

PERCUSSION DRILLING REPORT

on the

G.C. #1 MINERAL CLAIM

NICOLA LAKE AREA

NICOLA MINING DIVISION

NIS Sheet - 92I/2E	U.T.M. Grid - Zone 10
Latitude - $50^{\circ} 10.8'$	North - 5561200
Longitude - $120^{\circ} 35.9'$	East - 671500

BETHLEHEM COPPER CORPORATION
Suite 2100 - Guinness Tower
1055 West Hastings Street
Vancouver, B.C.
V6E 2H8

December 15, 1978

R. J. Nethery, P.Eng.

7121

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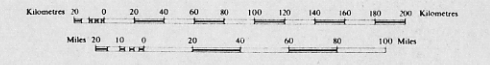
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BRITISH COLUMBIA

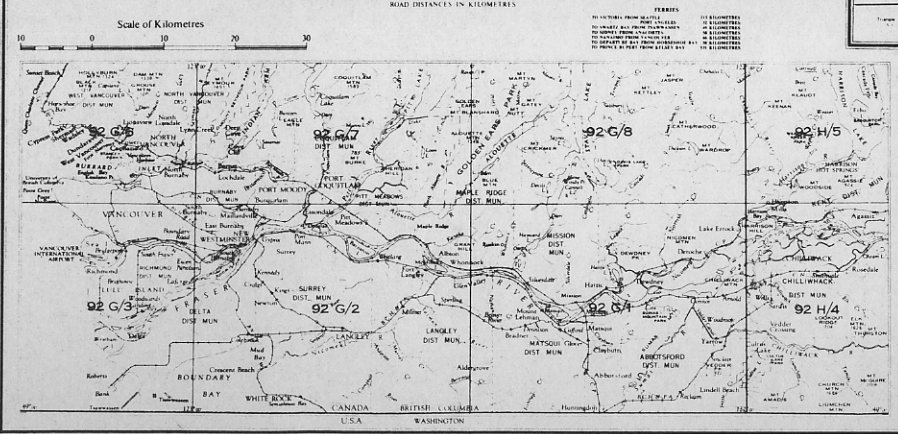
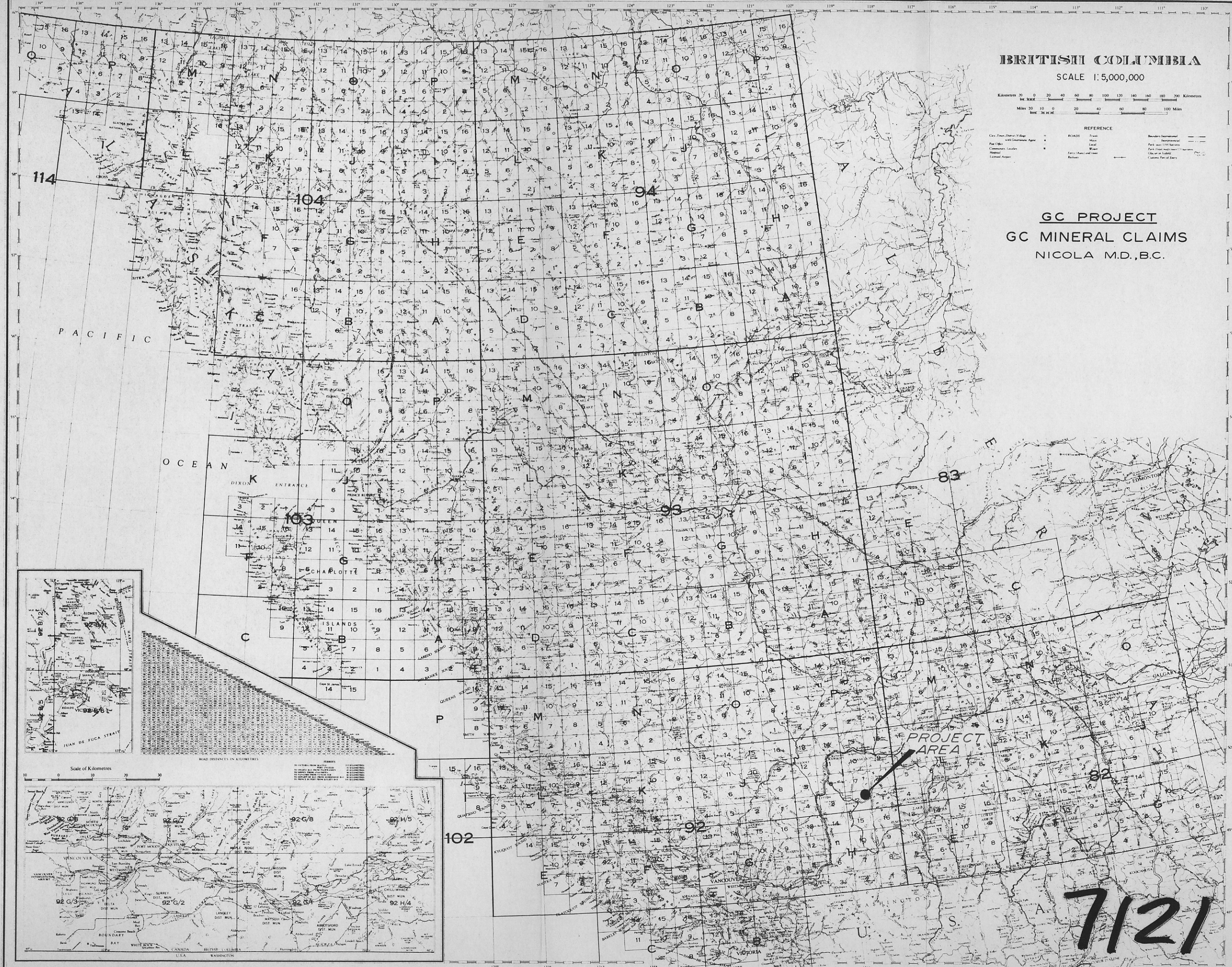
SCALE 1:5,000,000



