

5137

DIAMOND DRILLING REPORT

ON THE BOG & FRI CLAIMS

KAMLOOPS M. D.

92P/10E

JULY 17 - AUGUST 5, 1974

Location

12 Miles NE of Bridge Lake

Lat. $51^{\circ} 35'$

Long. $120^{\circ} 30'$

on behalf of

Cities Service Minerals Corporation

405-1200 West Pender St., Vancouver.

by

J. W. Murton, P. Eng.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5137 MAP

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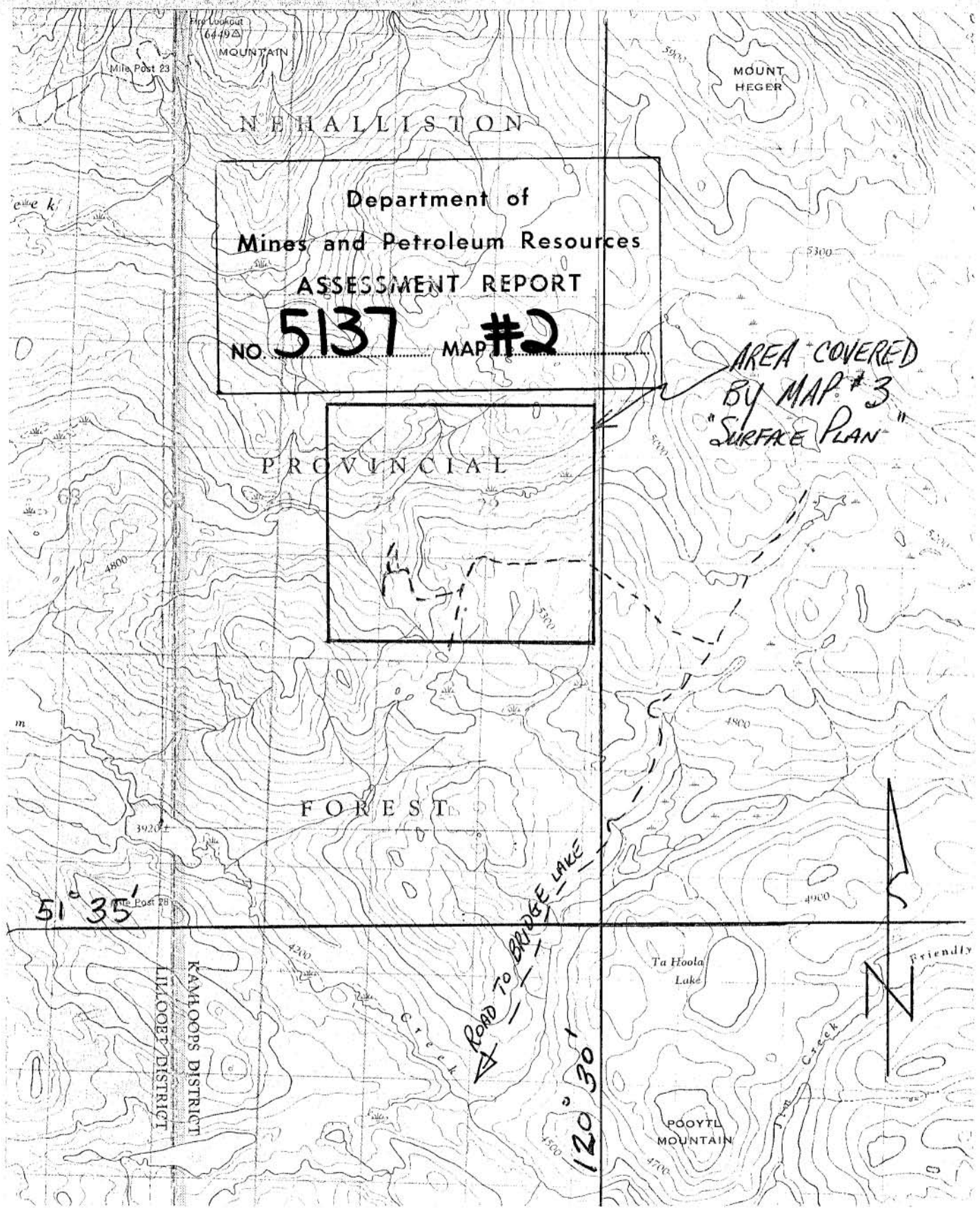


