W in selected samples. Unfortunately detailed mapping of these occurrences has not been done. The showings have not been properly tied in to the drill holes, the geological structures, the different rock types or each other.

Drill Results

Undocumented drilling done in 1979 was relogged by the author in November of 1980. Mineralized sections of core were split and half was assayed for gold and silver. The core was examined by U-V lamp and fluorescent sections were assayed for tungsten. Drill logs and assays are included in the appendix. Drill hole locations from notes supplied by E.T. Lonegran, P. Eng., are plotted on Figure 3.

A total of twenty-one drill core samples were assayed. Pyritized sections of core were assayed for gold and silver with negative results. All results were less than .002 oz Au/T and .06 oz Ag/T.

The best tungsten assays were 1.42% W over 1.6 meters near the top of hole #6 and 0.19% W over 4.5 meters in hole #5. Both of these intercepts are in the area of a surface showing with an assay of .5% W over 3 meters reported.

CONCLUSIONS

Tungsten is present on the claim in unknown amounts. The gold and silver content of pyritized and mineralized material on the claim is negligible.

RECOMMENDATIONS

- Detailed mapping of the mineralization to tie the various showings to each other and the drill holes.
- Regional mapping to determine if mineralization is related to intrusive activity and/or a postulated anticlinal structure.
- 3. More prospecting.

ITEMIZED COST STATEMENT

P. Folk, P. Eng. November 10, 11, 12 3 days at \$100/day	\$300.00
R. Schneider, C.E.T. November 11, 12, 13 3 days at \$90/day	270.00
Assays 21 assays	247.25
Report Preparation	150.00
	Total \$967.25

=====

APPENDIX I

STATEMENT OF QUALIFICATIONS

- I, Peter G. Folk, P. Eng., certify that:
- 1. I graduated with a B.A.Sc. degree in geological engineering from the University of British Columbia in 1971.
- I have worked since graduation as an exploration and mine geologist at various locations in Canada and the United States.
- 3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- 4. The work described here was done under my direct supervision.

P. Folk, P. Eng.

APPENDIX II

DIAMOND DRILL HOLE LOGS

GRID 42,234.98N B7,697.67 E DIAMOND DRILL LOG

AZIMUTH 265° DIP -45° EL. 2/47.54 M

GRAPHIC LOG

WOLLD WILL STATE HOLE No. ____ SHEET | OF 8 DEPTH 115.2 M. REC'VY ASSAY RESULTS WT. IN SAMPLE SPECIFIC GRAVITY METRE BLOCKS ROCK TYPES AND ALTERATION CORE No. KUSTY GREEN ALTERED, FOLIATED 1%-PY 7.2 VOLCANIC SOME OTZ 8.7 3.7 LIM , Py MINOR EP. 10.4 11.8 71 #1 13.4

PROPERTY.	Tol	CAKE	
CRID			

HOLE NO. _____ SHEET__Z OF______

_	ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION SI DEPTH TYPE IN CONTROL STRUCTURE	MINERALIZATION AND STRUCTURES .	SPECIFIC		REC'VY WT. IN GRAMS CORE %	SAMPLE No.	ASS	AY F	RESULT	s	
-	1 j		Ч		16-7							
3 —	/.		1)		183							
. — 1	ALTERED BROILLITE, EP SOME QTZ.	19.8	Py bissem 1%.		20-3						-	•••••
+-	1.		1		25.0							
7-	1,		r _s		26.7							·
O_		29.0			299							

PROPERTY	SOE	LAKE	
GRID			

HOLE No. 1 SHEET 3 OF 8

-		GRAPHIC LOG	-				REC'VY WT. IN GRAMS	SAMPLE	 ASS	AY F	RESULT	s	
	ROCK TYPES AND ALTERATION	ALTERATION DEPTH COMETRES DIMETRES DISTRUCTURE	MINERALIZATION	AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	CORE	No.					
30-	MIXED ARGILLIYE + VOLC. SCHISTOSE, Ep, 972.		1% PY			31.7							
33 -			/:			33.Z							
						34.7							
36		34.6				36.6							
	SILICEOUS ARGILLITE		1% py			384							
39	11					407				-			
		40.2	BROKEN GROUND			41.	57						
42	Λ.		1%-2% 84				20%						77
	,	448	,			14.8	7						
45													

PROPERTY _	JOE	LAKE	
GRID			-

HOLE No. _____ SHEET 4 OF B

ROCK TYPES AND ALTERATION	METRES DINA NETRES DINA STRUCTURE	MINERALIZATION AND STRUCTURES	υ , -	1 1	REC'VY WT. IN GRAMS	SAMPLE	AS	SAY	RESULT	s	
A 20 21 21 21 21 21 21 21 21 21 21 21 21 21	ALTERATION DEPTH CONTROL IN CONTROL STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE %	No.					
	46.3			15.7							
ALT. ARGILLITE WITCH		-1772 E P. Y		46.3 46.9 47.2							
,		· · · · · · · · · · · · · · · · · · ·		48.0	ı.						
.,				49.3							
				50.1							
/ 1	52.4	4		51.7							
HARD OLOCKY ARGILLITE	11 ' 1	NO SULFIDES		53.0							
				54.3							
		1		523							-
				231 138							

