

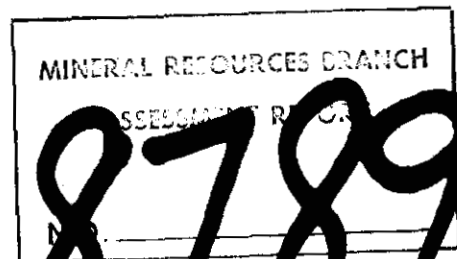
~~PROSPECTING~~  
~~GEOLOGICAL REPORT~~

on the  
BIRTHDAY CLAIM

Osoyoos Mining Division  
82 E/4W  
49°07'N 119°50'W

Owner: P. Folk  
Operator: Teck Explorations Limited

By  
P. Folk, P. Eng.



December, 1980

Vancouver, B.C.

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## 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.

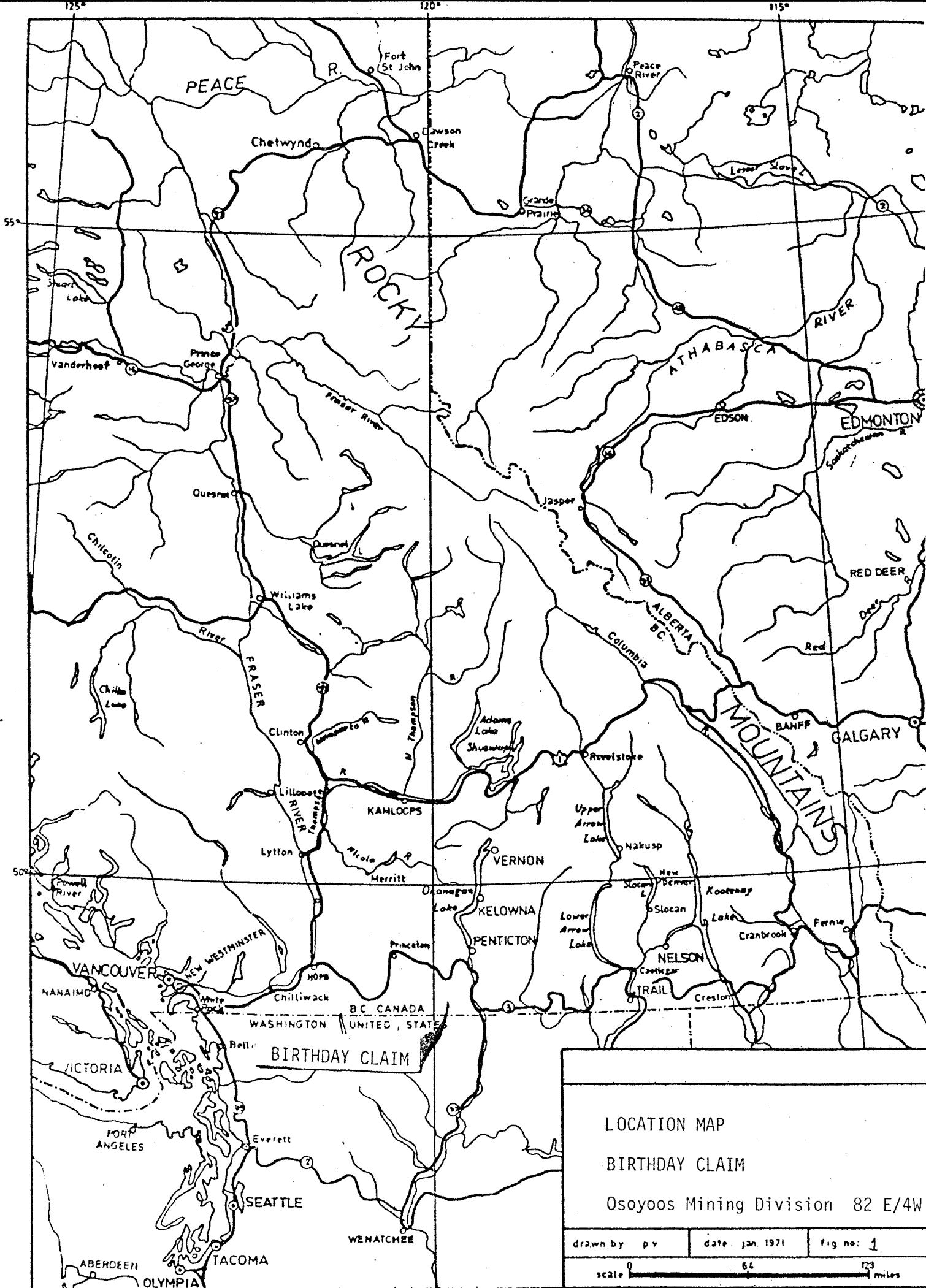
A logging road running through the Indian reserve comes within about 5 kilometers of Joe Lake at about 7,200 feet (2,195 meters) elevation. The terrain is alpine grazing land with sparse timber and moderate relief.