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **5137** MAP **#1**

MAP #1

SCALE 1" = 30 MILES

J. J. [Signature]
 Sept 10/74



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **5137** MAP **#2**

AREA COVERED
BY MAP #3
"SURFACE PLAN"

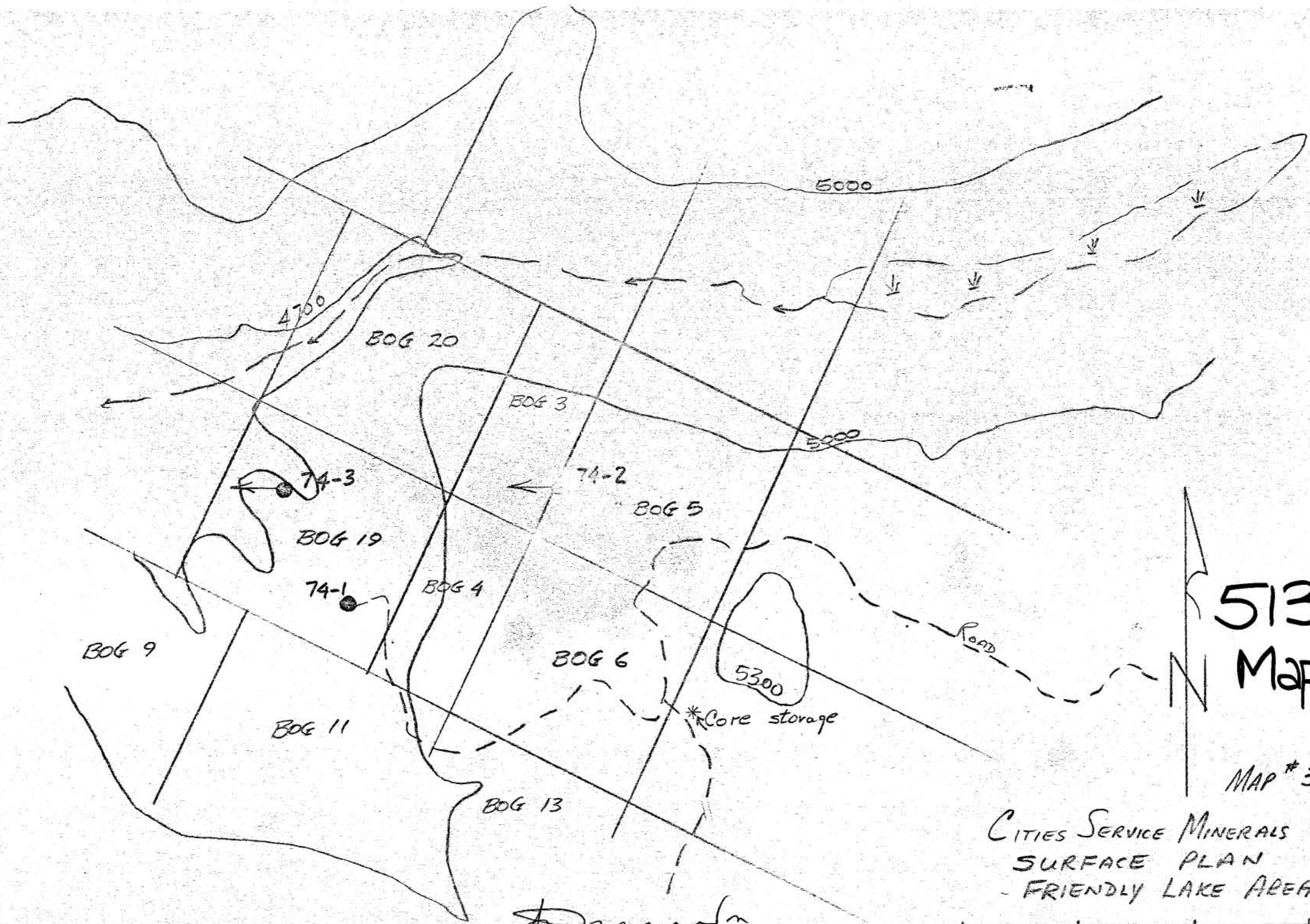
51° 35'

120° 30'

MAP # 2

[Signature]
Sept 10/74

SCALE 1:50,000
CLEARWATER SHEET
92P9W & 92P10E

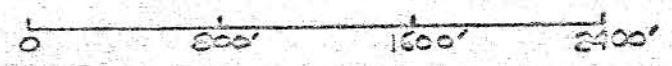


5137
Map 3

MAP # 3

CITIES SERVICE MINERALS CORP
SURFACE PLAN
- FRIENDLY LAKE AREA -

[Signature]
Sept 10/74



DIAMOND DRILLING

STATEMENT OF COSTS INCURRED DURING PERIOD JULY 17 -
AUGUST 5, 1974 ON BOG & FRI CLAIMS, KAMLOOPS, M.D.