PROPERTY -	SOL	LAKE	
GRID			

HOLE No. 1 SHEET 5 OF 8

OCK TYPES AND ALTERATION ALTERATION PER THE ALTERATION	MINERALIZATION AND STRUC	CTURES STORE S	No.	
	11	4.0		
			. 1 1	
		62.8		
1.	/.	63.7		
43		65.5		
MARD ARGILLITA MINOR RP. INCREASING SILICA AND VEIN PTZ.	P4 1-2%.	67,2		
		68.9		
•	1,	7a.1 70.7		
	2 6	28-1		
73.	3	73.0		
SILICEOUS ARGILLITE.	Py. ADVNDANT 2-3%			

PROPERTY	Tot	cath	
GRID			

HOLE No. 1 SHEET 6 OF 8

	GRAPHIC				REC'VY WT. IN GRAMS	SAMPLE		ASSAY	RESULTS	
ROCK TYPES AND ALTERATION	ALTERATION DEPTH IT IN COMETRES G STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE %	No.	Au.	Aq		
١,		Po, Py 2-3 %.		75.3			02/5	02/7		
				7. 6						
8		·,		DB3			,			
· · · · · · · · · · · · · · · · · · ·	79.9		-	79.9		79.9				
B) AS ABOVE WITH EP SOME 972.		11				#165 3M	.001	.02		
	83.0			B2.9	1	82.9				
4 AS ABOVE		BROKEN		ļ	190%	₩	 			
4 AS ABOVE LIMESTONE		FAULT ZONIE ?		844	33%	#166 3.1 m		.02		
	86.9	, <	_	84.1	,	86.0				
ARGILLITE WITH EP		NO SULFIDES		88:-	100%	#155 (5.BM	.001	,01		
)0						90.2				

PROPERTY	JOE	LAKE	
CRIO			

HOLE No. _____ SHEET ____ OF _____

	GRAPHIC LOG				REC'VY WT. IN GRAMS	SAMPLE	ASSAY	RESUL	τs
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH IN O IN O METRES S	MINERALIZATION AND STRUCTUR	SPECIFIC	METRE	CORE %	No.			
DIORITE PORPHYRY	924 9:4	1% 04		914					
DIORITE PORPHYRY OTZ. VEINCETS		1-27-04		92.9		t			
7		z-3%. PY		93.6		·			
				94.1 95.1 95.4					
) r		z-3% py		96-3					
ALT ARG EP MINOR GTZ	984	1% PY		79.4					
ARG SOME EP POSSIBLE FINE BE	108.3	NO SULFIOES 145-55 FOL		100.	100%				
li .		MINOR SCLFIDES		103.	-				

PROPERTY	JOK	CAKR	
GRID			

HOLE No. _____

	GRAPHI ≥ LOG	w w		1	REC'VY WT. IN GRAMS	SAMPLE	ASS	AY :	RESULT	s	
ROCK TYPES AND A	GRAPHI LOG LEW THE WORLD	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE	CORE %	No.					
AS ABOUE		AS BAOVE)	064							
b				e 7.9							<u> </u>
•		, t		'09. 4							
1				110.6							_
,				ብշ. ኒ							
				10-7							
		EOH 115.2		115.2							
											_
									-		-

HOLE No. 2 PROPERTY JOS LAKE PROPERTY JOS LAKE

GRID 42,231,64 N 87683.32 E DIAMOND DRILL LOG

AZIMUTH 265° DIP - 45° EL 2155.19 M DEPTH B3.5 M. ACK TYPE ALTERATION D DEPTH OF US METRES DIAG REC'VY ASSAY RESULTS WT. IN SAMPLE ROCK TYPES AND ALTERATION MINERALIZATION AND STRUCTURES CORE No. OB. SILICEOUS AUT. ARGILLITE 410 MIGHLY FRACT 15 LIM 1%- PY SILICYOUS ALT ARGILLITE AND GASY CHERT. EP 4 7.6 11 101 10.6 ALT. ARGILLITE ABUNDANT PO. SCHELLITE 60% SKARN, ALT. ARGILLITE, EP Py 1-2% POSSIBLY SOME QUARTZITE # 161 .001 .01 .02

PROPERTY _	50€	LAKE
GRID		

HOLE No. 2.
SHEET 2 OF 6

	GRAPHIC LOG	ш 2		ŀ	REC'VY WT. IN GRAMS	SAMPLE	ASS	SAY I	RESULTS	5
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH O IN O METRES D	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE %	No.				
AS ABOVE		PY		16.2	75%					
				/7.5° 17.7						
	17.7			17.7	[
ALTERED ARGILLITE, QTZ, Ep, LIM		MM								
					50%					
	20.4			204			i			
SILICIFIED ARGILLITA		Py, Po		21-3	-					
Ep				22.3						
·					90%					
				241						
					- 0/					
					20%					
				26.7						
	27.7			21.7						
SCHISTOSE ARGILLITE		NO Py. MINOR HM	TO FIRM WARRIE	18-7						
Ep		GROKEN			70%					
				29.6						
	111			1						