REFERENCE

City, Town, Village, or Hamlet	●	RAILROAD	—+—+—+—	Boundary International	— · — · — · —
Post Office	+	Trunk	—	Marine	—
Communication Line	—	Local	— · — · — · —	Park over 1000 hectares	—
Waterway	—	Branch	— · — · — · —	Park under 1000 hectares	—
Limited Access	—	Passenger	— · — · — · —	City or Town	—
				Customs Port of Entry	—

GC PROJECT GC MINERAL CLAIMS NICOLA M.D., B.C.



7121

SECTION A - SUMMARY OF WORK

INTRODUCTION

Bethlehem Copper Corporation signed an option agreement with Mr. George F. Cressy of Merritt, B.C. on September 28, 1978 covering the G.C. 1 to 4 mineral claims (16 units). It was intended to drill a 100 m percussion hole in order to test at depth a showing of copper mineralized leucocratic rock. It was thought that this weakly mineralized (0.05% Cu) and restricted (less than 15 m² of surface exposure) showing of leucocratic rock might with depth reveal a distinct grade improvement.

Unfortunately, due to lost circulation in a shattered zone, the intended depth was not reached even though three holes were attempted. All the holes were drilled on the main showing approximately 3 m apart and were curtailed at depths of 6.1, 30.5 and 36.6 m respectively.

LOCATION AND ACCESS

The G.C. mineral claims are located on the north side of Nicola Lake some 5.5 km ENE of the settlement of Nicola. The geographic co-ordinates at the centre of the property are 50° 10.8' latitude and 120° 35.9' longitude while the UTM Grid Reference is Zone 10, 5561200 North and 671500 East. NTS sheet no. is 92I/2E.

Access is gained via a gravel and dirt road running north, northeast and then southeast from Nicola, a distance of 11 km.

The property location is illustrated on drawing nos. G.C. 78-1 and 2 which are appended in Section E.

TOPOGRAPHY AND PHYSICAL ENVIRONMENT

The claims are situated on a generally southwest facing slope of an unnamed mountain located immediately north of the western end of Nicola Lake. Elevations on the property range from 900 to 1300 m A.S.L. with the central portion of the block averaging 1150 m. The relief is generally moderate over the northern three-quarters of the area but fairly steep in the southern section overlooking the lake.

Timber cover is moderate with the predominant species being lodgepole and ponderosa pine.

The area is generally semi-arid and receives in the order of 30 cm of annual precipitation.