Drilling Invoices from D. W. Coates (copies included)
following -

#759	July 16-31	\$15,618.36
#767	August 1-5	<u>8,234.80</u>
		\$23,853.16
		VVVVVVVVVV

	<u>Azimuth</u>	<u>Inclination</u>	<u>Depth</u>	<u>Elevation</u>	<u>Core Size</u>
DDH\$74-1	-90°	-90°	616'	4800'	BQ
74-2	True West	-60°	450'	5225'	BQ
74-3	True West	-60°	636'	4700'	BQ

Core storage is on property at location shown in Detailed
Surface Plan.

The core was logged by Mr. Greg Hawkins, a graduate from
University of Alberta with a B.Sc. in Geology, under the direction of
J. W. Murton, P. Eng.

C E R T I F I C A T I O N

I, J. W. Murton, of North Vancouver, British Columbia, do hereby certify that:

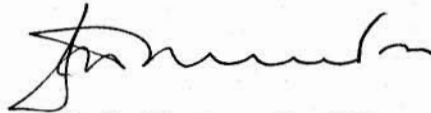
I am a member of the Association of Professional Engineers of the Province of British Columbia, registered in 1972, No. 8324.

I am a graduate of the University of Manitoba with a B. Sc. in Geology.

I have been a practising Engineer and Geologist since 1960 in Manitoba, Saskatchewan, British Columbia, South Western U.S.A. and Alaska.

Vancouver, B.C.

9 September 1974



J. W. Murton, P. Eng.

Cities Services Minerals Corp.
405 - 1200 West Pender Street
Vancouver, B. C.

INVOICE

D.W. COATES ENTERPRISES LTD.

1668 - 1st AVENUE WEST
VANCOUVER 9, B.C.

INVOICE NO.: 759

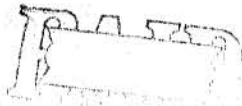
JOB NO.: 232

Date: Aug. 8, 1974

RE: Little Fort Area Drilling

PERIOD: July 16 - 31, 1974

Drilling Detail	\$11,051.80
Move, Setup & Teardown	1,293.40
Transportation	2,398.00
Drilling with Mud	145.36
Reaming & Casing	549.80
Core Boxes	180.00
	<hr/>
	\$15,618.36



581 J Drilling
ZP

VR

Cities Services Minerals Corp.,
405 - 1200 West Pender Street,
Vancouver, B.C.

INVOICE

D.W. COATES ENTERPRISES LTD.

1668 - 1st AVENUE WEST
VANCOUVER 9, B.C.

INVOICE NO.: 767

JOB NO.: 232

Date: August 21, 1974.

PROJECT: Little Fort Area Drilling.

PERIOD: August 1 - 5, 1974.

Drilling Detail	\$ 6,585.00
Move, Setup & Teardown	196.40
Transportation	1,341.80
Core Boxes	111.60
	<hr/>
	\$ 8,234.80
	<hr/> <hr/>

CITIES SERVICE MINERALS CORP.
R E C E I V E **D**
AUG 27 1974

E. & O. E.

581 d
Jm

Company Cities Service Minerals Corp.Project 581-JBearing VerticalSheet 1 of 4 Hole No. BMining KamloopsProperty BogInclination 90°Coordinates 540NDivision KamloopsStarted July 21, 1974Completed July 25, 1974355 + 50EGeographic KamloopsLogged by: G. HawkinsDepth 616'Altitude 4800'Coordinates Kamloops

Footage	Core Rec	Rec					Footage - Sample #	REMARKS
			Mo	Cu	Pb	Ag		
0-14							Casing	
14-80						14-20 20201	Volcanic & intrusive matrix breccia. Fractured, with limonite (from Py).	
						20-35 20202	Quartz veining and sericite in shear Faces (gouge).	
						30-40 20203	Finely disseminated Py <1% in silicified breccia. Soft green chlorite (serpentinization of volcanics?)	
						40-50 20204	Intrusive fragments bleached white. Secondary crystalline chlorite.	
				✓	✓	50-60 20205	Occasional Cpy dissemination. Galena at 35'. 41' fault - 20° off core axis. Copper associated with coarse soft green altered phenocrysts.	
						60-70 20206	60' scolecite? 66' shear gouge	
80-95						70-80 20207	70-80 intense sericite with associated fault gouge.	
						80-90 20208	Fault contact with fine grained multifractured tuff. Mineralization Py 1%. Light colored with some silification. Hematite veinlets with Py.	
95-115						90-100 20209		
						100-110 20210	More coarse breccia of tuff. Less altered. Less Py. Vuggy calcite at 100'. Grading into increased percent of intrusive matrix in breccia. 3" fragments with Py coating the clasts. Intensified Py to 4%. 115' - Shear zone.	