PROPERTY	JOE	LAKE	
GRID			

HOLE No. 2 SHEET 3 OF 6

	GRAPHIC LOG				REC'VY WT. IN GRAMS	SAMPLE		ASSAY	RESULT	s
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH T IN O METRES D STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE	No.				
AS ABOVE				31.3 31.3						
	32.0			32. 2			:	i.		
SILICEOUS VOLCANICS LITTLE EP, NO 972		1-2% py		33,8	95%					· · · · · · · · · · · · · · · · · · ·
, , , , _				34.9	l					
				35.8)					
		v		34.8						
ALT VOLCE-PTB. Ep	38,0	MINOR BY			100%					
>	39.3			396					 	
HARD SICILEOUS ALT VOLC		FINE SURIOSS		4/1						
"		11		43	5					
	45.0			79.9	3					

HOLE No. Z SHEET 4 OF 6

	GRAPHIC LOG				REC'VY WT. IN GRAMS	SAMPLE		ASS	AY I	RESULT	\$
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH C IN O METRES D	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE	No.	Au 02/1	Ag	W %		
		QTZ. PY, PO TRACES MOST		46.3		# 157 1.5m	.001	.01			
QTZ. SKARN. EP ALT. ARGILLIFE OF SOME QTZ EP		Po, Py		425							
8		••		f8.8					 		<u></u>
_				50.3							
//		"		51.2							
-	54.0		-	53.6		54					
ALTERED DIORITH MIXED WITH BRGILLITE EP, 9TZ.		Py-1-2% SCHEELITE TRACES		55,4							
7				ه.دح		4.5	.001	.01			
<i>i</i> (585		585					
D				600		#158	.00)	.01			

PROPERTY	
GRID	

HOLE No. 2 SHEET 5 OF 6

	GRAPHIC LOG W	A	٠٠		REC'VY WT. IN GRAMS	SAMPLE		ASS	AY F	RESULTS	;
ROCK TYPES AND ALTERATION	ALTERATION DEPTH COIN IN COMETRES SOMETHES STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE %	No.	Au	1-0/	W		
AS ABOVE		AS ABOVE					02/T	0267	%		
						122					
				62.9		/			<u> </u>		
				63.7		#163 3m	.001	.01			
				65.2		65.2			,		
		' (4.4		-66.4					
				67.4		# 157	,001	.01			
	69.3			68.3		69.3					
ALT. ARGILLITE MINOR QTZ. STRINGERS		Po, Py 1 1/2		69.5 70.4	1						
y(217(11/06 kg)					100%	,					
				71.5					ļ		
		; ,		73.4	1						
	75.0			7.5.4	-		-	-	 	++	
							1				

PROPERTY	
CRID	

HOLE No. 2
SHEET 6 OF 6

OCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	۱c ۲۲		REC'VY WT. IN GRAMS	SAMPLE	AS	SAY	RESULT	\$
	ROCK TYPE ALTERATION DEPTH DIN O METRES D	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCK	CORE %	No.				
				76.5						
				7 <u>8</u> ,0						
	>9.6			79.6						
BROKEN ALTERAD VOLC		NO SHEIDES, 972		06						
MINOR				Bu.B						
LIMONITA				82.0						
		EOH B3.5		B3.5						
			_ _				-			
					<u> </u>					

HOLE No. 3 PROPERTY JOE LAKE

GRID 42, 219.96 N 97, 636.04 E DIAMOND DRILL LOG AZIMUTH 265° DIP -45° EL 2158.98

GRAPHIC LOG BELLON LOG BELLON MINERALIZA

OCK TYPES AND ALTERATION LOS BELLON MINERALIZA

OCC TYPES AND ALTERATION LOS BELLON MINERALIZA

OC REC'VY WT. IN GRAMS ASSAY RESULTS SAMPLE ROCK TYPES AND ALTERATION MINERALIZATION AND STRUCTURES CORE No. 4.6 O. B. LIM ALT. VOLC. FINE MARC PHENOCRYSTS 7.9 9.8 RUSTY ALT. VOLC. 0.4 50% 130 50%

PROPERTY _	5.6	LAKE	
GRID			

HOLE No. 3 SHEET 2 OF 6

	GRAPHIC LOG	**************************************			REC'VY WT. IN GRAMS	SAMPLE		ASS	AY	RESULTS	
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH C IN O METRES D STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE %	No.	Au	RA			
RUSTY ARGILLITE		LESS THAN 1% Py		15:2 mg/dt	6%		93/m	osfr			
DIORITE -PORPHYRY VUGGY GTZ, EVHEDRAL PY FINE SPECKS UNIDENTIFIED GREY MINERAL	18.0	972. VEIN. Po 1-2% PY		149		#167					
J;		1-2°/- py		21.6		7m	.001	.02			
ARGILLITE, EP	24.7	No PY -90°		21.7 25.3 25.9	72%	25	-				
ARGILLITE NO EP	26.8	NOPY		26.8 22.7 28.0							
	39.6		-	23.5							

PROPERTY .	JOE	LAKE	_
CRID			

HOLE No. 3

DOCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	U >		REC'VY WT. IN GRAMS	SAMPLE	,	ISSAY	RESULT	s	
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH TO IN O METRES S STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE %	No.					
ALTERAD ARGILLITE SOME Ep MINOR 9TZ				30.5							
<u> </u>				3z.6							
<i>)</i>		MINOR IPY		34.1							
				754							
ALT, ARGILLITE EP	36.6	Po SCHEELITE		36.6							
PROBABLE = FINE BIOTITE - HORNEELS	38.7			38/ 38-7	95%						
HIGHLY ALT MAG. EP OTZ. STRINGERS		Py, BO MINOR		40.7	-						
				41.1							
?.		′1		43.0							
5											
		-	1		1						