MINERAL TITLE

The property, in the Nicola Mining Division, is comprised of four unsurveyed modified grid claims totalling sixteen units, all of which are recorded in the name of George F. Cressy. The details of these mineral claims are listed below:

<u>Claim Name</u>	<u>No. of Units</u>	<u>Tag No.</u>	<u>Record No.</u>	<u>Recording Date</u>	<u>Expiry Date</u>
G.C. 1	4	19638	75(2)	February 24, 1976	February 24, 1981
G.C. 2	2	19690	298(8)	August 4, 1977	August 4, 1981
G.C. 3	2	19691	299(8)	"	"
G.C. 4	8	19692	300(8)	"	"

GEOLOGY

The claims are underlain by the Upper Triassic Nicola group, Palaeozoic schist and intrusives, and Jurassic intermediate to basic intrusives. The main showings are underlain by gneissic gabbro which has been intruded in several locations by dykes and pods of leucocratic rock. A minor outcrop showing of the leucocratic rock was blasted open and revealed to be more extensive at depth. This main

trench has copper mineralized leucocratic rock exposed over 9 m but the trend is unknown. Another 3.7 m trench located approximately 12.2 m to the east of the main trench also contains mineralized leucocratic rock. The leucocratic intrusive is mineralized with malachite, chalcopyrite and lesser bornite and mineralization occurs both as disseminations and fracture fillings. Other minor showings of this alaskite type rock in the surrounding area are restricted to small unmineralized dyke-like pods which reach a maximum of 1.2 meters in width. Most of these pods follow the main structure and joint pattern trend of 010° .

The gabbro adjacent to the main alaskite exposure has been veined by copper bearing quartz immediately at the contact. Alteration of the gabbro in the contact zone consists of strong chlorite, moderate epidote and weak to moderate sericite.

PERCUSSION DRILLING

Three holes totalling 73.2 m (240') were completed on Unit 16 of the G.C. #1 mineral claim in early October 1978. Josco Mining Co. Ltd. of Kamloops was contracted to perform the work and the drilling, utilizing an Atlas Copco percussion rig in a truck-mounted configuration, was carried out during the period from October 10 to 12, 1978.

The first hole, GC-78-1, was drilled to 6.1 m (20'); the second hole, GC-78-2, located 3.0 m south was stopped at 30.5 m (100'), while the third hole, GC-78-3, located a further 3.0 m south was curtailed at 36.6 m (120'). Broken ground and the subsequent loss of circulation were the reasons for the drilling being stopped. An attempt was made to grout hole 78-2 from 24.4 to 30.5 m but this was unsuccessful as no water return was obtained. Hole 78-3 was drilled dry to 27.4 m but water was encountered below that depth and circulation was lost at 36.6 m. The location of these holes is shown on drawing no. GC-78-3.

CONCLUSIONS AND RECOMMENDATIONS

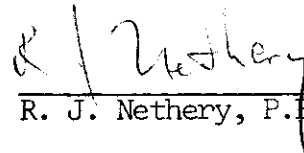
The percussion drilling as such did not reveal any significant grade increase with depth. Although the depth tested was limited

due to the drilling problems encountered, the values obtained were, for the most part, lower than the surface sampling. Additional drilling in this type of ground would probably have to be of the more expensive diamond variety and the results obtained to date would not seem to justify the additional expenditure.

Expenditures incurred in carrying out the work totalled \$2,906.30 and were comprised of \$1,660.83 in contractor expenses (57.1% of total) and \$1,245.47 in Bethlehem costs (42.9%).

The percussion drilling showed that the leucocratic rock is apparently an irregular dyke-like intrusion which does not widen with depth. It is therefore recommended that the agreement be terminated and the property returned to the vendor.

Respectfully submitted,


R. J. Nethery, P. Eng.

SECTION B - STATEMENT OF EXPENDITURES

Expense Period - October 1 to December 15, 1978

1. Contractors' (see accompanying invoices)

(a) Josco Mining Co. Ltd. - percussion drilling contractor		
Invoice dated October 18, 1978	-	\$1,454.00
(b) Altair Drafting Services Ltd.		
- drafting @ \$14.00/hour		
October 1978 - 3.0 hours	-	\$ 42.00
November 1978- 8.0 hours	-	\$112.00
- printing - October 1978	-	4.73
November 1978	-	17.64
		<hr/>
Total	\$176.37	- \$ 176.37
(c) Vancal Reproductions Group		
- photographic enlargement of base map		
Invoice No. 12630 dated October 6, 1978	-	\$ 30.46
TOTAL CONTRACTOR EXPENSES	-	\$1,660.83

