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COGEMA CANADA LIMITED
PORPHYRY CREEK PROJECT
FINAL REPORT 1989

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"DIAMOND DRILL RESULTS"

MINING LANDS SECTION

VOLUME 2 OF 2

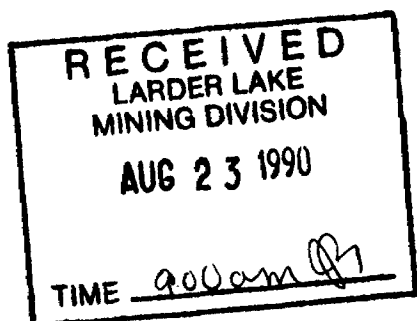
APPENDIX

1. Summary Logs
2. Field Logs
3. Analytical Results
4. Thin Section Descriptions

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Ref.No.90-CND-52-01
/BCD

Compiled: June, 1990



1. SUMMARY LOG

POC-01:

0 - 61.6	<u>OVERBURDEN</u>
61.6 - 196.9	<u>MAFIC TO INTERMEDIATE METAVOLCANIC ROCKS</u>
61.6 - 126.3	Intermediate to mafic tuffs (and/or flows), weakly graphitic at 70, 78m.
126.3 - 153.35	Amphibole-rich mafic flow(s).
153.35 - 196.9	Mafic to intermediate tuffs (and/or flows).

SUMMARY OF GOLD ANALYTICAL RESULTS

Maximum Au value is 14 ppb

SUMMARY LOG, continued

POC-02:

0 - 40.8	<u>OVERBURDEN</u>
40.8 - 151.5	<u>MAFIC TO INTERMEDIATE METAVOLCANIC ROCKS</u>
40.8 - 54.0	Strongly fractured, oxidized/limonitic.
54.0 - 71.1	Intermediate to mafic tuffs (and/or flows).
71.1 - 134.4	Mafic to intermediate tuffs (and/or flows).
134.4 - 151.5	Intermediate to mafic tuffs (and/or flows).
151.5 - 312.9	<u>FELSIC TO INTERMEDIATE METAVOLCANIC ROCKS</u>
151.5 - 211.1	Feldspar-quartz porphyry.
211.1 - 312.9	Feldspar-quartz crystal tuffs.
312.9 - 321.6	<u>MAFIC TO INTERMEDIATE METAVOLCANIC ROCKS</u>
312.9 - 314.9	Faulted contact.
314.9 - 321.6	Mafic to intermediate tuffs and/or flows.

SUMMARY OF GOLD ANALYTICAL RESULTS

Maximum Au value is 21 ppb

FIELD LOGS

The following notes should help the reader understand the manner in which core was logged, and also includes an explanation of information which is given in the logs in abbreviated form:

<u>COLUMN TITLE</u>	<u>DESCRIPTION EXPLANATION OF ABBREVIATIONS</u>
BOX:	core box number as received from drillers
DEPTH:	depth in metres (from drill floor)
% REC:	% recovery; generally given in 3m intervals, i.e. measured length of core between driller tags expressed as %. However, if drill core can be fitted across drill tag, zone of core loss can be more precisely determined, and we have made every effort to do so
LOG:	graphic representation of drill log; the legend we use is still at a preliminary stage and will be presented in full at a later time
GRAIN SIZE:	visual estimate of grain size; where porphyroblastic or porphyritic rock types occur, grain size of groundmass and coarser minerals given separately
TEXTURE:	macroscopic rock texture
STRUCTURES:	foliations measures in degrees to core axis, folds and other features also reported here
FRACTURES AND VEINS:	F = fracture V = vein
- Density:	where fracture or vein density prohibits individual description (eg where 10 or more fractures of same orientation occur in limited depth interval), density of fractures (or veins) are given: number of fractures (or veins) per metre
- Angle:	angle of fracture (F) or vein (V) to core axis as suffix to feature eg. F40 is a fracture at 40° to core axis; in some cases where more than one identical fracture occurs in restricted interval, we prefix with the number of fractures eg 2F40, rather than report in density column

Fractures and veins have been described, in general, in a more descriptive manner than has been done in previous years. The dominant (and commonly also secondary) orientation and mineralogy is also given (see below). Fracture density is probably best given in these logs by referring to the RQD together with the description given in these columns.

FIELD LOGS (cont'd)

COLUMN
TITLE

DESCRIPTION
EXPLANATION OF ABBREVIATIONS

- Nature:

abbreviated description of fractures and veins including description of fracture eg

RO, R: rough
SM : smooth
SS : striations, slickenslides
V : vuggy
H, HE : healed, recemented

and also including description of minerals associated with fractures or veins, eg

cb : carbonate
cc : calcite
ch, chl : chlorite
cl : clay
cpy : chalcopyrite
ep : epidote
fs, fspr: feldspar
hem : hematite
kaol : kaolinite
lim : limonite
mt : magnetite
mu, musc: muscovite
ox : oxides eg limonite, or generally rusty surfaces
peg : pegmatoid
po : pyrrhotite
py : pyrite
Q, q : quartz
ser : sericite
Si : very fine silica cement
tm : tourmaline

other common abbreviations used:

B1, b1 : bleaching
bkn : zones of broken core, probably natural but perhaps locally due to drillers
bx : brecciation; dense fracturation of no apparent regular orientation
ft : minor fault

finally, we emphasize that fractures appearing on log are interpreted to be fractures; breaks parallel to foliation are generally not recorded (unless they are interpreted to be fractures) and places where the core has been broken by drillers to fit into core box are not recorded

GEOT:

Geotechnical parameters

- F:

friability - a qualitative measure of rock competence
F = friable eg core can be broken with bare hands
VF = very friable eg core easily broken
EF = extremely friable eg clay where this column is not filled out, hammer is needed to break core

FIELD LOGS (cont'd)

<u>COLUMN TITLE</u>	<u>DESCRIPTION EXPLANATION OF ABBREVIATIONS</u>
- R:	rock quality designation (RQD); a measure of fracture density commonly used in rock mechanics studies where the length of core in box in lengths of 10 cm or greater is expressed as % of one 3m run in very fractured rock, RQD value is low. In non-fractured rock, RQD is 100; where this column is not filled out, RQD is >95%
COLOUR:	colour of core when wet lower case letters are tones: l = light m = medium d = dark capital letters are colours: B = black BL= blue BN= brown G = grey GG= greyish green/greenish grey GN= green O = orange P = pink PG= pinkish grey R = red W = white + = two colours which alternate repeatedly - = colour transitional between two colours
MINERALS AND ALTERATIONS:	a representation of occurrence of minerals of specific interest, abbreviations as for fractures and veins
SAMPLE #:	location and number of, sample
TS #:	location and number of thin section
DESCRIPTION:	description given by logging geologist, we have also recorded Au analytical results here



DIAMOND DRILL HOLE RECORD
PORPHYRY CREEK PROJECT

DRILL HOLE NO.: POC-01

CLAIM NO(S).: L1025525
TOWNSHIP : Hoblitzell
DATE BEGUN : 6/03/90
COMPLETED : 11/03/90
LOGGED BY : I.Cadieux

CONTRACTOR : Forage Mercier
CORE SIZE : BQ
DRILL FLUIDS: GS550(O/B), H₂O

COLLAR CO-ORDINATES

	<u>GRID</u>	<u>UTH</u>
<u>X:</u>	<u>2800 E</u>	<u>573150F</u>
<u>Y:</u>	<u>675 S</u>	<u>5483275N</u>
<u>Z:</u>	<u>295m</u>	

<u>DEVIATION RECORD</u>			
<u>DEPTH</u>	<u>AZIMUTH</u>	<u>DIP</u>	<u>METHOD</u>
<u>60m</u>		<u>-45</u>	<u>HF 4%</u>
<u>120m</u>		<u>-43</u>	<u>" "</u>
<u>180m</u>		<u>-42</u>	<u>" "</u>
<u>CHECKED BY: J.L.</u>			

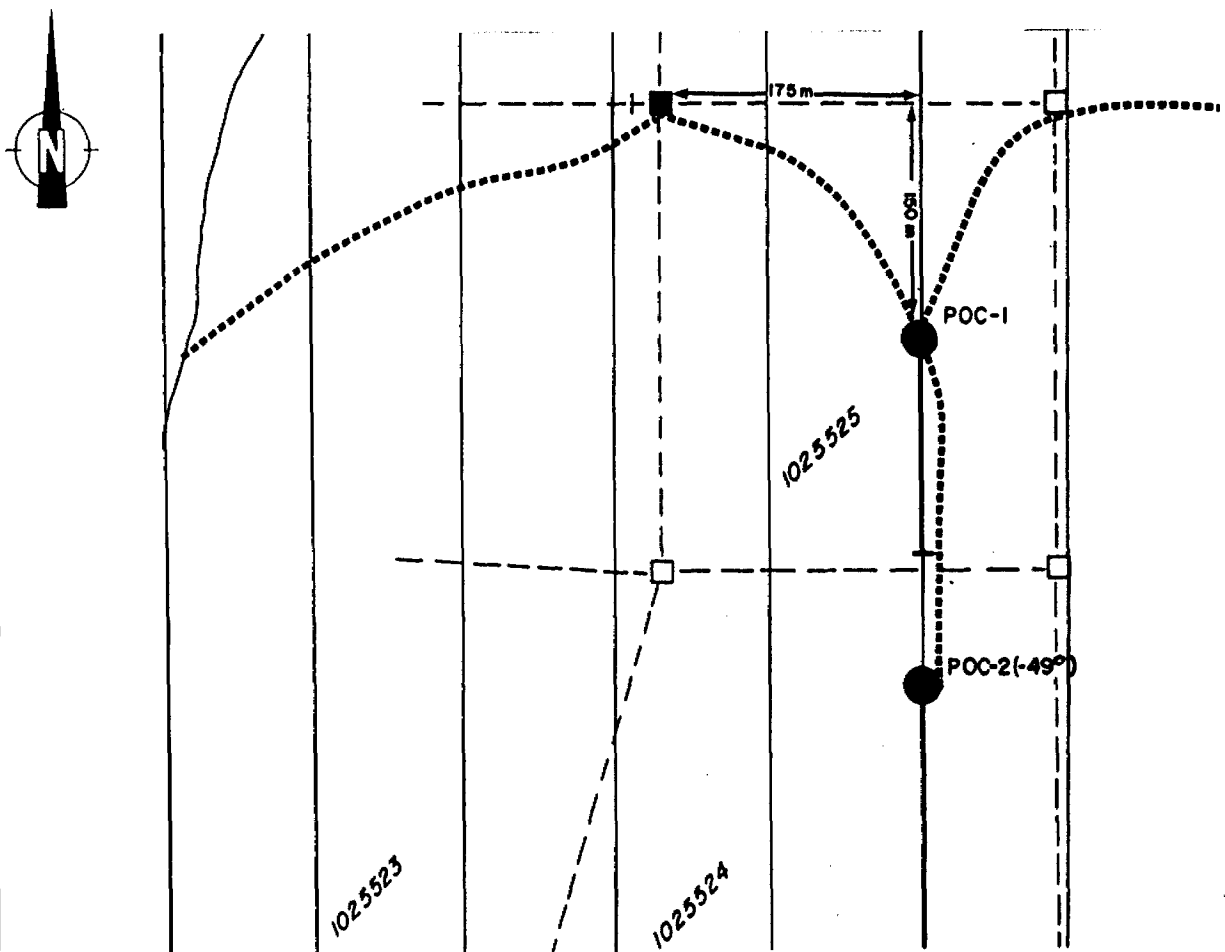
DEPARTURE: AZIMUTH: 180
INCLINATION: -45
CHECKED BY: J.L.