PROPERTY	JOE	CAKE	
CDID			

HOLE No. 3

ROCK TYPES AND ALTERATION	GRAPHIC LOG L	MINERALIZATION AND STRUCTURES	ح ن		0111111	SAMPLE	AS	SAY	RESULT	s
AUCK TIFES AND ALTERATION	ROCK TYPE ALTERATION DEPTH CO IN CO METRES SO STRUCTURE	WINEHALIZATION AND STRUCTURES	SPECIFIC	METRE	CORE %	No.				
AS ABOVE BANDS OF FINE BI	1 1 7 I	Py, 10		45.3						
BANDS OF FINE BI		·.		16.0						
	1000			47.5	-					
ARGILLITE , MINDA EP NO 972.	485			121						ļ
ARGILLITE , MINDA EP NO 9TZ. POSSIBLY VOLC. ORIGINAL TAXTURES DESTROYED BY METAMORPHISM				50.6	100%					
					100%			·		
	1	= 97Z		53.6						
11				54.9	.2/					
				56.0	10)%	,				
1;				57.6						
				58.5	100%					:
				59.4						

PROPERTY _	50€	14	<u>r.e.</u>
GRID			

HOLE No. 3 SHEET 5 OF 6

ROO	CK TYPES AND ALTERATION	ALTERATION DEPTH 1M STRES DIH	MINERALIZATION AND STRUCTURES	CIFIC VITY	WETRE BLOCKS	CORE	SAMPLE No.		ASS	AY I	RESULT	s	
4.0	<u> </u>	ALTERATIC DEPTH IN METRES STRUCTUI		SPE	WET BLO	%							
bb	AS ABOVE												ı
				- 1	61-0								
					61.6								
	CIGHT GREY RHYOLITE	62.2			62.8								
b3	5% FELD PHENOS - 72 MM				54.0					<u> </u>			
	IN SILICEOUS GREY MATRIX	64.3			646								
	HIGHLY ALTERED SEDOMENTS REDDISH BROWN POSSIBLY ALT. DOLONITE. ALSO												
	SOME CONGLOMERATE WITH BIOTITE GRANDDIORITE												
&	ACT, VOLC. AND				45.8		ļ						
~	BRGILLACEOUS PEBBLES												
		67.4			67.4			1	! !				
	Can Glem	67.7	MINOR OTZ. PY		'					ļ			
	1		1 Fa.		686								
<i>G</i>) —	HARD SILICEOUS		PY, POMINOR.										
	AKGILLITE				70.1	122 3							
									ŀ				
					71.6								
>2			3				 	 			+		
	11				73. 2	100%		ļ					
						100							
					74 *	,	}						
75					74.7	<u> </u>		 			 	ļ	
, 0													

PROPERTY _	200	LAKE	
GRID			

HOLE No. 3

 ROCK T	TYPES	AND	ALTERATION	Y ON O	RAPHIC LOG LOG NIN OELLH	TURE	MINERAL	IZATION	AND	STRUCTURES	FIC TY		REC'VY WT. IN GRAMS	SAMPLE	ASS	AY F	RESULT	s	
				ROCK T	DEPTH NETRE	STRUCTURE					SPECIFIC	METRE	CORE %	No.					
				-			76.2 EO	· ·				76.2							
															:				
	,																	-	
									<u></u>										
·	-	<u></u>									-								-
												_							<u> </u>

HOLE No. 4 PROPERTY JOS LAKE GRID 42, 217. 84 N 87,637.08 E DIAMOND DRILL LOG ROCK TYPES AND ALTERATION THE STATE MINERALIZA DEPTH 113.4 M REC'VY ASSAY RESULTS WT. IN GRAMS SAMPLE MINERALIZATION AND STRUCTURES CORE No. AA 02/f 4a HARD, ALT. VOLC. VERY LITTLE BY NO GTZ. MINOR EP HM, MINOR PY 1.9 SILICIFICATION 6.7 3% Py " 7.3 8.2 ٠, 10.7 11.9 NTHN GTZ. WETH PY AND GRAY E170 .01 . 00 14.0

PROPERTY JOE	LAXE
GRID	

HOLE No. 4

	GRAPHIC LOG W			1 1	REC'VY WT. IN GRAMS	SAMPLE	ASSAY RESULTS					
ROCK TYPES AND ALTERATION	ALTERATION D DEPTH CAN IN OOA METRES DIH STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE	CORE	No.	An	Aq				
· ·				15.6			22/5	02/1				
				6.Z 14.5								
				18.3								
				128								
				21.3	-						_	
				22.4								
	23.7			23.7	ł							
ALT VOLC NO 972		Lim, Py		67								
ALI VOICE NO GTZ				25.4								
		7500		26.8	1		<u> </u>					
				i	95%							
7		',										
				29.3								
					98%							
	29.7			297								