2. Bethlehem's Expenditures

(a) <u>Personnel</u>		
R. E. Anderson - Exploration Manager		
.5 days in general project supervision		
@ \$185.00/day	-	\$ 92.50
R. J. Nethery - Project Geologist		
3 days in project supervision and		
report preparation @ \$123.20/day	-	\$ 369.60
J. G. Collins - Field Supervisor		
3 days (October 10-12,1978) @ \$85.13/day	-	\$ 255.39
E. Andersen - Property Agent		
2 days in data compilation and		
report preparation @\$96.23/day	-	\$ 192.46

2. Bethlehem's Expenditures (Contd.)

A. Emo - Secretary
1 day @ \$55.52/day - \$ 55.52

TOTAL PERSONNEL - \$ 965.47

(b) Transportation

J. G. Collins - Ford F-250 4WD Pick-up
3 days @ \$35.00/day - \$ 105.00

(c) Assaying

20 Cu/Mo determinations performed at
Bethlehem's Highland Valley laboratory
20 @ \$8.75 - \$ 175.00

TOTAL BETHLEHEM EXPENDITURES \$ 1,245.47

TOTAL PROJECT EXPENDITURES - \$ 2,906.30

Phone 579-9127.

JOSCO MINING CO. LTD.
P.O.Box 665, Kamloops, B.C. V2C 5L7.

Copy

—Bethlehem Copper Corporation,
2100 - 1055 West Hastings St.
Vancouver, B.C.

October 18, 1978.

Dear Sirs:

Attention: Mr. Robin Anderson.

Following is a statement of our account for percussion drilling on the
Cressy property near Nicola Lake, during the period Oct.10-12, 1978:

<u>Hole No.</u>	<u>Bedrock Depth</u>	<u>Feet Cased</u>	<u>Total Footage Drilled</u>	<u>Water Truck</u>
GC 78-1	0 ft	20 ft	20 ft.	
GC 78-2	0 ft.	20 "	100 "	1 shift
GC 78-3	0 "	15 "	120 "	1 "
Totals			240 feet	2 shifts.

Drilling Charges 240 ft. @ \$ 3.50 per ft..... \$ 840.00

Water Truck Charges 2 shifts @ \$ 60.00 per shift..... \$ 120.00

Mobilization & De-mobilization Charges

Lowbed Charges- Pooley Bros. Lower Nicola to site & return..... \$ 114.00

Labor Charges- Oct.10..... 9 man hrs.
Oct.12.....12 " "

Total.....21 man hrs @ \$ 15.00 per hr..... \$ 315.00

Grouting Charges

1 Batch AM 9 @ \$35.00 \$ 35.00
1 man hr. @ \$ 15.00 \$ 15.00
1/2 hr. equipment rental @ \$30.00 \$ 15.00

Total Grouting Charges \$ 65.00 \$ 65.00

Total Amount Due \$ 1454.00

Yours very truly,

John W. Scott
John W. Scott,
Josco Mining Co. Ltd.

OK for Payment
27-944
12/8



BETHLEHEM
COPPER
CORPORATION

CALCULATION SHEET

SUBJECT: ALUMINUM LOSTING SERVICE

... ..

BY:

DATE:

SHEET

of

FILE No.:

				PRINTING	Total
9-860				14.18	14.18
2-860	1.0		14.00	10.55	24.55
11-860	1.0		14.00	3.15	17.15
12-860	1.0		14.00	-	14.00
24-860	120.5		1716.00	201.30	1916.30
25-860	2.0		28.00	11.29	39.29
27-860	2.0		28.00	4.73	32.73
107-860	2.0		28.00	-	28.00
109-860	16.0		224.00	-	224.00
103-860	2.0		28.00	11.21	39.21
103-860				14.88	14.88
112-860				8.51	8.51
	161.0		\$2254.00	280.85	2534.85

PRINTING

\$260.85

TOTAL

\$2534.85

Nov. 24/78



BETHLEHEM
COPPER
CORPORATION

CALCULATION SHEET

SUBJECT: ALTAR DRAFTING

- Nov. 1978

BY: EA

DATE: Dec. 12/78

SHEET ___ of ___

FILE No.:

DRAFTING

PROJECT	HOURS	COST	2126	2126
7-860			4.73	4.73
6-860	9.5	\$ 133.00	46.47	179.47
11-860	25.0	\$ 350.00	58.28	408.28
13-860	17.5	245.00	15.75	260.75
24-860	17.5	245.00	6.62	251.62
25-860	3.0	42.00	5.51	47.51
27-860	8.0	112.00	17.64	129.64
102-860	1.0	14.00		14.00
103-860	9.5	133.00	37.18	170.18
109-860	43.5	609.00	53.94	662.94
108-860			6.30	6.30
<u>TOTAL</u>	<u>134.5</u>	<u>\$ 1883.00</u>	<u>273.64</u>	<u>2156.68</u>

PRINTING

273.64

TOTAL

\$ 2156.68

Handwritten signature



VANCAL REPRODUCTIONS GROUP



1130 W. HASTINGS ST.
VANCOUVER B.C. V6E 1B4
583-5584

1777 WEST 3RD AVE.
VANCOUVER B.C. V6J 1K7
683-6684

310 GILBERT ST.
VICTORIA B.C. V3W 1B6
383-1533

INVOICE

CUST. ORDER NO. 27-860

(93) (94)	INVOICE NUMBER
952	12630
ACCOUNT NUMBER	DATE
682 5211	8 10 79
DATE	DAY MO. YR.

S
O
L
D
T
O

BETHLEHEM COPPER CORP LTD
SUITE 2100
1055 WEST HASTINGS ST
VANCOUVER B C

CUST. REQ. NO. _____
DATE SHIPPED _____
VIA _____
PPD. & CHG. COLL.

2300

SHIP TO

GENERAL NOTICE

Items sold by VANCAL REPRODUCTIONS LTD. are subject to discontinuance and price change without notice. Title passes to buyer upon delivery of goods to carrier.
Claims against the carrier must be made by the consignee within time limits specified by the Carrier.
CLAIMS CLAUSE
Claims must be made within TEN DAYS after receipt of the goods and be accompanied by our packing ticket. No goods may be returned for credit without first securing permission. Goods so returned will be subject to a charge of 10% for rehandling. Transportation to be paid by shipper.

QUANTITY ORDERED	UNIT	PRODUCT NO.	SIZE	DESCRIPTION	BACK ORDER	SHIPPED	UNIT PRICE	AMOUNT	CODE
1				M. M. 105 NEG		1		3 50	
1				FILM POSITIVE		7*	3.20	22 40	

TERMS
NET 30 DAYS

INTEREST AT 24% PER ANNUM
CALCULATED MONTHLY WILL BE
CHARGED ON OVERDUE ACCOUNTS.

REMIT TO
1180 W. HASTINGS ST.
VANCOUVER B.C. V6E 1B4

BRITISH COLUMBIA'S ENGINEERING SUPPLY HOUSE
OFFERING A COMPLETE REPRODUCTION
AND SUPPLY SERVICE

12630

PLEASE REFER TO THIS NUMBER WHEN REMITTING

LIC. NO.	SUB TOTAL	25 90	5110
LIC. NO.	FEDERAL TAX	3 11	
LIC. NO.	SUB TOTAL	29 01	
LIC. NO.	PROVINCIAL TAX	1 45	
LIC. NO.	SHIPPING		
LIC. NO.	TOTAL	30 46	

PLEASE PAY THIS AMOUNT

*A CORPORATE PARTNERSHIP - Partners: VanCal Reproductions (1978) Ltd, MyJoy Sales Ltd, Roasian Sales Ltd.

SECTION C - DRILL HOLE DATA

Drill Hole Record

Drill Hole Logs

- Hole No. GC-78-2
- Hole No. GC-78-3

Assay Report

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

SHEET No.

Property	G.C. (Cressy)	Hole No.	G.C.-78-3	Bearing	-	Elevation	1150 m A.S.L.	Logged by R. J. Nethery				
District	Nicola M.D.	Length	36.6 m (120')	Dip	-90°	Overburden	nil	Date October 31, 1978				
Commenced	October 11, 1978	Latitude		Hor. Comp.	-	Recovery						
Completed	October 11, 1978	Departure		Vert. Comp.	36.6 m	Purpose To test mineralized occurrence						