DEPTHS: OVERBURDEN: 61.6m
END OF HOLE: 196.9m

HORIZONTAL COMPONENT: 143m
VERTICAL COMPONENT : 136m

REMARKS: casing removed, 0.6m from drill floor to ground

LOCATION SKETCH 1:5000:



Box	Depth	% Rec	Log	Grain size mm		Texture	Structures to core axis	Fractures and Veins			Geol. FR	Colour	Minerals and Alterations				Sample #	TS #	Description
				-200-250	250-500			Dens.	Angle	Nature			1st	2nd	3rd	4th			
	0																	0-61.2 OVERBURDEN / CASING	
	62						600											61.6 - 66.3 Intermediate member with	
	70						100	Generally										composed of alternating buff-colored bands	
	80						50	broken in										with hornblende or gneiss interstratified	
	85						50	5-10 mm										a few mm to a few cm dark matrix with	
	90						50	not seen										black ground mass containing but no	
	95						50											hornblende porphyroblasts.	
	100						50											well foliated, possibly a bit sheared	
	105						50											between 70-82.	
	110						50											very poor recovery down to 70 cm	

Box	Depth	% Rec	Log	Grain size mm -N ₁₀ -N ₆₀ Q	Texture	Structures to core axis	Fractures and Veins			G ₁₀₀ F/R	Colour	Minerals and Alterations	Hel Mag	Sample #	TS #	Description
							Dens.	Angle	Nature							
	90						65°	Poorly sorted veins								
	92							Dark brown 10-20 cc fill								
	94						60°									
	96															
	98						60°	Poorly sorted or fractured								
	100						55°	but not sorted // Si								
	102						70°	Weakly sorted or fractured								
	104						60°	but not sorted with a fractured // Si								
	106															
	108															

-10/125
-10/125
-10/125

poorly sorted
with siliceous material

GB
dGB

1410 X L2

Box	Depth	% Rec	Log	Grain size mm -200 - 200	Texture	Structures to core axis	Fractures and Veins			Gcol F/R	Colour	pH	Minerals and Alterations				Sample #	TS #	Description
							Dens.	Angle	Nature				1	2	3	4			
	108					65°	Pinch low angle F with branching (45)												
9	110																		
	112					65°	Moderate α → 30° β β chert F												
	114						also discrete bleaching (1.5)												
10	116					10°	weak veining Qz & Zn silico S												
	118					65°	100% Epidote BKA (Fam)												
	120						bleached to pinkish color low angle F cutting into BKA and broken												
11	122					10°												124.1 - 124.6 25% py	
	124					65°	Wally chert to 200 color												heavy pyrite in irregular bands 2-11 to 5, minor talc in highly pyritic beds observed - section is calcareous
	126						Pyrite rich a little maggy wavy F looking like pyrite												all on either side is similar to elsewhere except about zone 2-12

Box	Depth	% Rec	Log	Grain size mm -200 - 400	Texture	Structures to core axis	Fractures and Veins			Gool FR	Colour	Type	Minerals and Alterations			Sample #	TS #	Description	
							Dens.	Angle	Nature				Sil	ThCl	Ag				
	162																		
	164																		often finely fractured leading to highly brecciated in situ oxidized sections (see)
	166																		to separate deformation - 1917 - 1977, with micro fracturing
19	168																		perlu?? local - pyrite (c. 1%) micro fractures in highly oxidized zone or less if to be but also some fractures
	170																		
	172																		no / sent to Chem for microfractures 22 pp. 10
20	174																		
	176																		
	178																		
21	180																		

Box	Depth m	% Rec	Log	Grain size mm - 200 - 2000	Texture	Structures to core axis	Fractures and Veins			Geo FIR	Colour	Minerals and Alterations	T ₁ (%)	T ₂ (%)	Sample #	TS #	Description
							Dens.	Angle	Nature								
	182						25°	Regular but weak F-30°							1443	X	L2
	184						55°	Weakly sandy thin 0.2 (cc) 21.5%									
22	186						10°										
	188														2260		L5
23	190	03						W. structure, sil broken cont. 31%							2470		L4
	192							Weakly sandy thin 0.2 (cc) 15.0 → 0.05 → 1.0									
	194						65°										
24	196						60°	Nodular thin brown shale 0.75% cc									

E.C.H. 196-9

DIAMOND DRILL HOLE RECORD
PORPHYRY CREEK PROJECT

 DRILL HOLE NO.: POC-02

 CLAIM NO(S): L1025524

 CONTRACTOR : Forage Mercier

 TOWNSHIP : Hoblitzell

 CORE SIZE : BQ

 DATE BEGUN : 11/03/90

 DRILL FLUIDS: GS550(O/B), H₂O

 COMPLETED : 18/03/90

 LOGGED BY : J.Learn
COLLAR CO-ORDINATES

	GRID	UTH
X:	<u>2800 E</u>	<u>573150F</u>
Y:	<u>900 S</u>	<u>5483000N</u>
Z:	<u>295m</u>	

<u>DEVIATION RECORD</u>			
DEPTH	AZIMUTH	DIP	METHOD
60m		-48	HF 4%
120m		-48	" "
180m		-44	" "
240m		-42	" "
321.6m		-36	" "
CHECKED BY: J.L. , I.C.			

 DEPARTURE: AZIMUTH: 179

 INCLINATION: -49

 CHECKED BY: I.C.

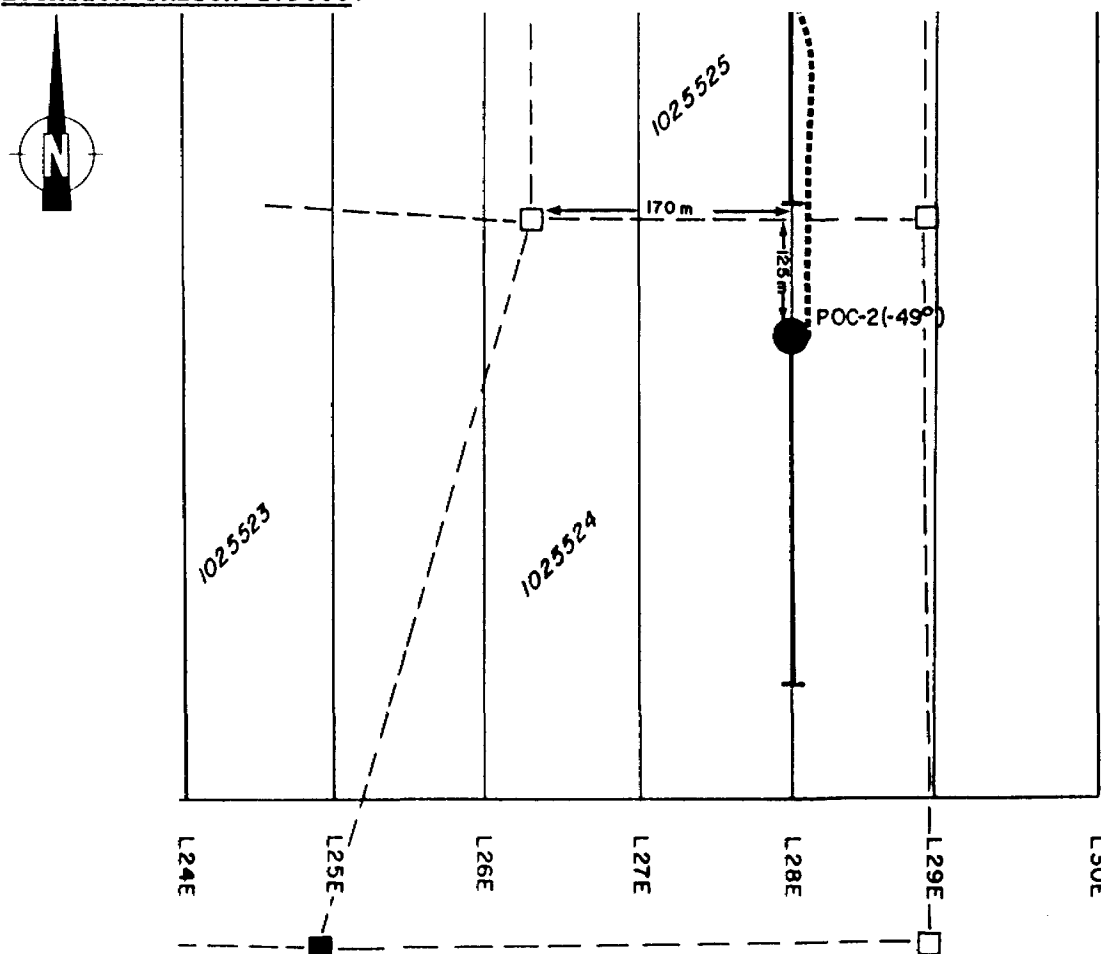
 DEPTHS: OVERBURDEN: 40.8m

 HORIZONTAL COMPONENT: 229m

 END OF HOLE: 321.6m

 VERTICAL COMPONENT : 225m

REMARKS: BW casing flush with drill floor, Casing left in hole

LOCATION SKETCH 1:5000:


Box	Depth	% Rec	Log	Grain size mm		Texture	Structures to core axis	Fractures and Veins			Coot FIR	Colour	Minerals and Alterations				Sample #	S	Description
				- 200 -	- 600 -			Dens.	Angle	Nature									
	36																	0-40.8 overburden/casing	
	42																	40.8-54.0 strongly oxidized/broken/fractured core → limonitic presumably the same as 54-71.1	
1	44																		
	46																		
	48																		
	50																		
2	52																		
	54																		

strongly broken and oxidized

presumably the same as below

very strongly fractured and broken core

F/S₁ and F30-F60

Ro/SM/ox

very weakly veined q + cc // S₁ ≤ 1cm

DBN
dy

Box	Depth	% Rec	Log	Grain size mm -N ₁₀₀ - N ₄₀₀	Texture	Structures to core axis	Fractures and Veins		Geol F/R	Colour	pykpo	Minerals and Alterations	HC/MAK	Sample		Description
							Dens.	Angle						Nature	#	
3	54		<						25							
	56		<													54.0-71.1 biotite ± amphibole schist (intermediate flow and/or buff unit)
	58	43	<						49							with a few short intervals rich in garnet/amphibole
4	60		<											1414	X	62
	62		<						59							
5	64	49	<						34							
	66		<													
	68		<						24							
6	70	70	<						38							
	72		<													

Box	Depth	% Rec	Log	Grain size mm			Texture	Structures to core axis	Fractures and Veins		Goot F/R	Colour	pyf-po	Minerals and Alterations	HCl	MM	Sample #	#	Description
				-200	-200	0			Dens.	Angle									
	72		V V																
	74	90	V V				well foliated												1415 X C2
	76	100	V V				well foliated	moderately (to strongly) fractured mostly // S ₁				dbb							71.1 - 119.2
	78		V V				well foliated	Ro/S ₁ tox ± cc (± py)				db							amphibole ± biotite schist more or less uniform with variations in proportions of amphibole/biotite but with no abrupt contacts (mafic/intermediate flow/truff unit)
	80	98	V V																
	82	95	V V				well foliated	weakly (to moderately) veined											
	84		V V					veined qtzcc and local cc ± q				dbb							
	86		V V				well foliated	≤ 5cm // S ₁				db							
	88	90	V V				well foliated												1416 X C2
	90		V V																

Box	Depth	% Rec	Log	Grain size mm - No - No	Texture	Structures to core axis	Fractures and Veins			Géol FIR	Colour	pH/pO	Minerals and Alterations	TKI mm	Samples		Description
							Dens.	Angle	Nature						#	#	
	90		V V														
		+100	V						53								
	92		V V		well foliated												
			V V			-65											
10			V V														
	94		V V														
		+95	V V						41								
			V V														
	96		V V		weakly porphyro- blastic												
			V V			-60											
			V V														
	98		V V						73			trace					
			V V														
			V V			-60											
11			V V														
	100		V V		well foliated												
			V V														
		+100	V V														
	102		V V												1417	X	L2
			V V														
			V V			-65											
			V V														
	104		V V		weakly porphyro- blastic				75			trace					
12			V V														
			V V														
	106		V V												2471		L5
			V V						62			trace b12					
			V V														
			V V														
	108		V V												2472		L5

Box	Depth 108	Rec	Log	Grain size mm -200 - 2000	Texture	Structures to core axis	Fractures and Veins			Geol FR	Colour	pylpo	Minerals and Alterations	HCl mark	Samples		Description
							Dens.	Angle	Nature						#	#	
13	108		V			65									2473	C5	HCl is reacting mostly to unsp. cc in S ₁ and few cc ty / q ± cc veins matrix of unspined rock does not react
	110		V		well foliated										2474	C5	
	112	100	V			70									1418	C2	
	114		V														
14	114		V		well foliated	65											119.2 - 134.4 amphibole (± biotite) schist mafic flow/stuff unit upper contact gradual but unit is more uniformly mafic, lower contact fairly abrupt
	116		V														
	118		V			65											
	120		V		well foliated												
15	120	100	V			75											
	122		V														
	124		V		well foliated	60											
	126		V														

Box	Depth	Rec	Log	Grain size mm - 200 - 2000	Texture	Structures to core axis	Fractures and Veins			Geol F/R	Colour	pylpo	Minerals and Alterations		Sample #	S #	Description
							Dens.	Angle	Nature				Min	Alter			
	126		✓			-60											
16	128		✓		well foliated												
	130	100	✓		well foliated blastic	-65											
	132		✓			-60								1419	X	<2	
17	134		✓			-60											134.4 - 151.5
	136		✓		well foliated	-65											biotite (± amphibole) schist a few local garnets intermediate flow/buff unit
	138		✓			-60											
18	140	100	✓		well foliated blastic	-60											
	142		✓			-65											
19	144		✓			-65											
	144		✓			-65											

Box	Depth	% Rec	Log	Grain size mm - 200 - 2000	Texture	Structures to core axis	Fractures and Veins			Geol FR	Colour	rg/ps	Minerals and Alterations	MCI	MAG	Samples		Description
							Dens.	Angle	Nature							#	#	
19	144		< ^															
	146		< ^															
	148	100	< ^													1421	X	L2
20	150		< ^															
	152		+ II															151.5 - 211.1 feldspar-quartz porphyry
21	154		+ II	85-252 blue qtz 152														154.6-157.0 mixed cleaved QFP with very fine grained mafic rock
	156		+ II															overall very uniform texture, although a few places the QFP may be sheared over short intervals (or it is a buff and these are simply slightly fine grained)
22	158		+ II	85-252 blue qtz 152														→ weakly foliated to massive → with abundant irregular fine grained schlieren
	160		+ II															
162			+ II															also, qz veins

Box	Depth	% Rec	Log	Grain size mm	Texture	Structures to core axis	Fractures and Veins	Geo. Dip	Colour	Minerals and Alterations	HCl mark	Sample #	Description	
				N ₁₀ - N ₁₀ O			Dens. Angle Nature							
22	162		π									2475	CS	
	164	100	+			55	weak to moderate qtz + cc + py veining < 5cm		0-m.G			2476	CS	
			π									2477	CS	
23	166		π										CS control xenooliths of fine grained mafic rock:	
			+										160.3	
			π										160.75 - 160.95	
			+										161.1 - 161.15	
			π										166.1 - 166.25	
	168		+				regular blocky fracturation moderate to strong							170.6 - 170.7
			π											172.05 - 172.4
24	170		π				F50-60		m.G + W				177.9 - 178.4	
			+				FS0-60						186.25	
	172		π				FS-90						208.8 - 209.1	
25	174		π				RO/SM + cc							
			+											
	176		π				F10-40							
25	178		π				SM/RO + ep + cc							
			+											
	180		π				strongly veined qtz + py + cc					2479	CS	
			+											
			π				N/S ₁ < 30cm					2480	CS	
			+											
			π									2481	CS	

light orange intervals show an abundance of fractures with epidote + calcite

porphyritic

S₁ ~ 25°
 N/S₂ ~ 15°

weakly foliated

Box	Depth	% Rec	Log	Grain size mm - N ₁₀ - N ₆₀ - N ₂₀₀	Texture	Structures to core axis	Fractures and Veins			Geol FIR	Colour	Minerals and Alterations	Sample #	TS #	Description
							Dens.	Angle	Nature						
25	180		+ +												
	182	100	+ +		poppyrite - 60										
	184		+ +			regular blocky fracturation moderate to strong									
26	186		+ +			F50-60 and L Si ₁									
	188		+ +			F75-90 Ro/SM ± cc									
	190		+ +			F10-40 SM/RO ± cc									
27	192	100	+ +		weakly foliated - 60							1422	X	< 2	
	194		+ +			weak to moderate fracturation veining SSm S ₁									
	196		+ +												
28	198		+ +												

Box	Depth	% Rec	Log	Grain size mm - N10 - N100	Texture	Structures No core axis	Fractures and Veins			Géol FR	Colour	Minerals and Alterations	Sample #	TS #	Description			
							Dens.	Angle	Nature									
28	198		+		porphyritic	60												
	200	100	+	FS-252														
29	202		+		weakly foliated	70				mb + W (spotted)								
	204		+															
	206		+															
	208	100	+															
30	210		+															
	212		+		well foliated	60												
214		+																
31	216		+		porphyritic	60				mb (-25)								
	218		+															

1423 x C2

211.1 - 222.1 QFP becomes well foliated and weakly (to moderately) sericitized it is sheared

Box	Depth	% Rec	Log	Grain size mm - ϕ - ϕ	Texture	Structures to core axis	Fractures and Veins			Geo. F R	Colour	Minerals and Alterations	Sample #	TS #	Description
							Dens.	Angle	Nature						
	216														
	218				well foliated							1424	X 22		
32	220	100			propylitic										
	222														222.1-239.75 QFP moderately foliated not sheared, or only very weakly, but is much less massive than above 211.2
	224														
33	226				propylitic										
	228														few very thin mafic interbeds.
	230				moderately foliated										227.75-227.9 240.4-240.6 248.2-248.35
34	232											1425	X 4		
	234														

Box	Depth (m)	Log	Grain size mm - 200 - 200 0	Texture	Structures to core axis	Fractures and Veins			Geo F/R	Colour	Minerals and Alterations	MC1	Sample		Description
						Dens.	Angle	Nature					#	#	
	234			porphyritic											
35	236			moderately foliated	-60										
	238														
	240			well foliated	-60	(same as before)									239.75 - 269.4 again well foliated; shearing probably a little stronger than 211.1 - 222.1
36	242														
	244														
	246			porphyritic	-60										
37	248														
	250														
	252														

B-152
237-238

B-152
242-243

see 237/238

239.75 - 269.4

again well foliated; shearing probably a little stronger than 211.1 - 222.1

1426 X C2

sample 2484 247.5 - 249.0 has 2.0m of core

248.4 - 251.5 3.55 m core

pyrite is disseminated in S₁ planes, there appears to be no increase in density of quartz veining

Box	Depth	% Rec	Log	Grain size mm - No - No	Texture	Structures to core axis	Fractures and Veins			Goot F/R	Colour	py	Minerals and ser. ^{LAB No.}	Hcl, mm	Sample #		Description
							Dens.	Angle	Nature						#	#	
	252																
38	254				very well foliated	60								2487	9		
										mb				2488	5		
	256	100								lb				2489	19		
	258					60								2490	<5		
39	260				mply with	60								2491	<5		
														2492	<5		
	262													2493	21		
	264					60								2494	19 control (<5)		
40	266	100			well foliated	60								2496	<5		
	268																
41	270					60				mb							

Box	Depth	% Rec	Log	Grain size mm - N ₁₀ - N ₆₀	Texture	Structures to core axis	Fractures and Veins			Geol F R	Colour	Minerals and Alterations		Sample #	TS #	Description
							Dens.	Angle	Nature			HCl	MMS			
	270															
A1	272	100														269.4 - 312.9 same crystal half unit
	274															with texture alternating between sheared and not sheared (or very weakly so)
	276															shearing intensity generally decreasing with depth
A2	278															
	280															
	282															
A3	284	100														1427 x 22
	286															
A4	288															