### 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.

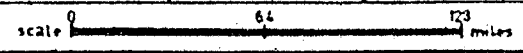


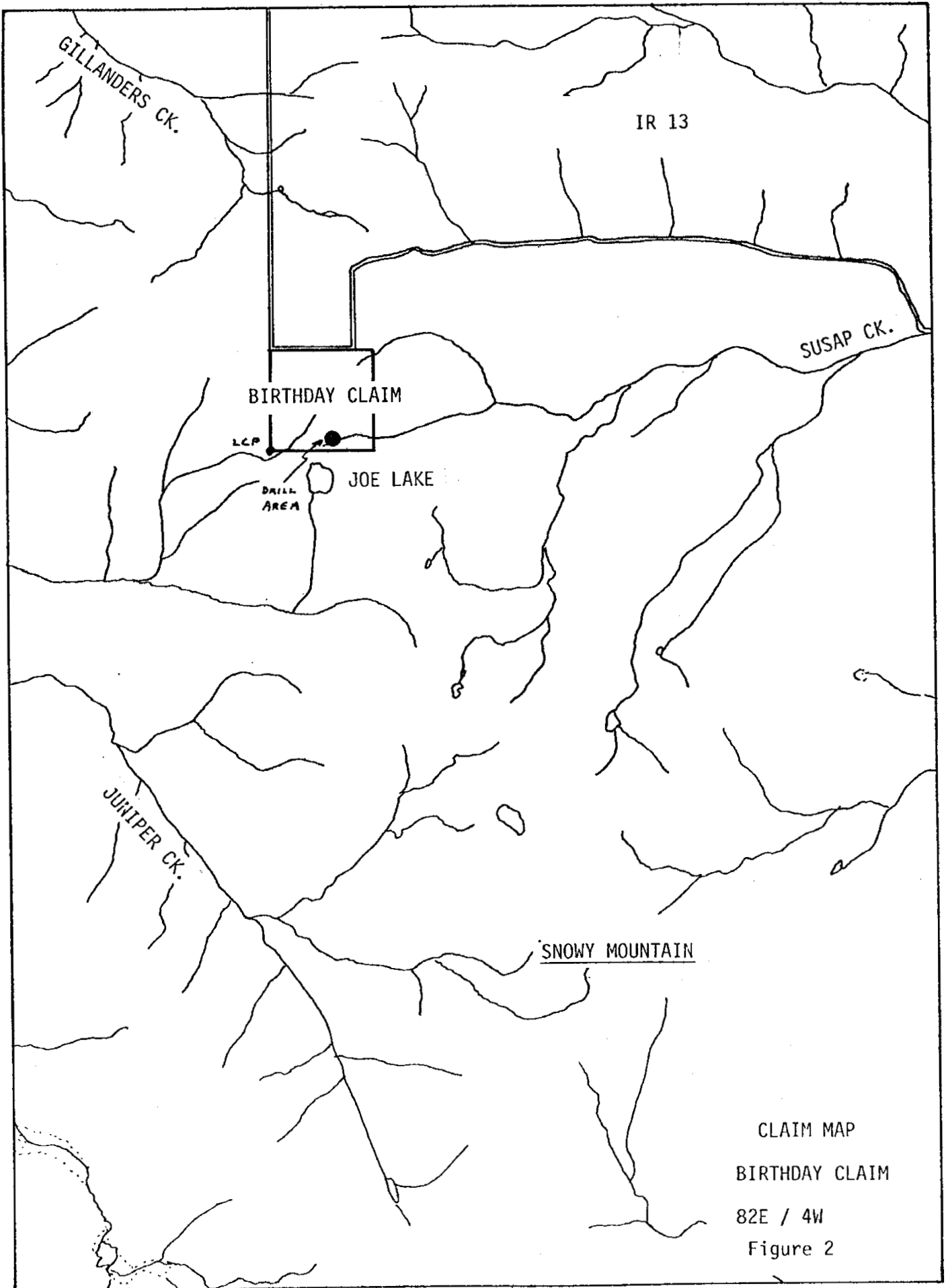
LOCATION MAP

BIRTHDAY CLAIM

Osoyoos Mining Division 82 E/4W

drawn by p v	date jan. 1971	fig no. 1
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CLAIM MAP  
BIRTHDAY CLAIM  
82E / 4W  
Figure 2