DESCRIPTION	SULPHIDES	OXIDES	OTHERS	FROM	TO	SAMPLE No.	% Cu.	% Mo.	Oz Au	Oz Ag	% RECOV
Mostly gabbro with 25% leucocratic fragments -	very minor Cpy	minor limonite and	leucocratic segments 25%	0	10		.08	tr			
	and Pyrite	Malachite		10	20		.03				
Weak to moderate sericite, moderate to strong chlorite, weak		limonite	30%	20	30		.02				
to moderate epidote			40%	30	40		.05				
			20%	40	50		.03				
Quartz stringers present but no Cu mineralization			20%	50	60		.03				
observed			15%	60	70		.04				
	Cpy in leucocratic rock	Malachite and limonite	10%	70	80		.13				
		limonite	5%	80	90		.08				
				90	100		.05				
				100	110		.02				
				110	120		.03	✓			

BETHLEHEM COPPER CORPORATION LTD.

ASHCROFT, B. C.

Geology - GC Percussion

October 23, 1978

SAMPLE No.	DESCRIPTION	OZS. PER TON			PER CENT				
		GOLD	SILVER	COPPER	MO.	SULPHUR			
GC 78-2	0 - 10			.05	Tr				
	10 - 20			.03					
	20 - 30			.03					
	30 - 40			.09					
	40 - 50			.06					
	50 - 60			.07					
	60 - 70			.07					
	70 - 80			.06	Tr				
GC 78-3	0 - 10			.08	Tr				
	10 - 20			.03					
	20 - 30			.02					
	30 - 40			.05					
	40 - 50			.03					
	50 - 60			.03					
	60 - 70			.04					
	70 - 80			.13					
	80 - 90			.08					
	90 - 100			.05					
	100 - 110			.02					
110 - 120			.03	Tr					