Box	Depth 286	% Rec	Log	Grain size mm - N ₆₀ - N ₁₀₀	Texture	Structures to core axis	Fractures and Veins			Geol F/R	Colour	Minerals and Alterations			Sample #	TS #	Description
							Dens.	Angle	Nature			ser	HCl	max			
A4	286																
	290	100								30							
	292										ml (-26)						
A5	294									43							
	296																
	298																
A6	300	100															
	302																
	304																
A7	306																

Alternating
and
foliated

and
moderately
foliated

pyritic

much the
same as
before

very minor
orange alteration
(bleaching, hematite)
adjacent to
some of the veins

1428 x L2

2497 L5

Box	Depth	% Rec	Log	Grain size mm -N ₁₀ - N ₆₀ - N ₁₀₀	Texture	Structures to core axis	Fractures and Veins			Geo F R	Colour	Minerals and Alterations				Sample #	TS #	Description
							Dens.	Angle	Nature			py	po	ser	HCl			
	306																	
	308	100			alternating well foliated and moderately foliated	60					mg						312.9 - 314.9 alternating between two rock types	
48	310				porphyritic	70											A) 312.9 - 314.1 and 314.4 - 314.65: v. fine black rock (mafic tuff or argillite?) with strong wispy calcite	
	312					60											B) 314.1 - 314.4 and 314.65 - 314.9: feldspathic tuff (or dyke)	
	314				mixed rock along faulted contacts						B + dG						contacts are clean and abrupt, and foliation orientation across the contacts change abruptly (healed faulted contacts)	
49	316	100			well foliated	60											314.9 - 321.6 mafic flow/tuffs; amphibole-biotite schists with minor pyrrhotite	
	318				porphyroblastic	60					dG						(N.C. due to wispy cc in S ₁ , matrix of rock does not react)	
50	320					60											1429 X C2	
																	EoH 321.6	

3. ANALYTICAL RESULTS

Three sets of tables follow:

- I) Au, Cu, Zn, K_2O , Na_2O results from XRAL Laboratories (Rouyn). Note that Au, K_2O , Na_2O results from Chimitec (below) are included in this table.
- II) Major element results from Chimitec, Ltee (Ste.Foy).
- III) Minor element results from Chimitec, Ltee (Ste.Foy).

Procedures, detection limits for the various types of analyses are as follows:

= XRAL:

Au:

Fraction: -150 mesh (two stage crushing, grinding)
Extraction: 3 parts HCl: 1 part HNO_3 - aqua regia
Method: Fire assay-atomic absorption
Detection
Limit: 5 ppb

Note: 500g is pulverized, 30g is analyzed (one assay-ton)

Cu, Zn:

Fraction: -150 mesh
Extraction: aqua regia
Method: atomic absorption
Detection
Limit: 0.01 0/00

K_2O , Na_2O :

Fraction: -150 mesh
Extraction: metaborate fusion
Method: XRF
Detection
Limit: 0.01 0/00

* sample batches sent to XRAL include control samples sent at irregular intervals. Control samples are barren quartzite.

= CHIMITEC:

MAJOR ELEMENTS

SiO₂, TiO₂, Al₂O₃, Fe₂O₃ (total iron), MnO, MgO, CaO, Na₂O:

Fraction: -150 mesh (two stage crushing, grinding)
Extraction: metaborate fusion
Method: emission - plasma
Detection
limit: 0.01%

K₂O, P₂O₅:

Fraction: -150 mesh
Extraction: metaborate fusion
Method: emission - plasma
Detection
limit: 0.03%

LOI:

Fraction: -150 mesh
Method: gravimetry
Detection
limit: 0.01%

CO₂:

Fraction: -150 mesh
Extraction: H₃PO₄
Method: gravimetry
Detection
limit: 0.05%

MINOR ELEMENTS

Fraction: -150 mesh
Method: neutron activation
Detection
limits:

Au	: 2 ppb
Sm	: 0.05 ppm
Sb	: 0.1 ppm
Sc, Th, U, Lu	: 0.2 ppm
As, Cs, Ta, Tb, Br	: 0.5 ppm
Eu, Hf, Mo, W	: 1 ppm
La, Ag, Yb	: 2 ppm
Cd, Co, Rb, Se, Ce	: 5 ppm
Te	: 10 ppm
Cr, Ni	: 20 ppm
Ba, Ir	: 50 ppm
Zn, Sn	: 100 ppm
Zr	: 200 ppm
Fe, Na	: 0.02%

HOLE	SAMP	FROM (m)	TO (m)	AU (ppb)	CU (%)	ZN (%)	K2O (%)	NA2O (%)
POC-01	2451	68.90	71.90	-5			1.60	1.68
POC-01	2452	71.90	75.00	-5			1.91	2.20
POC-01	2453	78.00	79.50	-5			1.46	1.32
POC-01	2454	79.50	81.00	-5			1.21	3.83
POC-01	2455	81.00	82.50	-5			1.64	2.24
POC-01	2456	82.50	84.00	-5			1.10	1.66
POC-01	2457	84.00	85.50	-5			1.35	0.90
POC-01	2458	85.50	87.00	-5			1.25	3.03
POC-01	2459	87.00	88.50	-5			1.39	4.35
POC-01	1410	101.00	101.50	-2			1.06	2.96
POC-01	2460	122.00	123.50	-5			1.20	2.86
POC-01	2461	123.50	125.00	-5	-0.01	0.07	1.03	1.81
POC-01	2463	125.00	126.50	-5	0.01	-0.01	1.58	2.13
POC-01	2464	126.50	128.00	-5	0.02	-0.01	0.78	1.26
POC-01	1411	142.00	142.50	5			0.03	1.85
POC-01	2465	156.00	157.50	-5	0.02	-0.01	0.99	2.69
POC-01	2466	165.50	167.00	-5	0.01	-0.01	0.79	2.32
POC-01	2467	167.00	168.50	-2			0.81	1.76
POC-01	1412	169.50	170.00	-2			0.48	2.41
POC-01	2468	175.50	177.00	-5	0.01	0.01	1.01	2.69
POC-01	1413	180.50	181.00	-2			0.99	2.14
POC-01	2469	187.00	188.50	-5	0.01	-0.01	0.95	1.85
POC-01	2470	188.50	190.00	14	0.02	-0.01	1.02	1.98

HOLE	SAMP	FROM (m)	TO (m)	AU (ppb)	CU (%)	ZN (%)	K2O (%)	NA2O (%)
POC-02	1414	59.50	60.00	-2			0.50	3.19
POC-02	1415	72.50	73.00	-2			0.46	3.03
POC-02	1416	87.00	87.50	-2			0.72	3.02
POC-02	1417	101.00	101.50	-2			0.96	3.17
POC-02	2471	105.00	106.50	-5			0.93	3.74
POC-02	2472	106.50	108.00	-5			1.01	3.55
POC-02	2473	108.00	109.50	-5			1.00	2.83
POC-02	2474	109.50	111.00	-5			1.14	3.10
POC-02	1418	111.00	111.50	-2			0.77	3.52
POC-02	1419	131.50	132.00	-2			0.11	1.75
POC-02	1420	140.50	141.00	10			0.11	2.13
POC-02	1421	147.00	147.50	-2			0.56	3.31
POC-02	2475	162.00	163.00	-5			2.06	5.51
POC-02	2476	163.00	164.00	-5			2.74	4.85
POC-02	2477	164.00	165.00	-5			2.29	5.06
POC-02	2479	175.50	177.00	-5			1.89	5.41
POC-02	2480	177.00	178.50	-5			1.95	3.84
POC-02	2481	178.50	180.00	-5			2.11	4.57
POC-02	1422	191.00	191.50	-2			2.56	5.20
POC-02	1423	206.50	207.00	-2			2.07	4.68
POC-02	1424	216.50	217.00	-2			3.06	3.13
POC-02	1425	230.50	231.00	4			2.88	4.21
POC-02	1426	243.00	243.50	-2			3.15	3.36
POC-02	2482	246.00	247.50	-5			3.82	3.43
POC-02	2484	247.50	249.00	10			3.87	4.26
POC-02	2485	249.00	250.50	-5			3.76	3.54
POC-02	2486	250.50	252.00	-5			4.23	3.37
POC-02	2487	252.00	253.50	9			3.82	4.27
POC-02	2488	253.50	255.00	5			3.10	3.84
POC-02	2489	255.00	256.50	19			3.73	3.69
POC-02	2490	256.50	258.00	-5			2.91	3.78
POC-02	2491	258.00	259.50	-5			3.13	3.52
POC-02	2492	259.50	261.00	-5			3.00	3.55
POC-02	2493	261.00	262.50	21			3.42	4.26
POC-02	2494	262.50	264.00	19			3.33	3.85
POC-02	2496	264.00	265.50	-5			2.93	3.73
POC-02	1427	284.00	284.50	-2			2.31	4.22
POC-02	1428	300.60	301.10	-2			1.84	5.60
POC-02	2497	304.50	306.00	-5			1.56	4.88
POC-02	1429	318.50	319.00	-2			0.23	2.56