PROPERTY	Jok	LAKE
CRIO		

HOLE NO. 4 SHEET 3 OF 8

-		GRAPHIC Z LOG w					REC'VY	041457 5		ASS	AY F	RESULT	s	
	ROCK TYPES AND ALTERATION	ALTERATION DEPTH CONTROL NETRES DINESTRURE	MINERALIZATION	AND STRUCTURES .	SPECIFIC GRAVITY	WETRE BLOCKS	WT, IN GRAMS CORE %	SAMPLE No. 29.7	Au	A	W			
30-	SILICAOUS DIORITH-PORPHYRY	32.6	2-3% PY				75%.		.00)	.02	%.02			
33 -	ALTERED VOLCANICS, FOHATED POSSIBLY BIOTITE BANDS		1-27/PY OTZ 34.2-34.7 TR CP			33 <i>5</i> 3 1 -7								·-
<i>3</i> 6 -		39.0				32.3 32 8 33.6								
39	DARK GREEN ALT VOLC EP MINOR GTZ.		No Pg			405								
12	SILICE DUS ARGILLITÉ ÉP NO 972	42.4	FY			43.1								
45														

PROPERTY.	KOE	LAKE
GRID		

HOLE No. 4

ROCK TYPES AND ALTERATION	ALTERATION SO DEPTH TO BE IN CONTROL SO DEPTH TO BE IN CONTROL SO DEPTH TO BE IN CONTROL STRUCTURE	MINERALIZATION AND STRUCTURES	2 1 1 1 1		REC'VY WT. IN GRAMS	SAMPLE	ASS	SAY	RESULT	rs
	ROCK TYPE ALTERATION DEPTH F IN C METRES G		SPECIFIC	WETRE BLOCK	CORE %	No.				
AS ABOUR		Py 1%								
:					100%			<u> </u>		
				47.2 925						
	48		1 1	480						
DARK SILICEOUS ARGILLITE		STORE OF ZIPY, CP PO		402 46.5	-) 		
		1% Py								
				49.† 5.32	i					
				30.5				-		
·,			1 1	52.7 52.7						
				25.						
		•		59.3						
1,				55.2 55.5						
				56.7						
HAGA AC	57.7			57.7						
HARD ARGILLITY SOME Ep		MINOR PY			100%					
				58,B						
								ļ	_	

PROPERTY.	JOE	LAKE	
GRID			

HOLE No. 4

ROCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	ے د		V.,,,,,,,,,,	SAMPLE		ASS	AY F	ESULTS	3
NOOK TITES AND ALLEMATOR	ALTERATION DEPTH COMMETRES DAMESTRES STRUCTURE		SPECIF	METRE BLOCKS	CORE %	No.	Au	Aa	W		
45 ABW€				61-6			02/T	02/4			
<u></u>	62.2			62.2							
SCHISTOSA ALT. VOLC ABUNDANT EP SEARN		NO PY, NO QTZ.		63.1							
	65.0			65.0							
HARD ALT. YOLC. Ep.		NO PY		67.1	100%						
				70-1							
HIGHLY ALT. EP SKARN	71.1.			70.7 71-1							
	72.8	No SYLFIDES		72.B	20%	-72.8					
RHY OLITE FORTHYRY 5% GTZ - 5% FELD PHENOCRYST -> ZMM IN LIGHT GREEMSH SILICEOUS APHANITIC MATRIX		50° FOL. NO SYLFIDES		74.7 v.0	85%	#169 (2.8 m	.001	.01			
SILICEBUS AF HAPPETIC METERIX				v. 0		75.b					

PROPERTY.	50E	LAKE	
CRID			

HOLE NO. 4

		GRAPHIC					REC'VY WT. IN GRAMS	SAMPLE	 ISSAY	RESULT	s
ROCK TYPES AND	ALTERATION S	ALTERATION DEPTH T METRES D	MINERALIZATION	AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE	No.			
AS ABOVE						75.6	i				
AS ABOVE ALT VOLC	NO 972.		·.								
						7 <i>8-0</i>					
						7& L					
						<i>9</i> 0. Z					
						80.8					
•											
			``			82.3 8 2.6					
		1				83.g					
4.			t ţ			85G					
					- 1 1	86.5 86.9					
			6			_					
•						883					
						89.7					
)		-									
								1	ļ		

PROPERTY.	JŒ	LAKE	
CRID			

HOLE No. 4 SHEET 7 OF 8

DOCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	ح ن		REC'VY WT. IN GRAMS	SAMPLE		ASS	AY	RESULT	s
ROCK TYPES AND ALTERATION	ALTERATION DEPTH TO IN OF METRES D	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCK!	CORE	No.	Au	Ag			
AS ABOVA	91.4	NO SULFIDES		90.2 90.8 91.4			02/1	02/			
EPIDOTA SKARN BROKEN GROUND,	93.0	BROLEN GROWD		¶ 3. <i>0</i>							
QUARTZITE (?) FINE GRAINED HIGHLY SILICEOUS FOLIATED, MIDTILE BIOTITE AS FINE BANDS		MINORPY		93.6 94.5							
AND STREAKS				958				-			
				96.5		97.2					
)			987	80%	# 160	.001	.01			
9		<i>'</i> .		99.1		J100.2					
				101.5	88%						
^		1.		102.5							
				1043	9.5%						
25											