ASSAYER

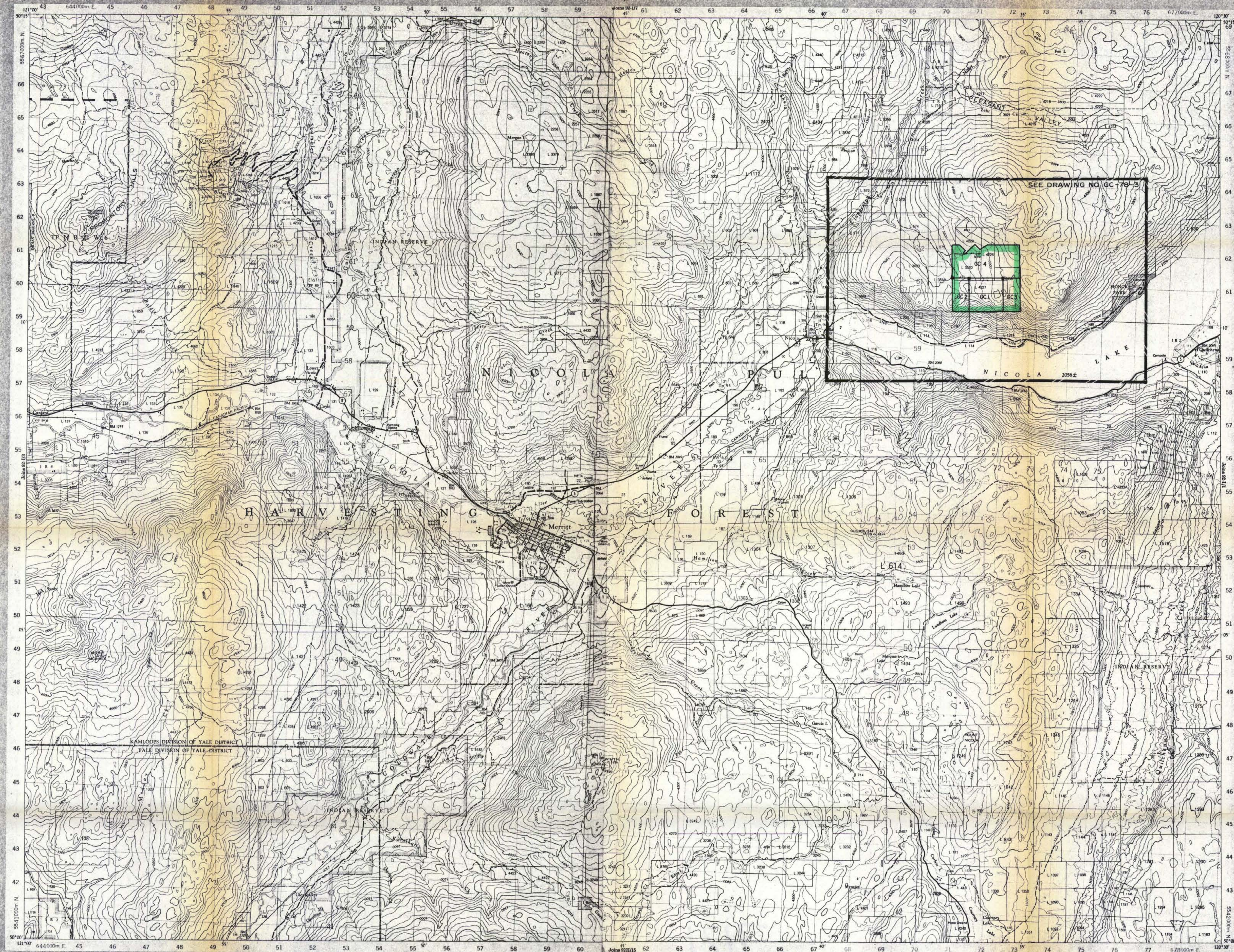
SECTION D - STATEMENT OF QUALIFICATIONS

Ronald J. Nethery, P.Eng.

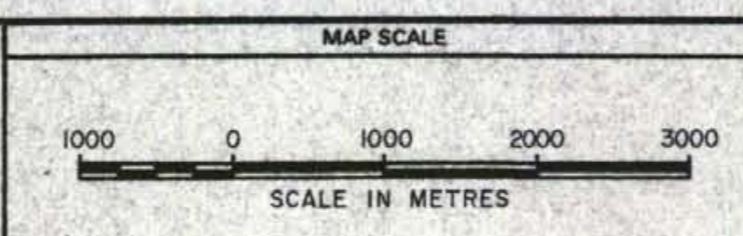
1. Attended the University of British Columbia from 1963 to 1967 and graduated with a B.Sc., Majors Geology.
2. Registered in good standing with the Association of Professional Engineers of British Columbia since February 7, 1973.
3. Geologist with Johns Manville Company from April to September, 1967 carrying out field exploration in Alaska.
4. Commenced employment with Bethlehem Copper Corporation in September 1967 and has been continuously employed by this firm and involved in the following activities:-
 - (a) 1967 to 1970 - engaged at the Highland Valley Operations as a Mine and Exploration Geologist involved in large scale drilling projects, including the Lake Zone porphyry deposit.
 - (b) 1970 to 1972 - engaged as a Project Geologist attached to the Copper Belt Joint Venture, a large scale regional exploration program conducted in South-Central British Columbia.
 - (c) 1972 to 1974 - carried out general geological examinations of mineral properties in Canada and the Western United States.
 - (d) 1974 to 1976 - involved as a Project Geologist attached to the Copper Belt (Washington) Joint Venture, a regional exploration program in North-Central Washington State.
 - (e) 1977 to 1978 - Project Geologist in charge of the Guichon Joint Venture, a regional program being carried out in the general Highland Valley area of South-Central British Columbia.

SECTION E - ILLUSTRATIONS

<u>Drawing No.</u>	<u>Title</u>	<u>Scale</u>
GC-78-1	General Location Plan	1:250,000
GC-78-2	Location Plan	1: 50,000
GC-78-3	Drill Hole Plan	1: 10,000