HOLE	SAMP	FROM (m)	TO (m)	SiO2 (%)	TiO2 (%)	Al2O3 (%)	Fe2O3 (%)	MnO (%)	MgO (%)	CaO (%)	Na2O (%)	K2O (%)	P2O5 (%)	LOI (%)	TOTL (%)	CO2 (%)
POC-01	1410	101.00	101.50	61.46	0.76	16.60	6.86	0.18	1.66	5.65	2.96	1.06	0.25	1.09	98.54	0.29
POC-01	1411	142.00	142.50	50.48	0.89	14.02	11.45	0.24	6.44	11.21	1.85	0.03	0.05	1.58	98.23	1.08
POC-01	2467	167.00	168.50	51.64	0.97	14.19	12.80	0.35	3.55	8.92	1.76	0.81	0.18	3.15	98.31	1.37
POC-01	1412	169.50	170.00	53.81	1.29	15.79	9.85	0.30	3.86	10.68	2.41	0.48	0.29	2.56	101.32	1.25
POC-01	1413	180.50	181.00	60.48	0.82	15.82	9.13	0.20	3.46	6.38	2.14	0.99	0.13	1.79	101.33	0.05
POC-02	1414	59.50	60.00	55.15	1.58	16.69	7.40	0.19	3.49	9.46	3.19	0.50	0.29	2.39	100.33	1.76
POC-02	1415	72.50	73.00	56.77	1.80	15.15	7.70	0.17	5.14	8.33	3.03	0.46	0.46	1.18	100.21	0.16
POC-02	1416	87.00	87.50	57.18	1.06	14.70	8.78	0.15	5.38	6.79	3.02	0.72	0.32	1.16	99.26	0.14
POC-02	1417	101.00	101.50	58.89	0.95	14.76	9.00	0.15	4.97	7.31	3.17	0.96	0.22	1.10	101.47	0.18
POC-02	1418	111.00	111.50	61.40	0.78	16.35	6.25	0.11	4.22	5.84	3.52	0.77	0.25	1.58	101.07	0.15
POC-02	1419	131.50	132.00	47.08	1.01	15.59	12.94	0.19	9.48	9.24	1.75	0.11	0.09	2.17	99.65	0.11
POC-02	1420	140.50	141.00	50.58	1.91	13.59	14.00	0.38	1.81	10.85	2.13	0.11	0.24	3.03	98.63	3.15
POC-02	1421	147.00	147.50	53.44	1.89	15.75	12.94	0.24	2.24	8.64	3.31	0.56	0.19	1.77	100.99	1.60
POC-02	1422	191.00	191.50	65.40	0.44	14.56	3.13	0.04	1.82	3.53	5.20	2.56	0.22	2.41	99.31	1.92
POC-02	1423	206.50	207.00	65.05	0.42	14.50	2.99	0.04	1.81	4.24	4.68	2.07	0.26	2.75	98.82	2.08
POC-02	1424	216.50	217.00	65.27	0.40	14.28	2.75	0.05	1.26	5.13	3.13	3.06	0.23	3.81	99.39	2.87
POC-02	1425	230.50	231.00	65.76	0.40	14.37	2.92	0.05	1.53	4.37	4.21	2.88	0.23	2.10	98.80	2.40
POC-02	1426	243.00	243.50	66.74	0.41	14.70	3.11	0.05	1.67	4.41	3.36	3.15	0.20	3.50	101.30	2.27
POC-02	1427	284.00	284.50	66.88	0.42	14.69	3.07	0.05	1.80	4.48	4.22	2.31	0.21	2.73	100.86	1.98
POC-02	1428	300.60	301.10	66.83	0.45	15.11	3.40	0.04	2.04	3.52	5.60	1.84	0.24	2.15	101.22	1.52
POC-02	1429	318.50	319.00	53.51	1.05	16.30	10.29	0.20	3.29	10.29	2.56	0.23	0.21	2.90	100.83	1.83

HOLE	SAMP	FROM (#)	TO (#)	AU (ppb)	SB (ppm)	AS (ppm)	BA (ppm)	CD (ppm)	CS (ppm)	CR (ppm)	CO (ppm)	EU (ppm)	HF (ppm)	IR (ppm)	FE (ppm)	LA (ppm)	MO (ppm)	NI (ppm)	RB (ppm)	SC (ppm)
POC-01	1410	101.00	101.50	-2	-0.10	-0.50	180.00	-5.00	1.20	130.00	14.00	1.00	5.00	-50.00	4.30	13.00	-1.00	26.00	39.00	13.00
POC-01	1411	142.00	142.50	5	-0.10	-0.50	120.00	-5.00	-0.50	300.00	60.00	1.00	2.00	-50.00	8.60	4.00	-1.00	71.00	-5.00	44.50
POC-01	2467	167.00	168.50	-2	-0.10	-0.50	230.00	-5.00	1.10	490.00	55.00	-1.00	2.00	-50.00	11.00	13.00	-1.00	230.00	38.00	34.90
POC-01	1412	169.50	170.00	-2	0.20	0.70	150.00	-5.00	1.00	780.00	74.00	1.00	2.00	-50.00	7.00	11.00	-1.00	220.00	17.00	41.40
POC-01	1413	180.50	181.00	-2	-0.10	-0.50	190.00	-5.00	0.80	220.00	35.00	2.00	3.00	-50.00	6.50	11.00	-1.00	64.00	52.00	20.00
POC-02	1414	59.50	60.00	-2	-0.10	-0.50	170.00	-5.00	0.80	470.00	64.00	2.00	2.00	-50.00	5.80	11.00	1.00	150.00	24.00	40.00
POC-02	1415	72.50	73.00	-2	-0.10	-0.50	160.00	-5.00	0.80	110.00	32.00	1.00	4.00	-50.00	6.00	18.00	-1.00	41.00	-5.00	35.90
POC-02	1416	87.00	87.50	-2	-0.10	-0.50	310.00	-5.00	2.80	350.00	46.00	-1.00	4.00	-50.00	6.90	14.00	-1.00	110.00	49.00	26.00
POC-02	1417	101.00	101.50	-2	-0.10	-0.50	250.00	-5.00	1.40	340.00	37.00	2.00	5.00	-50.00	7.10	14.00	-1.00	92.00	47.00	24.50
POC-02	1418	111.00	111.50	-2	-0.10	-0.50	240.00	-5.00	2.60	220.00	34.00	2.00	5.00	-50.00	4.60	19.00	-1.00	82.00	41.00	19.00
POC-02	1419	131.50	132.00	-2	-0.10	-0.50	51.00	-5.00	0.70	400.00	83.00	-1.00	-1.00	-50.00	11.00	4.00	-1.00	240.00	-5.00	33.60
POC-02	1420	140.50	141.00	10	-0.10	-0.50	91.00	-5.00	-0.50	140.00	58.00	2.00	4.00	-50.00	11.00	10.00	-1.00	41.00	-5.00	36.90
POC-02	1421	147.00	147.50	-2	-0.10	-0.50	350.00	-5.00	2.50	140.00	61.00	-1.00	3.00	-50.00	10.00	9.00	-1.00	74.00	32.00	38.80
POC-02	1422	191.00	191.50	-2	0.10	0.80	900.00	-5.00	2.50	180.00	15.00	1.00	4.00	-50.00	2.30	33.00	1.00	-10.00	71.00	6.40
POC-02	1423	206.50	207.00	-2	0.10	-0.50	810.00	-5.00	3.10	150.00	11.00	2.00	3.00	-50.00	2.30	30.00	2.00	47.00	51.00	6.20
POC-02	1424	216.50	217.00	-2	0.20	-0.50	1100.00	-5.00	2.20	140.00	10.00	2.00	3.00	-50.00	2.10	28.00	1.00	30.00	91.00	5.80
POC-02	1425	230.50	231.00	4	-0.10	-0.50	1800.00	-5.00	2.40	160.00	12.00	-1.00	3.00	-50.00	2.30	29.00	2.00	26.00	73.00	5.70
POC-02	1426	243.00	243.50	-2	0.30	-0.50	1000.00	-5.00	1.90	180.00	11.00	1.00	3.00	-50.00	2.30	28.00	-1.00	20.00	91.00	5.60
POC-02	1427	284.00	284.50	-2	0.10	-0.50	970.00	-5.00	3.60	130.00	9.00	2.00	3.00	-50.00	2.30	27.00	-1.00	29.00	75.00	5.70
POC-02	1428	300.60	301.10	-2	0.30	-0.50	760.00	-5.00	5.40	160.00	13.00	-1.00	3.00	-50.00	2.40	29.00	2.00	33.00	72.00	5.40
POC-02	1429	318.50	319.00	-2	0.10	0.60	68.00	-5.00	0.90	340.00	65.00	2.00	3.00	-50.00	8.90	15.00	-1.00	200.00	17.00	38.50

HOLE	SAMP	FROM (#)	TO (#)	SE (ppm)	AG (ppm)	TA (ppm)	TB (ppm)	TH (ppm)	M (ppm)	U (ppm)	YB (ppm)	ZN (ppm)	CE (ppm)	NA (ppm)	SN (ppm)	TE (ppm)	ZR (ppm)	BR (ppm)	LU (ppm)	SM (ppm)
POC-01	1410	101.00	101.50	-5.00	2.00	0.50	1.20	0.90	-1.00	0.30	3.00	-100.00	34.00	1.90	-100.00	-10.00	-200.00	0.80	0.30	5.00
POC-01	1411	142.00	142.50	-5.00	-2.00	-0.50	-0.50	-0.20	-1.00	-0.20	3.00	160.00	10.00	1.50	-100.00	-10.00	-200.00	-0.50	0.40	2.60
POC-01	2467	167.00	168.50	-5.00	-2.00	0.80	0.90	0.60	-1.00	-0.20	2.00	130.00	37.00	1.70	-100.00	-10.00	-200.00	1.70	0.50	4.90
POC-01	1412	169.50	170.00	-5.00	5.00	-0.50	1.10	0.70	-1.00	0.20	3.00	-100.00	38.00	1.80	-100.00	-10.00	-200.00	1.20	0.40	5.30
POC-01	1413	180.50	181.00	-5.00	2.00	-0.50	0.80	1.00	-1.00	0.30	3.00	-100.00	17.00	1.60	-100.00	-10.00	-200.00	1.30	0.20	3.50
POC-02	1414	59.50	60.00	-5.00	-2.00	0.60	0.90	0.50	-1.00	-0.20	3.00	-100.00	38.00	2.56	-100.00	-10.00	-200.00	-0.50	0.50	6.30
POC-02	1415	72.50	73.00	-5.00	-2.00	0.90	1.50	1.00	1.00	0.20	4.00	-100.00	64.00	2.41	-100.00	-10.00	470.00	-0.50	0.50	8.40
POC-02	1416	87.00	87.50	-5.00	-2.00	0.70	1.10	0.70	-1.00	-0.20	3.00	-100.00	37.00	2.45	-100.00	-10.00	360.00	1.20	0.50	5.80
POC-02	1417	101.00	101.50	-5.00	-2.00	-0.50	1.00	0.70	-1.00	0.20	3.00	110.00	33.00	2.60	-100.00	-10.00	-200.00	0.60	0.60	5.70
POC-02	1418	111.00	111.50	-5.00	-2.00	0.70	1.10	1.40	-1.00	0.30	4.00	-100.00	57.00	2.77	-100.00	-10.00	300.00	0.60	0.50	6.00
POC-02	1419	131.50	132.00	-5.00	-2.00	-0.50	0.80	-0.20	-1.00	-0.20	3.00	-100.00	-5.00	1.60	-100.00	-10.00	-200.00	0.50	0.40	3.50
POC-02	1420	140.50	141.00	-5.00	-2.00	0.60	1.10	0.50	-1.00	-0.20	6.00	110.00	18.00	1.80	-100.00	-10.00	320.00	-0.50	0.70	6.90
POC-02	1421	147.00	147.50	-5.00	-2.00	0.60	1.30	0.70	-1.00	-0.20	4.00	-100.00	23.00	2.67	-100.00	-10.00	-200.00	-0.50	0.60	6.40
POC-02	1422	191.00	191.50	-5.00	-2.00	-0.50	-0.50	4.70	-1.00	1.70	-2.00	-100.00	88.00	4.31	-100.00	-10.00	-200.00	-0.50	-0.20	6.70
POC-02	1423	206.50	207.00	-5.00	-2.00	-0.50	0.60	4.80	-1.00	1.30	-2.00	-100.00	79.00	3.84	-100.00	-10.00	320.00	1.00	-0.20	6.60
POC-02	1424	216.50	217.00	-5.00	-2.00	-0.50	-0.50	4.60	-1.00	1.30	-2.00	-100.00	75.00	2.60	-100.00	-10.00	-200.00	-0.50	-0.20	5.90
POC-02	1425	230.50	231.00	-5.00	-2.00	-0.50	-0.50	4.60	-1.00	1.20	-2.00	-100.00	76.00	3.39	-100.00	-10.00	-200.00	-0.50	-0.20	6.00
POC-02	1426	243.00	243.50	-5.00	-2.00	-0.50	-0.50	4.50	-1.00	0.70	-2.00	-100.00	80.00	2.55	-100.00	-10.00	-200.00	-0.50	-0.20	5.90
POC-02	1427	284.00	284.50	-5.00	-2.00	-0.50	-0.50	4.40	-1.00	0.90	-2.00	-100.00	69.00	3.18	-100.00	-10.00	-200.00	0.80	-0.20	5.90
POC-02	1428	300.60	301.10	-5.00	-2.00	-0.50	0.60	4.80	-1.00	1.20	-2.00	-100.00	75.00	3.81	-100.00	-10.00	-200.00	0.70	-0.20	7.10
POC-02	1429	318.50	319.00	-5.00	-2.00	-0.50	0.80	0.20	-1.00	0.20	4.00	-100.00	47.00	2.36	-100.00	-10.00	-200.00	1.40	0.50	5.40