PROPERTY	_JoE	LA	<u> </u>
GRID			

DOCK T	voer A	ND	ALTERATION	GF WÕ	RAPHIC LOG	MINERALIZATION	AND	STRUCTURES	υ >		REC'VY WT. IN GRAMS	SAMPLE		ASS	AY	RESULT	·s
RUCK 1	TPES A	IND	ALIERATION	ROCK TY ALTERAT	DEPTH T WE IN STRUCTURE	MINERALIZATION	ANU	STRUCTURES	SPECIFI	METRE BLOCKS	CORE %	No.					
A\$	ABOV	E,								1053							
					:					106.4							
·	<u></u>									107.6							
										109.1 109.7							
					.												
					Α					112,8							
			and the state of t		EOH	113.4				13.4	<u>.</u>		:				٠
														,			
																ļ	
-					İ												:

PROPERTY JOE LAKE HOLE No. __5 GRID 42, 286, 98 N 87, 547. 01 E DIAMOND DRILL LOG DEVTH 39.62 M AZIMUTH DIP - 90° EL 2190.98 REC'VY ASSAY RESULTS WT. IN SAMPLE MINERALIZATION AND STRUCTURES ROCK TYPES AND ALTERATION CORE No. 0.8. 0.6 AUT. YOLC. EP BLEBS 1-2 % Py 4.7 4.3 1-2% PY PY, Po ALT. ARGILLITES OR BASALT. Ep + VUGGY 5.3 100%. CHONITIC 9TZ # 153 .001 .01 0.19 TR. SCHEENTE 2.3 1-2 % py 4.5 m EP + RTZ 100/ 8.8 9.8 PY, Po WUGGY ALT. FINE VOLCANICS 10.4 VERY LITTLE VEIN QTZ 1-2/1/19 /3. I

PROPERTY _	JOE	GAKE
CRID		

DOCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND CTRUCTURES	۷ ۶		REC'VY WT. IN GRAMS	SAMPLE		ASS	AY	RESUL	rs
ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH CINE NETRES D STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE %	No.	An	Aq	W		
AS ABOVE	16.8	1-2% PY		15.B 16.2			02/7	02/T	%		
8	10.2			17.4							
RUSTY ALT VOLC. Ep		1-2%, BY		18.4							
.)				20.5							
	22.3			22.7		-22.2					
BROKEN RUSTY OTZ WITH EP, MIXED ALT VOLC. AND		Py, 4m			15%						
PORPHYRITIC ALT. DIORITE, POSSIBLY BI ALT.	25,9			29.7 25.6	50%	7#15C 5.5m	.001	.05	. 01		
RUSTY DIOKITE	,	py , LIM		26.7	90%	11					
The second secon	28.0			27.7	90%	27.7					
ARGILLIT E EP NO QTZ.		NO LIM		23.0		#154	.00)	.01			
30						131.7					

PROPERTY	JOE LAKE
COID	

GRAPHIC LOG	MINERALIZATION AND STRUCTURES	υ >		WT. IN	SAMPLE		ASS	AY F	ESULT	\$	
OCK TYI NLTERATI DEPTH IN METRES	MINERALIZATION AND STRUCTURES	SPECIFI	METRE BLOCKS	CORE	No.	An	Ag	-		_	L
		_			(02/5	03/1				
<u> </u>			31.4 31.7	90%	31,7						
	Py.		32.0 32.3	90%							
	·.		ļ	10%	#152 4m.	.001	.02				
			36-3	 	35.7	<u> </u>					-
			332	90%						ļ	
			38.1	95%	3.9m	.001	.01				
	- EOH 39.63		39.6	25%	139.6						
		-					-				\vdash
			+	 		+	+		 		+
	ROCK TYPE ALTERATIC OEPTH IN WETRES	MINERALIZATION AND STRUCTURES WELLES WELLES AND ALECTORES AND	MINERALIZATION AND STRUCTURES SELECTION AND STRUCTURES DISCONTINUES SELECTION AND STRUCTURES DISCONTINUES SELECTION AND STRUCTURES DISCONTINUES DISCO	# LOG # MINERALIZATION AND STRUCTURES 1	MINERALIZATION AND STRUCTURES	## MINERALIZATION AND STRUCTURES	## LOG ## MINERALIZATION AND STRUCTURES ## ## CORE NO. Au. 31.1	## LOG ## MINERALIZATION AND STRUCTURES	## LOG ## MINERALIZATION AND STRUCTURES ### ### SAMPLE 10	## LOG ## MINERALIZATION AND STRUCTURES WINERALIZATION AND STRUCTURES WINERALIZATION AND	DOG MINERALIZATION AND STRUCTURES

HOLE No. PROPERTY JOE LAKE GRID 42, 286.64N 87, 546.77 E DIAMOND DRILL LOG SHEET ____ OF ______ DEPTH 33.22 M AZIMUTH 163° DIP -45° EL 2190.94 REC'VY ASSAY RESULTS SAMPLE SPECIFIC GRAVITY METRE BLOCKS ROCK TYPES AND ALTERATION MINERALIZATION AND STRUCTURES CORE No. 0.B 1.0 1-2% PY, LIM ALT. VOLC WAVYBANDING ALT VOLC 45° QTZ-BANDING, SCHERUTE. 5.8 1.42 .001 KPIDOTE SKARN PARR ALT. VOLC EP MINOR PTZ ry, um mx 17.84