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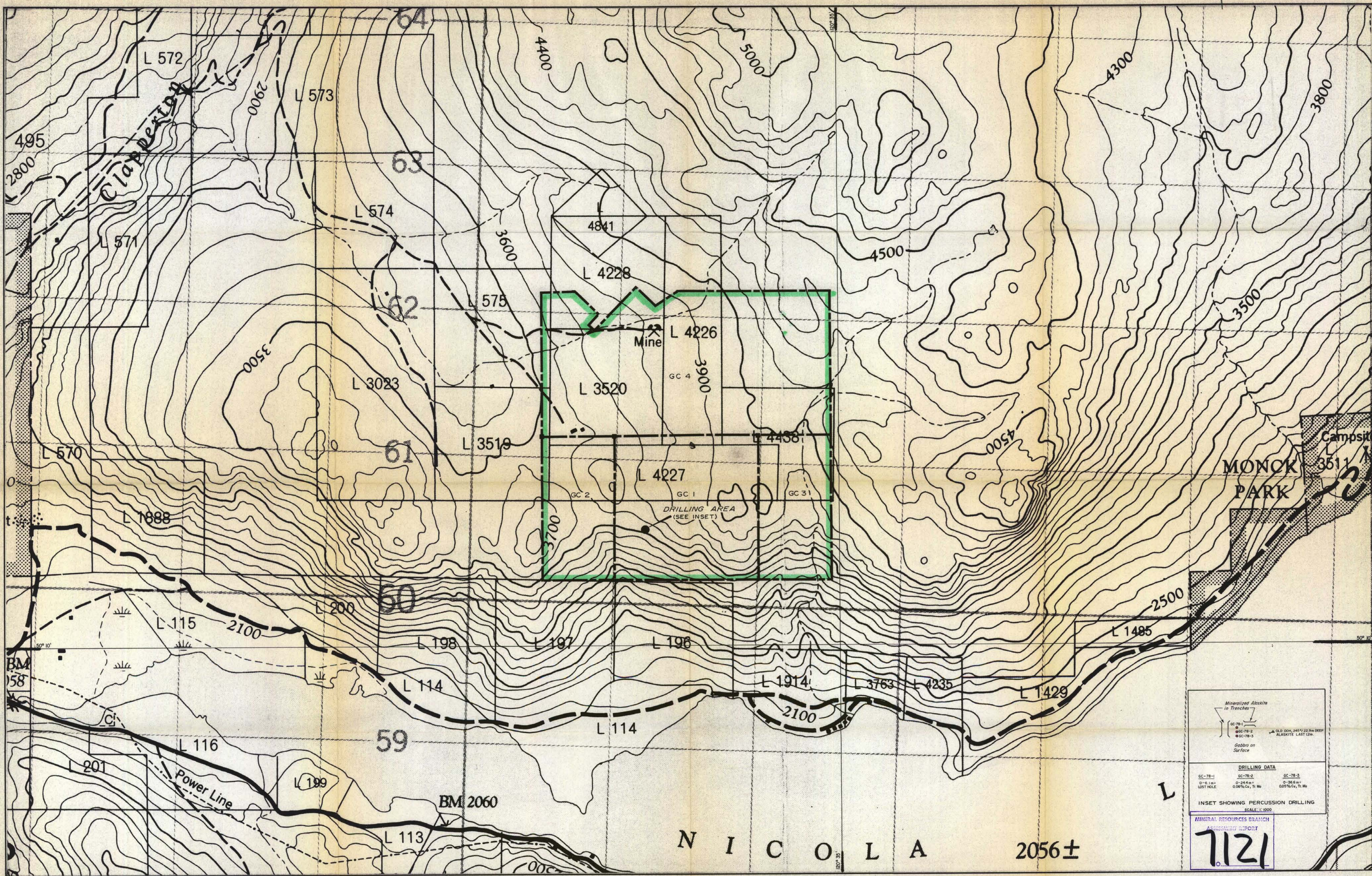
No.	Date	MADE BY	DESCRIPTION
1			
2			
3			
4			
5			

DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT
OCT. 1978		E.A.		VANCOUVER	EXPLORATION

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
N.T.S. 92-I/2	1:50,000	GC-78-2

B BETHLEHEM
COPPER
CORPORATION

G.C. PROJECT
LOCATION PLAN



Mineralized Alaskite in Trenches

GC-78-1
GC-78-2
GC-78-3

OLD DDH, 245' x 22.9" DEEP ALASKITE LAST 12m

Gabbro on Surface

DRILLING DATA

GC-78-1	GC-78-2	GC-78-3
0-6.1m	0-24.4m	0-26.6m
LAST HOLE	0.08% Cu, 0.1% Mo	0.05% Cu, 0.1% Mo

INSET SHOWING PERCUSSION DRILLING
SCALE 1:1000

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

7121

MAP SCALE		SCALE IN METRES		200 0 200 400 600	
REVISIONS		No.	Date	MADE BY	DESCRIPTION
1					
2					
3					
4					
5					
DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT
OCT. 1978		E. A.		VANCOUVER	EXPLORATION
MAP INDEX NUMBER		SCALE		DRAWING NUMBER	
N.T.S. 92-1/2		1:10,000		GC-78-3	

B BETHLEHEM
COPPER
CORPORATION

G.C. PROJECT
DRILL HOLE PLAN