Company _____ Project _____ Bearing _____ Sheet 2 of 4 Hole No. 74-1
 Mining _____ Property _____ Inclination _____ Coordinates _____
 Division _____ Started _____
 Geographic _____ Completed _____
 Coordinates _____ Logged by: _____ Depth _____ Altitude _____

Footage	Core Rec	Rec					Footage - Sample #	REMARKS
			Mo	Cu	Pb	Ag		
115-144							110-120 20211	125' Vuggy matrix of siliceous content-intermediate intrusive.
								Very low matrix with very fine disseminated cubic Py (5%) Kaolinized tuffs in intrusive 135-139 siliceous vuggy zone of Py coated breccia fragments.
							120-130 20212	
								140-144 poor recovery (50%) in contact zone.
144-150							130-140 20213	Dyke of volcanic augite porphyry altered to clay, SiO ₂ and veined. Calcification giving vuggs.
150-259							140-150 20214	Very siliceous tuffs. Fractured. 4% Py. 200' increased
							150-160 20215	fracturing. 202-211 fractured and brecciated. Increased
				✓			160-170 20216	silicification and the Cpy in SiO ₂ veinlet.
							170-180 20217	Secondary chlorite and Al silicates.
							180-190 20218	
							190-200 20219	222-224 Chloritization of rock, into kaolinization at 224.
							200-210 20220	Highly micro fractured and kaolinized with 4-5% Py to 242.
							210-220 20221	242 more massive silicified volcanics with fracturing and finely
							220-230 20222	disseminated Py and Cp trace. 250' quartz epidote veins. 254'-
				✓		230-240 20223	1% disseminated Cu.	
						240-250 20224		
						250-260 20225		

Bog

Company _____ Project _____ Bearing _____ Sheet 3 of 4 Hole No. 74-
 Mining _____ Property _____ Inclination _____ Coordinates _____
 Division _____ Started _____
 Geographic _____ Completed _____
 Coordinates _____ Logged by: _____ Depth _____ Altitude _____

Footage	Core Rec	Rec					Footage - Sample #	REMARKS	
			Mo	Cu	Pb	Ag			
259-315		95%		↓			260-270 20226	Highly pyritized micro fractured kaolinized porphyritic volcanic	
							270-280 20227	Green alteration of plagioclase phenocrysts prevades Cpy	
		60%					280-290 20228	disseminations continue Vuggies has allowed for growth of	
							290-300 20229	coarse crystalline Py.	
							300-310 20230		
							310-320 20231		
							320-330 20232		
315-340				✓			330-340 20233	Clay altered fine grained diorite less leucocratic in overall color. Less mineralization but higher percentage of Cp/Py.	
								Minor brecciation.	
								338-346 small zone of altered intrusive and dendritic veining of	
								Py.	
340-356							340-350 20234	Highly siliceous brecciated volcanic and intrusive. SiO ₂ veining	
356-360							350-360 20235	Silicified and fractured brecciated tuff. Minor Py < 1%.	
360-445				+			360-370 20236	Increased mineralization into highly kaolinized and micro-	
							370-380 20237		fractured. Trace Cpy.
							380-390 20238		402-405) - fault gouge
							390-400 20239	412-413)	
445-450				+			400-410 20240	Silification of volcanics. Less fractured. Cu trace in SiO ₂	
							410-420 20241		veinlets with disseminated Py.
450-475				X	X		420-430 20242	Quartz epidote alteration in fractures with galena. Cp traces	
							430-440 20243	and Py.	
							440-450 20244		

Company _____ Project _____ Bearing _____ Sheet 4 of 4 Hole No. 74-1
 Mining _____ Property _____ Inclination _____ Coordinates _____
 Division _____ Started _____
 Geographic _____ Completed _____
 Coordinates _____ Logged by: _____ Depth _____ Altitude _____