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

8789

BIRTHDAY CLAIM  
DIAMOND DRILL HOLE DATA (METRES)

#	LENGTH	DIP	AZIMUTH	NORTHING	EASTING	ELEVATION
1	115.2	-45	265	42,234.98	87,697.67	2147.54
2	83.5	-45	265	42,231.64	87,683.32	2155.19
3	76.2	-45	265	42,219.96	87,636.04	2158.98
4	113.4	-30	220	42,217.84	87,637.08	"
5	39.6		142	42,286.98	87,547.01	2190.98
6	33.2	-45	163	42,286.64	87,546.77	"
7	128.0	-45	65	42,315.68	87,594.37	2199.77

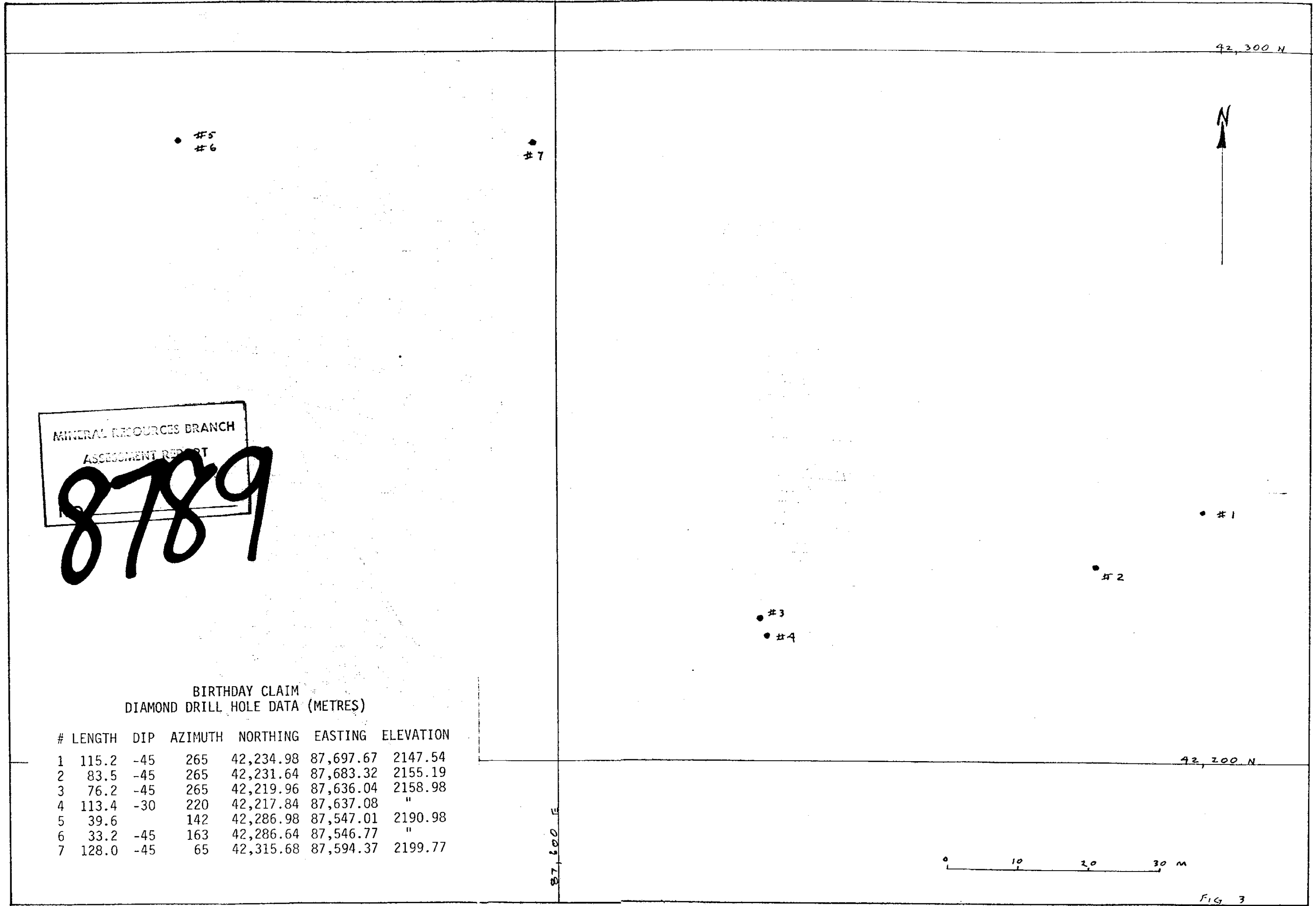


FIG. 3

### 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

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

#### ITEMIZED COST STATEMENT

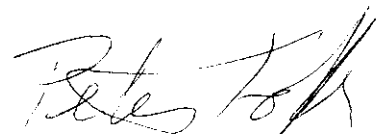
P. Folk, P. Eng. November 10, 11, 12 3 days at \$100/day	\$300.00
R. Schneider, C.E.T. November 11, 12, 13 3 days at \$90/day	270.00
Assays 21 assays	247.25
Report Preparation	150.00
	Total \$967.25
	=====

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.
2. 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

























PROPERTY JOE LAKE  
 GRID \_\_\_\_\_

DIAMOND DRILL LOG

HOLE No. 2  
 SHEET 4 OF 6

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION	GRAPHIC LOG DEPTH IN METRES	STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY	ASSAY RESULTS								
							WT. IN GRAMS	SAMPLE No.	Ag 02/7	Ag 02/8	W %					
45				QTZ. SKARN. EP			44.8									
		45.8		QTZ. PY, PO TRACES MoS <sub>2</sub>		46.3		#159 1.5m	.001	.01						
				ALT. ARGILLITE, SOME QZ EP		42.5		46.3								
48				"		48.8										
				"		50.3										
57				"		51.2										
				"		52.6										
54		54.0		ALTERED DIORITE MIXED WITH ARGILLITE EP, QZ.		53.9		54								