4. THIN SECTION DESCRIPTIONS

Remarks:

The report was written before the thin sections were studied so the following comments are given:

POC-01

First subunit (61.6-126.3m) of intermediate to mafic tuffs:

one thin section from this unit supports the mesoscopic description given in the text.

Second subunit (126.3-153.35m) of amphibole-rich flows:

one thin section from this unit supports the mesoscopic description in the text; the foliation is very well developed, may be a tuff.

Third subunit (153.35-196.9m) of mafic to intermediate tuffs:

the two thin sections studied support the mesoscopic description in the text; section taken at 180.7m is porphyritic and may be a flow rock.

POC.02

First subunit (40.8-71.1m) of intermediate to mafic tuffs:

one thin section from this unit supports the mesoscopic description given in the text.

Second subunit (71.1-134.4m) of mafic to intermediate tuffs:

five thin sections from this unit were studied and these support the mesoscopic description given in the text.

Third subunit (134.4-151.5m) of intermediate to mafic tuffs:

two thin sections were studied and one (at 140.7) shows 40 0/00 amphibole and no biotite, the other (at 147.4) shows 40 0/00 amphibole and 52 biotite.

the fine grained metamorphic amphibole (locally chloritized) was probably mistaken for biotite during core description; the corroded texture of the amphibole is different than the amphibole in all previous slides and opaques are slightly more abundant (note that the core here is weakly magnetic, and that these two samples plot clearly together in the tholeiitic andesite field - Figure 5 in text - away from all other samples).

The feldspar porphyritic rocks (151.5-312.9):

seven thin sections are all remarkably similar considering the textural variations observed on the core, except for #1424.

I do not see any strong evidence that these rocks are sheared upon examination of the thin sections.

The mafic to intermediate tuffs at the end of hole (312.9-321.6):

one thin section from the unit shows no biotite, but chlorite pseudomorphs of biotite are present.

* * *



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-01-101.0
(1410)

Field Rock Name: intermediate to mafic tuffe (and/or flows)
(garnetiferous)

Major Minerals: (% - habit, grain size):

- ~ 60% very fine grained feldspar - quartz groundmass
- ~ 20% amphibole (hornblende) mostly well oriented / occasional porphyroblasts
- ~ 20% biotite - well oriented laths define good foliation
- ~ 1% garnet - porphyroblasts generally occur along distinct "horizons"
- < 1% opaques
- < 1% disseminated calcite grains

Minor Minerals:

Veins, Fractures: minor chloritic hairline fractures at ~60° to foliation
with associated weak calcite alteration

Alterations: weak chloritic alteration confined to distinct "horizons"
derived from hornblende/biotite

Rock Texture: well foliated / well developed mineralogic and granulometric
variations help define foliation

Rock Name: intermediate tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-01-142.3
(1411)

Field Rock Name: amphibole rich mafic flow

Major Minerals: (% - habit, grain size):

- ~60% amphibole (hornblende) variable grain size, well aligned (relictoblastic)
- ~40% interstitial feldspar/quartz(?)
- ~1% very spherical
- <1% epaguer
- <1% disseminated calcite grains

Minor Minerals:

Veins, Fractures: one fracture/vein // foliation with coarse amphibole, calcite, minor chlorite, epidote, muscovite, prehnite(?), quartz, feldspar

Alterations: very fresh

Rock Texture: very well foliated/nematoblastic

Rock Name: mafic flow (very fine grained/very well developed metamorphic foliation) or suff.



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: FOC-01-169.7

(1412)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

- ~ 55% very fine grained feldspar - quartz groundmass
- ~ 40% amphibole (hornblende), nematoblastic, weakly chloritized
- ~ 5% biotite, tiny elongate grains, commonly completely chloritized
- ~ 1% garnet; <1mm poikiloblasts, local weak chloritization
- < 1% opaque
- < 1% disseminated calcite grains / patches

Minor Minerals:

Veins, Fractures: one vein/fracture at ~ 50° to S, with calcite, chlorite
This vein shows a few subsidiary splays in several
orientations which extend 1mm or so away from it.

Alterations: very weak, but pervasive chloritic alteration

Rock Texture: well foliated possibly weakly sheared.

Rock Name: mafic flow or tuff (mineralogic/granulometric variations
not present as observed in 1410)

PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-01-180.7
(1413)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

- ~50% very fine grained feldspar/quartz groundmass
- ~5% plagioclase phenocrysts - weakly to strongly sericitized
estimated composition An₄₅ (Michel-Levy)
- ~30% amphibole (hornblende), fine grained, moderately nematoblastic
- ~15% biotite, very fine needles, grains, moderately well oriented
- ~1% opaques

Minor Minerals:

Veins, Fractures: a few 2-3 mm quartz veinlets (weakly strained)
roughly parallel to foliation

Alterations: similarly chloritized, perhaps a little stronger than 1412
(mostly due to higher biotite content?)

Rock Texture: moderately foliated (nematoblastic), porphyritic

Rock Name: mafic flow



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-59.5
(1414)

Field Rock Name: intermediate to mafic tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

- ~55% very fine grained feldspar - quartz groundmass
- ~25% amphibole (hornblende), very elongate grains and aggregates
- ~10% biotite, elongate grains and aggregates
- ~5% chlorite, probably derived from, but not pseudomorphing biotite, hornblende
- ~5% opaques

Minor Minerals:

Veins, Fractures: a few 1mm quartz (very weakly strained) veins // foliation
a few hairline cracks at 70-90° to foliation
with or without quartz, chlorite

Alterations: local weak sericitization may suggest a few relict
plagioclase phenocrysts

Rock Texture: very well foliated - nematoblastic / minor mineralogic variation
helps define foliation

Rock Name: intermediate to mafic tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-72.7
(1415)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

almost identical to 1414 except there is:

~ 10% plagioclase phenocrysts estimated composition An₃₅
(weakly to moderately sericitized and generally subround)
there is no chlorite (~30% amphibole)

Minor Minerals:

Veins, Fractures:

Alterations:

Rock Texture: very well foliated / some mineralogic variation across foliation

Rock Name: mafic to intermediate tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-87-3
(1416)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

almost identical to 1415 except there is:

increased amphibole (hornblende) content

a little chlorite in the hinge of crenulation (see below)

~1% calcite in patches

one large patch of plagioclase phenocrysts

~~Minor Minerals:~~

a prominent crenulation plane/kink band

occurs at ~45° to S₁ foliation, biotite and

chlorite are more abundant in hinge than on limbs

Veins, Fractures:

Alterations:

Rock Texture: well foliated, generally uniform mineralogy and texture
except for patch of plagioclase phenocrysts

Rock Name: mafic to intermediate tuff or flow



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-101.2
(1417)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

identical to 1415, perhaps 35% hornblende

Minor Minerals:

Veins, Fractures: haulie crack at 90° to foliation

Alterations:

Rock Texture:

Rock Name: mafic to intermediate tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-111.35
(1418)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

~ 60% feldspar - quartz groundmass, fine grained to very fine grained

15-20% amphibole (hornblende), generally elongate, locally tabular,
generally coarser grained than previous slides

15-20% biotite, elongate needles, aggregates, a little coarser than previously
but not as coarse as hornblende

2-3% opaques

Minor Minerals: clinozoisite

Veins, Fractures: hairline cracks at 90° to foliation

Alterations: very local chloritic alteration of biotite
minor sericitization of groundmass may indicate
relict plagioclase phenocrysts (recrystallized)

Rock Texture: very well foliated

Rock Name: intermediate tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-131.9
(1419)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

~35% feldspar - quartz groundmass, very fine grained, interstitial to amphiboles

~50% amphibole (hornblende), generally elongate to locally tabular

~10% biotite, mostly completely altered to chlorite

~5% opaque

Minor Minerals: epidote, a few totally sericitized plagioclase phenocrysts

Veins, Fractures:

Alterations:

Rock Texture: well foliated / nematoblastic

Rock Name: mafic tuff

PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: PDC-02-140.7
(1420)

Field Rock Name: intermediate to mafic tuffs (and/or flows)
(garnetiferous)

Major Minerals: (% - habit, grain size):

- ~ 50% very fine grained feldspar/quartz groundmass
- ~ 40% amphibole (hornblende) relict and corroded
- ~ 1% garnet porphyroblasts
- ~ 7% opaquers
- ~ 1% small epidote grains, most commonly in or near garnets
- ~ 2% calcite in veins

Minor Minerals:

Veins, Fractures: several 0.1 to 1 mm quartz-calcite and calcite veins
parallel to foliation, with minor clinopyroxene

Alterations: most amphiboles are unaltered, some are completely chloritized

Rock Texture: well foliated / relict / weakly porphyroblastic

Rock Name: mafic to intermediate tuff.