Footage	Core Rec	Rec					Footage - Sample #	REMARKS
			Mo	Cu	Pb	Ag		
475-479							450-460 20245	Very vuggy and soft with cherty veins.
479-488							460-470 20246	Chloritized and kaolinized volcanic porphyry with well preserved remnants.
							470-480 20247	Very soft and green tinged rims around remnants.
488-510							480-490 20248	Decreased kaolinization to siliceous micro fractured andesite
							490-500 20249	tuff breccia, intruded with veins of micro intrusive. Py content < 1%.
510-540							500-510 20250	Some kaolinized zones in micro intrusive. Dark green host altered to light green.
							510-520 20251	
							520-530 20252	
							530-540 20253	
540-576							540-550 20254	
				X			550-560 20255	Increased microfractures and kaolinite. Py 5% in fractures Cpy traces.
576-616							560-570 20256	
							570-580 20257	
							580-590 20258	More competent silicified dark green andesite. Fracturing with
							590-600 20259	Py 1%. Increased micro intrusive veining and lightened core.
							600-610 20260	Py % varies to 2%. 616' disseminated Py in dark gray green si-
							610-616 20261	licified andesite. Fracture veining.
End of Hole								

Company _____ Project _____ Bearing _____ Sheet 2 of 4 Hole No. 74-3
 Mining _____ Property _____ Inclination _____ Coordinates _____
 Division _____ Started _____
 Geographic _____ Completed _____
 Coordinates _____ Logged by: _____ Depth _____ Altitude _____

Footage	Core Rec	Rec					footage	Sample #	REMARKS
			Mo	Cu	Pb	Ag			
(86-276)							130-140	24082	125' calcic vuggy's with limonite stain from oxidation of ferromagnesian mafics. 128-146 silicious breccia-altered. Augite plagioclase porphyry with some kaolinization of matrix.
				✓			140-150	24083	High Cpy at 130' in blobs.
				✓			150-160	24084	Cpy appears to be associated with calcic veinlets down section around 143'. Primary alteration in ultrabasic bands gives galena, specularite, whereas more total alteration (kaolinite) is necessary for Cpy. 170' -increase in biotite content in ultramafic volcanic (secondary).
							160-170	24085	
							170-180	24086	
							180-190	24087	
							190-200	24088	Lination of biotite at 25° off core axis. Hematite along slickenside shears.
							200-210	24089	
							210-220	24090	
							220-230	24091	
							230-240	24092	
							240-250	24093	
							250-260	24094	
							260-270	24095	
							270-280	24096	
							280-290	24097	
							290-300	24098	
							300-310	24099	
							310-320	24100	

Company _____ Project _____ Bearing _____ Sheet 3 of 4 Hole No. 74-3
 Mining _____ Property _____ Inclination _____ Coordinates _____
 Division _____ Started _____
 Geographic _____ Completed _____
 Coordinates _____ Logged by: _____ Depth _____ Altitude _____

Footage	Core Rec	Rec					Footage	Sample #	REMARKS
			Mo	Cu	Pb	Ag			
276-295								Med. fine grained equigranular monzonite intrusive.	
						320-330	7803		
295-310						330-340	7804	Silicified white-green altered ultrabasic. Very minor galena.	
						340-350	7805	Py < 1%. Small monzonite lenses and altered tuff from 310.	
310-348						350-360	7806	Increased Py. Fracturing 45° off core axis. Kaolinization and	
						360-370	7807	Py. 348' increased porphyritic volcanic. Dark green silicified	
348-373						370-380	7808	augite porphyry.	
						380-390	7809		
						390-400	7810		
373-376						400-410	7811	Monzonite	
						410-420	7812		
376-382						420-430	7813	Augite porphyry	
						430-440	7814		
382-415						440-450	7815	Dark green fractured pyritic tuff. 383' intense silicification of	
						450-460	7816	brecciation of tuff.	
						460-470	7817		
415-423						470-480	7818	Altered porphyritic volcanic (augite). 423-424 fault gouge.	
423-453						480-490	7819	Silified tuff-increased Py 2%.	
453-472						490-500	7820	Relatively unaltered augite porphyry.	
						500-510	7821		
472-553						510-520	7822	Increased silicification and porphyritic tuff brecciation. Grades	
						520-530	7823	into tuff light gray green fractured breccia.	
						530-540	7824		
						540-550	7825	Heavy silicification and fracture veining. 3-4% disseminated	
						550-560	7826	Py.	
						560-570	7827	Alteration decreases down section into veining with cubic Py.	
						570-580	7828		