				Py-1-2% SCHEELITE TRACES		57.0		#164 4.5	.001	.01						
57				"		58.5		58.5								
				"		60.0		#158 7.7m	.001	.01						
50																









PROPERTY JOE LAKE  
 GRID \_\_\_\_\_

DIAMOND DRILL LOG

HOLE No. 3  
 SHEET 2 OF 6

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION DEPTH IN METRES	STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY	SAMPLE No.	ASSAY RESULTS										
						WT. IN GRAMS		CORE %										
RUSTY ARGILLITE			LIM LESS THAN 1% PY		15.2													
					17.7													
DIORITE-PORPHYRY VUGGY QTZ, EVIDENTIAL PY FINE SPECKS UNIDENTIFIED GREY MINERAL	18.0		QTZ. VEIN. Po 1-2% PY		18.9													
"			1-2% PY		21.6													
					23.5													
ARGILLITE, EP	24.7		NO PY 90°		24.7													
					25.3													
					25.9													
	26.8				26.8													
ARGILLITE NO EP			NO PY		22.7													
					28.0													
	29.6				29.6													
					29.9													

0%

18

#167

7m

25

72%

AN 0.2%  
 AS 0.2%

.001 .02





PROPERTY JOE LAKE  
 GRID \_\_\_\_\_

DIAMOND DRILL LOG

HOLE No. 3  
 SHEET 5 OF 6

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY	SAMPLE No.	ASSAY RESULTS					
		DEPTH IN METRES	STRUCTURE				WT. IN GRAMS		CORE %					
AS ABOVE						61.0 61.6								
		62.2				62.8								
LIGHT GREY RHYOLITE PORPHYRY 5% QTZ AND 5% FELD PHENOS → 2MM IN SILICEOUS GREY MATRIX		64.3				64.6								
HIGHLY ALTERED SEDIMENTS REDDISH BROWN, POSSIBLY ALT. DOLOMITE. ALSO SOME CONGLOMERATE WITH BIOTITE GRANODIORITE ACT. VOLC. AND ARGILLACEOUS PEBBLES		67.4				65.8 67.4								
CONGLAM		67.7		MINOR QTZ, PY 40° 1 FC.		68.6								
HARD SILICEOUS ARGILLITE				✓ PY, PO MINOR.		70.1 71.6	123.5							
"						73.2 74.7	100.4							