PROPERTY -	JOX:	1 1 1 1 1	·
CRID			

ROCK TYPES AND ALTERATION	ACTERATION DO DEPTH CONTROL DE	MINERALIZATION AND STRUCTURES	FIC		REC'VY WT. IN GRAMS CORE	SAMPLE No.	<u> </u>	ASSAY	RESU	LTS
			SPECIFIC	METR	%					
AS ABOVE MINOR OTZ 4 EP	16-5	BAXEN 45 ABOVE - 45°								
		MINOR PY								
	27.	ATZ, BARREN' MINOR PY								
	24.1	MINOR PY								
RUSTY ALT. VOLC. VERY LITTLE OT = DECREASING ALT. AND METAMORPHIC DANDING		/Y								
		1,								
RUSTY, BLACK, ALT. VOLC SOME EP	28.4									

PROPERTY	JOE	CALG
GRID		

ROCK TYPES AND ALTERATION	ALTERATION OF THE STATE OF THE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY		REC'VY WT. IN GRAMS CORE	SAMPLE No.	ASSA	Y R	ESULTS	
AS ABOVE	4 g z 2		S	3.40				-		
		FOLK & NOS WITH GIMON FRACT	5	35,2						
								·		

HOLE No. ________ PROPERTY JOE LAKE

GRID 42,315.68N 87,594,37 E DIAMOND DRILL LOG SHEET _ OF _9_ AZIMUTH 65° DIP-45° EL 2199.77 DEPTH 128.0 M REC'VY GRAPHIC ASSAY RESULTS WT. IN SAMPLE MINERALIZATION AND STRUCTURES ROCK TYPES AND ALTERATION CORE No. OVER BURDEN 1450 LIMBUITE. MANDED ALTERED ARGILLITE? MINOR PY MINOR PY AS ABOVE MINOR BY 12-

PROPERTY_	JOE	LAKE	
CRID			

	GRAPHIC	AMMEDIA (74710M) AMD 675467485		REC'VY WT. IN GRAMS	SAMPLE	ASSAY	RESULTS
ROCK TYPES AND ALTERATION	ALTERATION DEPTH CONTRIBE	MINERALIZATION AND STRUCTURE	SPECIFIC GRAVITY	CORE %	No.		
AS ADOVE INCREASED 9TZ, Ep		1-2% PY					
AS ABOVE		1-2% 84					
ALTERED VOLLANICS LIGHT GREEN, RP, SOME 972	21:0						
DARR ALTERED ORGICLITES WITH EP	2.3.9		-	95%			
ALTERED VALGANICS, EP A FEW BLABS PY							
D							

PROPERTY	TOE	LAKK	·
GRID			

ROCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION	AND STRUCTURES	٠٠		REC'VY WT. IN GRAMS	SAMPLE	ASSA	Y F	RESULT	s
ALIZAMION	ROCK TYPE ALTERATION DEPTH O IN O METRES D	WINEAGLEATION	AND STRUCTURES ,	SPECIFIC	METRE BLOCK	CORE %	No.				
AS ABOVE, AUT. VOLC.		minor by				_					
OMATZITE? BANDED SILICEOUS FINE GRAINED ROCK WITH MOTTLED, BANDED TEXTURE WITH FINE BILL)	33.0										-
·											
						<u>. </u>					
11											
',											
. 1											

PROPERTY.	SOE	LAKE
GRID		

DOCK THOSE AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	υ >		REC'VY WT. IN GRAMS	SAMPLE		ASS	AY	RESULT	s	
ROCK TYPES AND ALTERATION	ALTERATION DEPTH TO IN O METRES DE STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC	METRE BLOCKS	CORE %	No.						
ALT. VOLC. SOME RP		A FEW ALEBS PY										I
0	47.6											
SILICEOUS ALT VOLC. SOME EP. MEDIUM TEXT.		MINDE PY					:					;
ROS EN ALTERED VOLCAMACS COARSE FRAGMENTS	19.5	21										
ALTERED VALCANICS. SILTCEOUS BANDS WITH EP	5%-6	ч										
DARK GREEN ALTERED VOLCANICS . LITTLE EP	522											
COAKSE TEXTURE	54.7_									!		
FINE TEXTURE ALTERED VOLCANICS SOME Ep		/:										
7			-			 				 		
AS ABIVE		. "										
<i>50</i>												

PROPERTY .	SOE	LAK	E	
GRID				

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION SO DEPTH DA IN CONTROL METRES SOLD STRUCTURE	MINERALIZATION AND	STRUCTURES	SPECIFIC GRAVITY		REC'VY WT. IN GRAMS CORE %	SAMPLE No.	ASSAY	RESUL	TS
AS ABOV€	\$ 0 * S	bles py		й 0	3 0					
	63.6									
COARSE ALTERED VOLC. BANDS RP		9 MINOR			!					
AS ABOVE		By MINOR								
,										.
DARK ALT. ARGILLITES UR BASALT A LITTLE EP	70.7	WTTLE PY 20 CM OTZ 600 / BEOS								
AS ABOVE		MINAR PY AS ABOVE								
									_	

PROPERTY.	JO4	LAXE	
CDID			

بي.	GRAPHIC LOG			İ	REC'VY WT. IN GRAMS	SAMPLE	ASS	AY	RESULT	S
ROCK TYPES AND ALTERATION	ALTERATION DEPTH C IN C METRES G ATRUCTURE	MINERALIZATION AND STRUCTURES .	SPECIFIC	METRE	CORE %	No.				
AS ABOVE		AS ABOVE								
DARK HIT. VOLC. MED.	78.6	MINOR PY								
GRANDD SOME EP SMALL BLEBS GTZ.										
AS ABOV€		1/								
COARSE ALT VOLC. EP BANDS	94.7	NO HMONITE								
ALT VOLC AND HAGILITE VERY LITTLE EP MLT. VOLC. BANDS EP	\$7.5 \$8.4	BY MIMOR.								
							_			