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-147.4 (1421)

Field Rock Name: intermediate to mafic tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

almost identical to 1420 except that:

there is about 5% biotite

there is no garnet (but there are still a few epidote grains)

there is no chlorite

Minor Minerals:

Veins, Fractures:

Alterations:

Rock Texture:

Rock Name: mafic to intermediate tuff.



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-191.2
(1422)

Field Rock Name: feldspar-quartz porphyry

Major Minerals: (% - habit, grain size):

- ~ 25% plagioclase phenocrysts up to 2-3 mm, with abundant flecks of sericite, subhedral to subround, estimated composition An₄₀
- ~ 3% quartz phenocrysts up to ~1 mm, weakly recrystallized/strained
- ~ 55% feldspar/quartz, groundmass
- ~ 7% biotite, needles and aggregates define weak/moderate foliation
- ~ 5% muscovite, on plagioclase grain boundaries and cutting across biotite aggregates, also dispersed in groundmass
- ~ 5% calcite, dispersed grains near and in plagioclase

Minor Minerals: opaques < 1%

Veins, Fractures:

Alterations:

Rock Texture: porphyritic, weakly foliated

Rock Name: feldspar-quartz porphyry



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-206.9
(1423)

Field Rock Name: feldspar - quartz porphyry

Major Minerals: (% - habit, grain size):

almost identical to 1422, a little more calcite

Minor Minerals:

Veins, Fractures: 1 mm calcite veinlet at 45° to foliation

Alterations:

Rock Texture:

Rock Name: feldspar - quartz porphyry



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-216.8 (1424)

Field Rock Name: feldspar-quartz crystal tuff

Major Minerals: (% - habit, grain size):

in comparison to 1423:

albite phenocrysts are far less abundant, either they are completely recrystallized to very fine grained aggregates or they never existed quartz eyes are slightly more abundant and are larger up to 3mm there is only ~5% biotite or less overall, foliation is much better developed

Minor Minerals:

Veins, Fractures:

Alterations:

Rock Texture:

Rock Name: feldspar-quartz crystal tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-230.6
(1425)

Field Rock Name: feldspar - quartz crystal tuff

Major Minerals: (% - habit, grain size): _____

almost identical to 1423, with somewhat better developed foliation

Minor Minerals: _____

Veins, Fractures: _____

Alterations: _____

Rock Texture: _____

Rock Name: feldspar - quartz crystal tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-243.5
(1426)

Field Rock Name: feldspar-quartz crystal tuff

Major Minerals: (% - habit, grain size): _____

idem 1425

Minor Minerals: _____

Veins, Fractures: _____

Alterations: _____

Rock Texture: _____

Rock Name: feldspar-quartz crystal tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: Poc-02-2842
(1427)

Field Rock Name: feldspar - quartz crystal tuff

Major Minerals: (% - habit, grain size):

idem 1425

Minor Minerals:

Veins, Fractures:

Alterations:

Rock Texture:

Rock Name: feldspar - quartz crystal tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-300.7

(1975)

Field Rock Name: feldspar - quartz crystal tuff

Major Minerals: (% - habit, grain size):

idem 1422, one quartz eye is from

Minor Minerals:

Veins, Fractures:

Alterations:

Rock Texture:

Rock Name: feldspar - quartz porphyry (?) or crystal tuff



PORPHYRY CREEK PROJECT

THIN SECTION DESCRIPTION

Sample No.: POC-02-318.9 (1429)

Field Rock Name: mafic to intermediate tuffs (and/or flows)

Major Minerals: (% - habit, grain size):

~ 50% fine grained feldspar/quartz groundmass

~ 35% amphibole (hornblende), elongate porphyroblasts, locally chloritized

~ 10% chlorite - very likely pseudomorphing pre-existing biotite

~ 1% sericite - locally abundant in groundmass where there is abundant chlorite

~ 3% opaquers

~ 1% calcite dispersed grains

Minor Minerals:

Veins, Fractures: minor quartz-calcite microveinlets // foliation

Alterations:

Rock Texture: well foliated / nematoblastic / porphyroblastic

Rock Name: mafic to intermediate tuff



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Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

October 19, 1990

File: 2.13479 & 2.13517
Report of Work: W9008.241

Mr. Robert W. Owen
Assessment Files Office
Room 812
77 Grenville Street
Toronto, Ontario
M5S 1B3


Dear Mr. Owen:

Re: Drill Core Analysis submitted on Mining Claims:
L. 1025524 et al in Hoblitzell Township.

I am returning File: 2.13517 to your office. File: 2.13479
has been deleted and merged with this file.

For further information, please contact Dale Messenger at
(416) 965-4888.

Yours sincerely,


Ron C. Cashinski
Acting Provincial Manager, Mining Lands
Mines & Minerals Division

DM: zm
Encl:



August 13, 1990

TO WHOM IT MAY CONCERN

I do hereby certify that the following expenditures have been spent in 1990 for the Porphyry Creek project situated in Hoblitzell Township in northeastern Ontario:

Claim #L1025525 (diamond drill hole POC-01)

major/minor element analyses	5 x 58.00	290.00
Au, K ₂ O, Na ₂ O, Cu, Zn analyses	8 x 37.75	302.00
Au, K ₂ O, Na ₂ O analyses	10 x 25.75	257.50

Claim #L1025524 (diamond drill hole POC-02)

major/minor element analyses	16 x 58.00	928.00
Au, K ₂ O, Na ₂ O analyses	24 x 25.75	<u>618.00</u>

Total		<u>2,395.50</u>
-------	--	-----------------

We have not yet been invoiced for thin sections and reserve the right to claim future credits for data submitted in the technical report which accompanies this statement.

As Vice President, Finance of COGEMA CANADA LTD., I am duly authorized to make this certification.

Dated at Saskatoon, in the Province of Saskatchewan, this 13th day of August, 1990.

COGEMA CANADA LIMITED

A handwritten signature in black ink, appearing to read "R. A. Rozon", is written over the printed name.

R. A. Rozon,
Vice President, Finance.

JL:rhb
def



DOCUMENT NO.
W9008-241

Instructions - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Mining Act

Type of Survey(s) DIAMOND DRILL CORE ANALYTICAL RESULTS	Township or Area Hoblitzell
Claim Holder(s) COGEMA CANADA LTD. LIMITED	Prospector's Licence No. 2,13517 T4677
Address 817-825 - 45th Street West, Saskatoon, SK, S7K 3X5	
Survey Company COGEMA CANADA LTD.	Date of Survey (from & to) 06, 08, 90 18, 03, 90
Name and Address of Author (of Geo-Technical report) John Learn, CP 877, Rouyn-Noranda, Qc J9X 5C7	

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Electromagnetic	
	Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	Radiometric	
	Other	
	Geological	
	Geochemical	
Man Days Complete reference to this section and enter total(s) here	Geophysical	Days per Claim
RECEIVED SEP 10 1990 MINING LANDS SECTION	Electromagnetic	
	Magnetometer	
	Radiometric	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
L	1025524	20			
	1025525	54			
	1025526	40			
	1025503	1			
	1025521	40			
	1025522	4			

RECEIVED
MINING DIVISION
OCT 15 1990

RECEIVED
LARDER LAKE
MINING DIVISION
AUG 17 1990
TIME 8:35am

Expenditures (excludes power stripping)

Type of Work Performed Core analysis	
Performed on Claim(s) L1025524, L1025525	
Calculation of Expenditure Days Credits	
Total Expenditures \$ 2,395.50	Total Days Credits 159
Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.	

Total number of mining claims covered by this report of work. **x6**

Date **AUG. 13, 1990**
Signature: *[Signature]*
V.P. ADMINISTRATION

For Office Use Only		
Total Days Cr. Recorded 159	Date Recorded Aug 17/90	Mining Recorder <i>[Signature]</i>
	Date Approved as Recorded October 4/90	Branch Director <i>[Signature]</i>

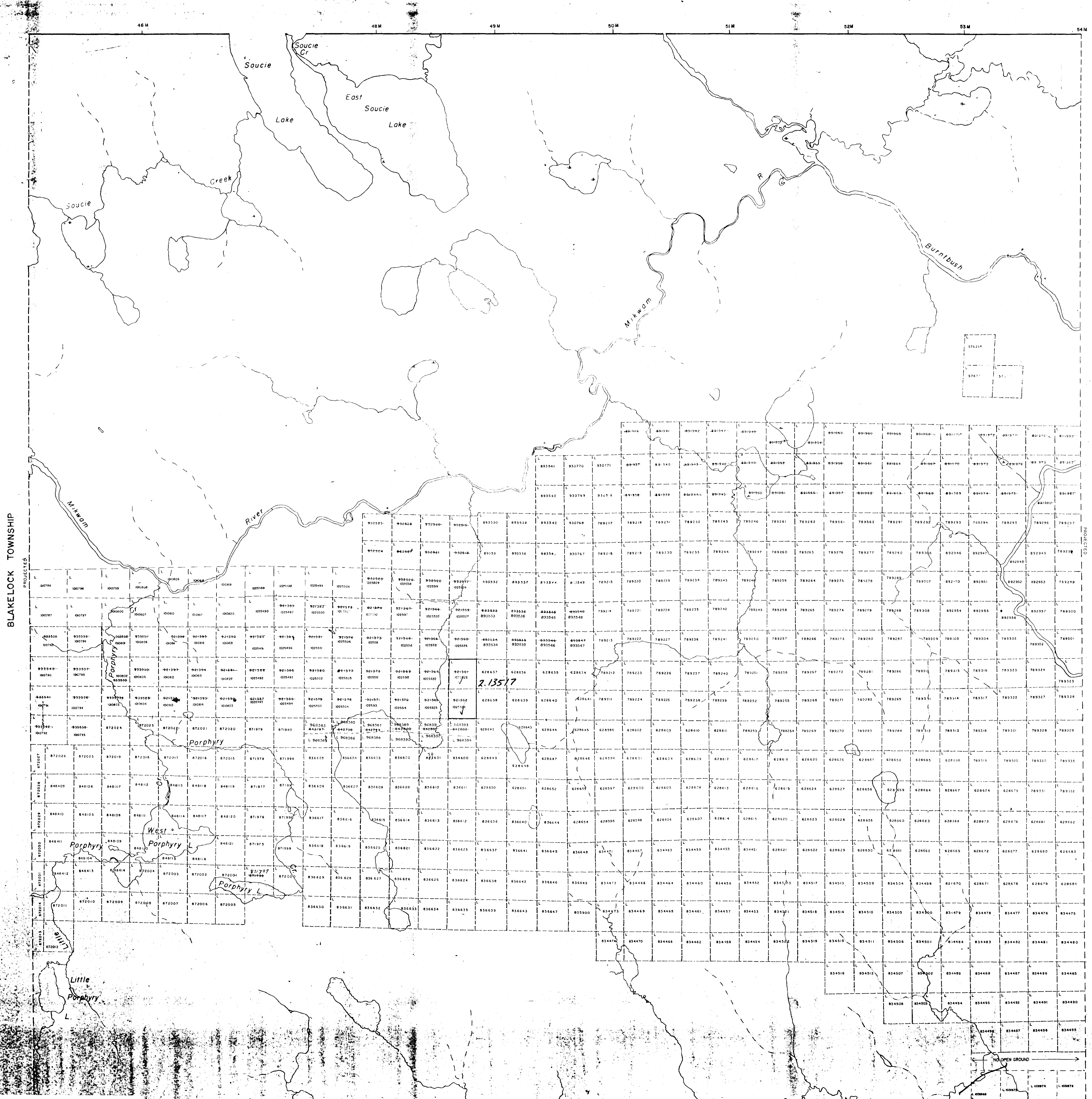
Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
John Learn, CP 877, Rouyn-Noranda, Qc, J9X 5C7

Date Certified
AUG. 13, 1990

Certified by (Signature)
[Signature]



LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES:	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES:	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1915, VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1910, CHAP. 360, SEC. 43, SUBSEC. 1.