PROPERTY Joe LAKE

GRID 42, 217.84 N 87,637.08 E

42.1 MUTH 220° DIP -30° EL 2158.98

DIAMOND DRILL LOG

HOLE No. 4

SHEET 1 OF 8

DEPTH 113.4 M

ROCK TYPES AND ALTERATION	ROCK TYPE ALTERATION	GRAPHIC LOG DEPTH IN METRES	STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY	SAMPLE No.	ASSAY RESULTS										
							WT. IN GRAMS		CORE %										
<u>OVERBURDEN</u>		<u>3.0</u>																	
<u>HARD, ALT. VOLC. VERY LITTLE BY NO QTZ. MINOR EP SILICIFICATION</u>				<u>LIM, MINOR PY AND 90° G.C.A.</u>		<u>9.7</u>													
						<u>6.7</u>													
						<u>7.3</u>													
						<u>8.2</u>													
						<u>9.1</u>													
						<u>10.7</u>													
						<u>11.9</u>													
				<u>NO THIN QTZ. WITH PY AND GRAY MINERAL</u>			<u>11.9</u>	<u>12.1</u>	<u>170</u>	<u>.2M</u>	<u>.001</u>	<u>.01</u>							
						<u>13.1</u>													
						<u>13.3</u>													
						<u>14.0</u>													
						<u>14.6</u>													

15











PROPERTY JOE LAKE  
 GRID \_\_\_\_\_

### DIAMOND DRILL LOG

HOLE No. 4  
 SHEET 6 OF 8

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY	SAMPLE No.	ASSAY RESULTS						
	ROCK TYPE ALTERATION	DEPTH IN METRES				WT. IN GRAMS		CORE %						
AS ABOVE ALT VOLC, NO QZ.					77.6									
					78.0									
					78.2									
					80.2									
					80.8									
					82.3									
					82.6									
					83.8									
					85.6									
					86.6									
				86.9										
				88.3										
				88.7										









PROPERTY JOE LAKE  
 GRID \_\_\_\_\_

DIAMOND DRILL LOG

HOLE No. 5  
 SHEET 2 OF 3

ROCK TYPES AND ALTERATION	GRAPHIC LOG ROCK TYPE ALTERATION DEPTH IN METRES STRUCTURE	MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	METRE BLOCKS	REC'VY WT. IN GRAMS CORE %	SAMPLE No.	ASSAY RESULTS						
							AN	AG	W				
AS ABOVE	16.8	1-2% PY		15.8 16.2 17.4 17.7			02/T	02/T	%				
RUSTY ALT VOLC. EP		Py, LIM 1-2% PY		18.4 20.5 20.9									
BROKEN RUSTY QTZ WITH EP, MIXED ALT VOLC. AND	22.3	Py, LIM		22.7 22.6	15%								
PORPHYRITIC ALT. DIORITE, POSSIBLY BI ALT.	25.9			29.7 25.6 26.2	50%	#156 5.5m	.001	.05	.01				
RUSTY DIORITE		Py, LIM		27.7	90%								
ARGILLITE EP NO QTZ	28.0	NO LIM		27.7 29.0	90%								
						#159 9m.	.001	.01					
						131.7							































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 No. 80-1452

Type of Samples Core

Disposition \_\_\_\_\_

# ASSAY CERTIFICATE

Attn: P. Folk

No.	Sample	Ag oz/ton	Au oz/ton	W%			No.
1	0151	.01	.001	1.42	Surface 10' SW		1
2	0152	.02	.001				2
3	0153	.01	.001	.19			3
4	0154	.01	.001				4
5	0155	.01	.001				5
6	0156	.05	.001	.01			6
7	0157	.01	.001	.01			7
8	0158	.01	.001	Tn			8
9	0159	.01	.001	Tn .029% Mo			9
10	0160	.01	.001				10
11	0161	.01	.001	.02			11
12	0162	.01	.001				12
13	0163	.01	.001	Tn			13
14	0164	.01	.001	Tn			14
15	0165	.02	.001				15
16	0166	.02	.001				16
17	0167	.02	.001				17
18	0168	.01	.001				18
19							19
20							20

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DATE SAMPLES RECEIVED Nov. 17, 1980

DATE REPORTS MAILED Nov. 26, 1980

ASSAYER

*Dean Toye*  
DEAN TOYE, B.Sc.  
CHIEF CHEMIST  
CERTIFIED B.C. ASSAYER



To: Teck Explorations Ltd.,

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B. C. V6A 1R6

Telephone: 253 - 3158

File No. 80-1452

Type of Samples Core & Rock

Disposition \_\_\_\_\_

# ASSAY CERTIFICATE

2

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					3
4								4
5								5
6								6
7								7
8								8
9								9
10								10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

*Core A B*

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ASSAYER *D. Toye*

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