PROPERTY.	JOE	LAKE	
GRID			

HOLE No. 7
SHEET 7 OF 9

)	ALTERATION DO DEPTH OF THE STRUCTURE OF THE STRUCTURE OF THE STRUCTURE		SPECIFIC	METRE	REC'VY WT. IN GRAMS CORE %	SAMPLE No.	A	SSAY	RESULT	rs
AS ABOVE CONSPICUOUS QTZ-EP		PY MINOR								
AS ABIVE	36,0	Py-minor								
FAIRLY MASSIVE, FOLIATED ALT VOLCANICS WITH FO AND MINOR QTZ		MINOR PY								
		Y								
i		• 1								
5										

PROPERTY -	JOE	LAKE
CRIO		

ROCK TYPES AND ALTERATION	GRAPHIC LOG	MINERALIZATION AND STRUCTURES	ر ي ک		REC'VY WT. IN GRAMS	SAMPLE	 ASS	AY	RESULT	s
OCK TIPES AND ALTERATION	ALTERATION DEPTH CONTROL IN CONTROL METRES D	WINEKALIZATION AND STROSTORES	SPECIFIC GRAVITY	METRE	CORE %	No.	 			
ALT, VOLC. SOME REDDISH BANDS EP		Py mwor								
	109.0							<u></u>		
PARK GREEN ALT, VOLC ACTINOLITE, EX NO 9TZ.		PY MINOR								
ij		11								
) i		' (
1,		lr								
	119.5									

PROPERTY _	JOE	LAKE	_
GRID			

HOLE No. 7
SHEET 9 OF 9

ROCK TYPES AND ALTERATION	GRAPHIC LOG LOG	MINERALIZATION AND STRUCTURES	υ >		REC'VY WT. IN GRAMS	SAMPLE	Α	SSAY	RESULT	rs
TOOK TITES AND ALTERATION	ALTERATION DEPTH TO IN O METRES D	MACAZIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE	CORE %	No.				
ALT. VOLC. REDDISH BANDS	12103	minor by								
ALT VOLC EP		ey, po, are								
MEDIUM GRAEN										
	124.0	market and an								
ALT. VOLC. MUCH EP IN VUGS. REDDISH ALT BLACK SCHIST Y BANDS		MINOR PY			95%					
45 ABOVE,		11								
		1280 604	<u></u>	128.0						
· · · · · · · · · · · · · · · · · · ·										
								+		



To: Teck Explorations Ltd., 1100 - 1199 W. Hastings St., Vancouver, B.C. V6E 2K5

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6 Telephone: 253 - 3158

	File No80-1452
SSAY CERTIFICATE	Type of SamplesCore

les <u>Core</u> Disposition______

Jo.	Sample	Ag oz/ton	Au oz/ton	W%	N	, , , , , , , , , , , , , , , , , , ,			No.
1	0151	01	001	1 40	Sun	rce 19	$\mathcal{W}_{\mathcal{I}}$		1
2	0151	.01	.001	1.42		100	<i>,</i> •		2
3	0152	.02	.001		 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>		3
4	0153	.01	.001	.19				· · · · · · · · · · · · · · · · · · ·	4
	0154	.01	.001						-
5	0155	.01	.001						5
6	0156	.05	.001	01					6
7	0157	.01	.001	.01					7
8				To					8
9	0158	.01	.001		.029%1				9
10	0159	.01	001	·T2	029/01	10			10
	0160	.01	.001	·					-
11	0161	.01	.001	.02					11
12	0162	.01	.001						12
13		.01	.001	Tn					13
14	0163			17					14
15	0164	01	001	17.					1.5
16	0165	.02	.001						16
	0166	-02	.001			<u> </u>			
17	0167	.02	.001					<u> </u>	1
18		.01	.001						18
19	0168	↓	.001						19
20	· · · · · · · · · · · · · · · · · · ·	 							20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED_NOV__17,_1980___

DATE REPORTS MAILED Nov 26 1980

CHIEF CHEMIST CERTIFIED B.C. ASSAYER

DEAN TOYE, B.Sc.



Teck Explorations Ltd.,

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6 Telephone: 253 - 3158

ASSAY CERTIFICATE

File No. -___80-1452____ Type of Samples _Core & Rock Disposition_____

No.	Sample	Ag oz/ton	Au oz/ton	W%	,		No
1	0169	.02	.001	.02			1
2	0170	.01	.001				2
3	0171	.01	.001		(0W)	AB	3
4		·					4
5							. 5
6							6
7					-		7
8	· ·						8
9							9
10		·					1
11							1
12							1
13							1
14							1
15							1
16							1
17		-			• • • • •		1
18							1
19							1
20							2

All reports are the confidential property of clients,

DATE SAMPLES RECEIVED Nov. 17. 1980

DATE REPORTS MAILED_

DEAN TOYE, B.Sc. CHIEF CHEMIST CERTIFIED B.C. ASSIVER