SCALE
1:20 000

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM OFFICIAL RECORDS AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDS, MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

BLAKELOCK TOWNSHIP

NOSEWORTHY TOWNSHIP

DATE OF ISSUE
2004
LAND TITLE RECORDS DIVISION

TOWNSHIP
HOBLITZELL
M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE
MINING DIVISION
LARDER LAKE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources
Ontario

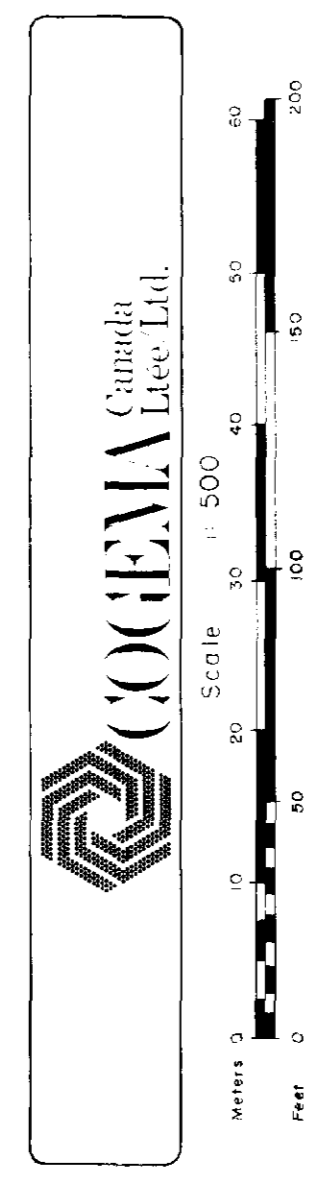
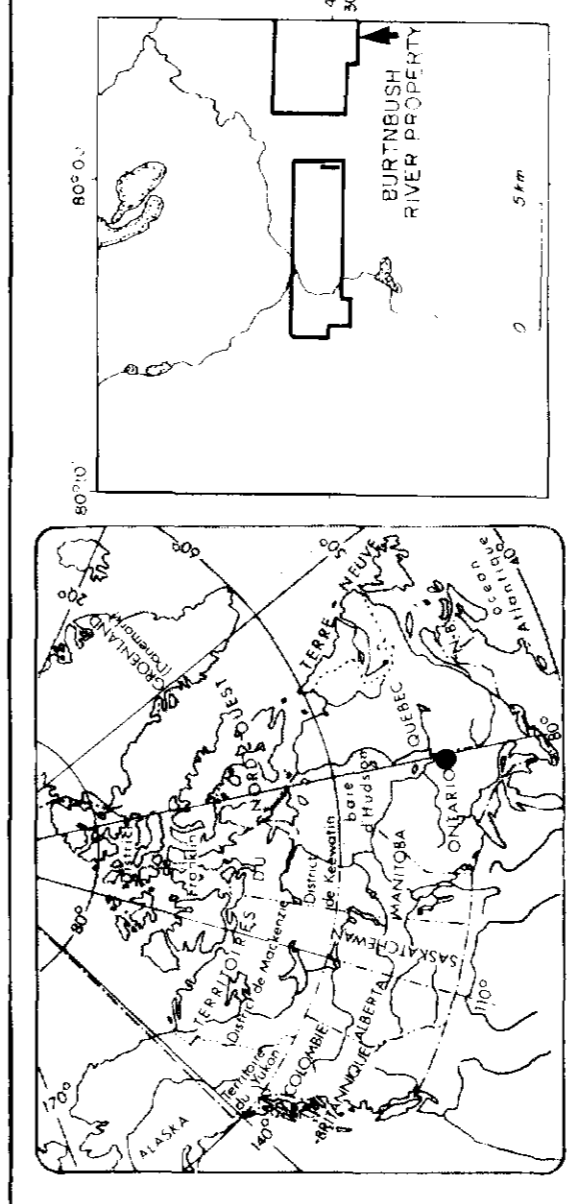
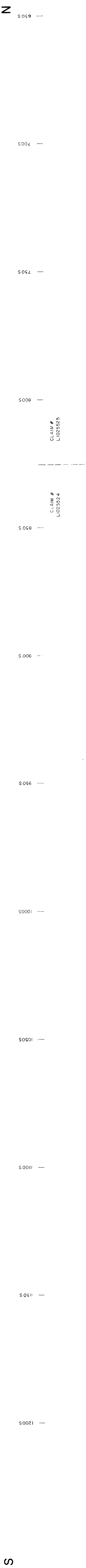
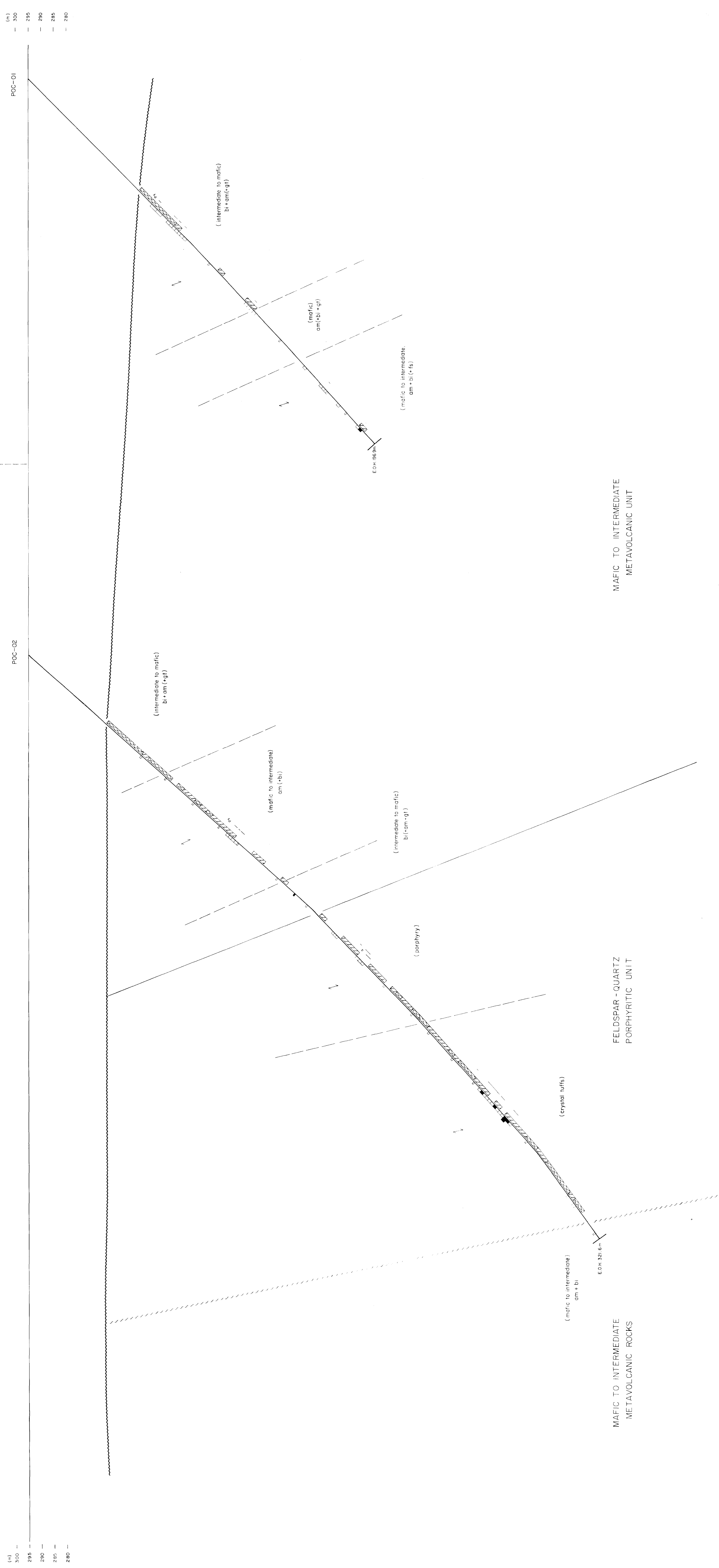
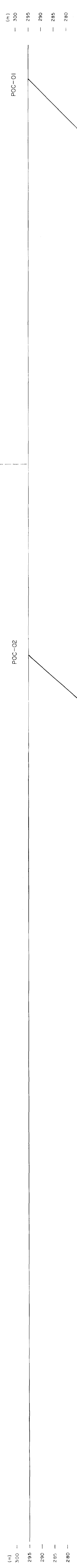
Date: OCTOBER 1986
Number: G-3513



TOMLINSON TOWNSHIP

S

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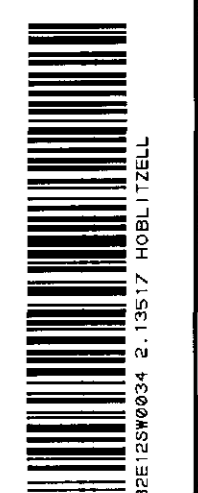
PORPHYRY CREEK PROJECT

DIAMOND DRILL HOLES
 POC-01 & POC-02
 SECTION 2800 E

213477
 2.155/7

Prepared by: J. Levesque - C.P.R. Date: August 06, 2007 (2007-08-06)
 Checked by: M. P. G. Date: 6/7/07
 Drawn by: [blank]
 Review by: [blank]

MAP NO. 1



E10