

5824

DIAMOND DRILLING and CONTROL SURVEY REPORT

on the

LOG #1-4 Mineral Claims

MISSEZULA LAKE AREA

NICOLA MINING DIVISION

LATITUDE $49^{\circ} 47' N$ LONGITUDE $120^{\circ} 33.5' W$

N.T.S. No. 92 H/15E

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

FEBRUARY 27, 1976

R. E. Anderson, P.Eng.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5824 MAP X

TABLE OF CONTENTS

SECTION A - SUMMARY OF WORK

- Introduction
- #1 75-1A Location and Access
- 75-2A Topography and Physical Environment
- 75-3A Rotary Drilling
- 75-4A Diamond Drilling
- Control Survey
- Summary of Costs

SECTION B - STATEMENT OF EXPENDITURES

- Contractor's Costs
- Bethlehem Costs
- Invoices

SECTION C - STATEMENT OF EMPLOYEE QUALIFICATIONS

S.H.M. Marr

SECTION D - CONTROL SURVEY DATA

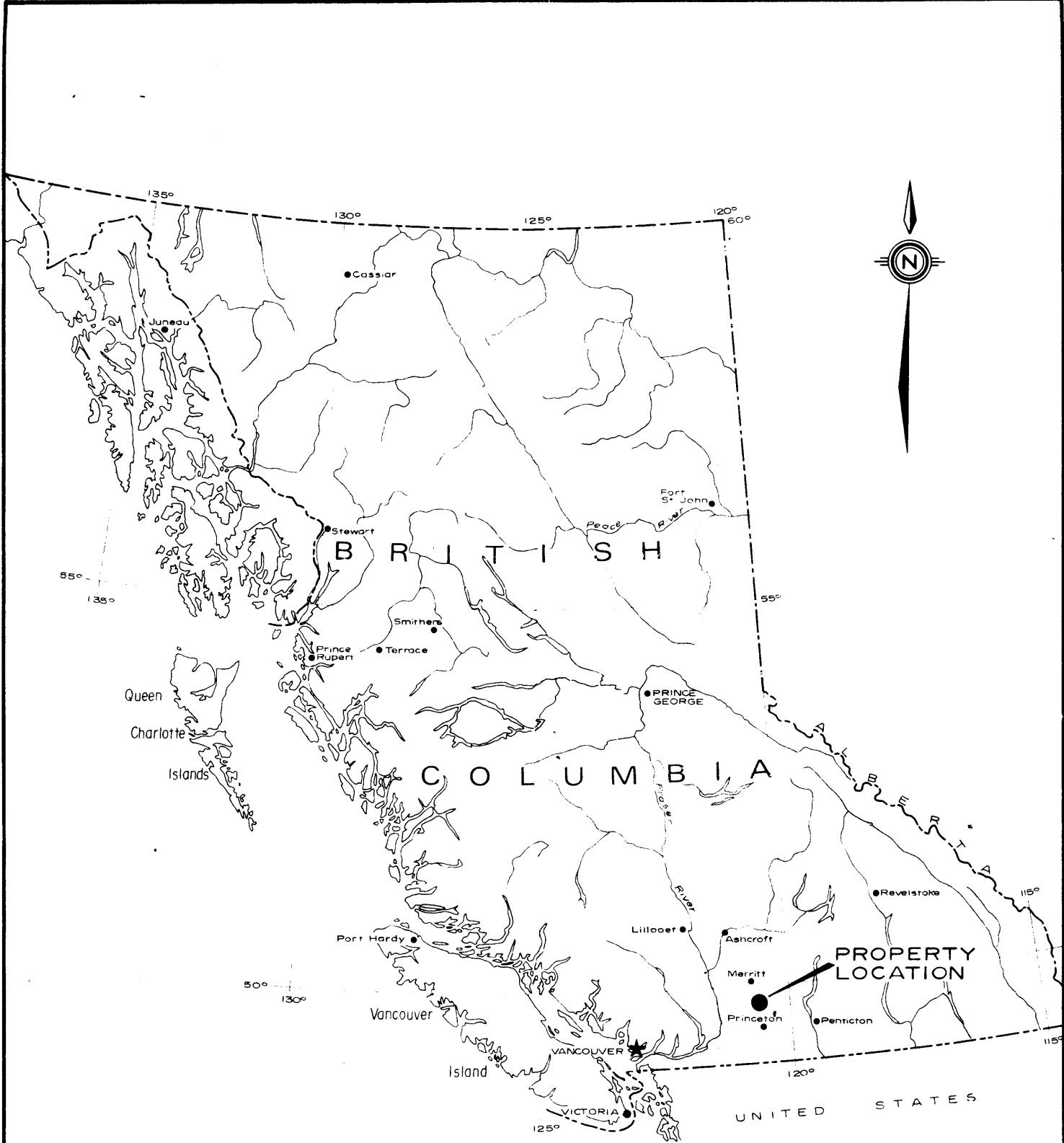
- Correspondence from D. G. Whyte
- Survey Plan (Reduced Copy)
- Drill Hole Co-ordinates

SECTION E - DRILL HOLE LOG

L-75-4

SECTION F - ILLUSTRATIONS

| <u>Drawing No.</u> | <u>Description</u> | <u>Scale</u> |
|--------------------|-----------------------|--------------|
| #2 75-1A | General Location Plan | 1:50,000 |
| 75-2A | Mineral Claim Plan | 1:10,000 |
| 75-3A | Geological Plan | 1:10,000 |
| 75-4A | Drill Hole Plan | 1:1,250 |



COPPER BELT PROJECT
 (MISSEZULA LAKE)
 "LOG" GROUP
 LOCATION PLAN

SECTION A - SUMMARY OF WORK

Introduction -

The "LOG" Group of mineral claims was acquired by staking during December 1973 and its acquisition resulted from a large scale regional exploration program that was carried out in the Merritt-Princeton area during 1970, 1971 and 1972. Work carried out on the property during October to December 1974 consisted of geological mapping, sampling and the drilling of ten percussion holes totalling 900 metres (2955'). This program was detailed in the "Percussion Drilling Report on the LOG Claims" by R. J. Nethery, P.Eng. which was submitted as an assessment report in January 1975.

Further work in the form of diamond drilling was carried out during the period from June 16 to July 19, 1975 and this program was set out in the "DIAMOND DRILLING REPORT on the LOG 54, 63 and 64 Mineral Claims" by R. E. Anderson, P.Eng. Due to drilling problems encountered because of badly faulted ground it was decided to employ a large diameter rotary drill in an attempt to penetrate this difficult horizon prior to utilizing the diamond drill at depth.

Location and Access

The LOG claim group is situated over a low north-south trending valley some 3 Km. west of Missezula Lake at geographic coordinates $49^{\circ} 47'$ latitude and $120^{\circ} 33.5'$ longitude. The nearest centres of population are 36 Km. to the south at Princeton and 38 Km. to the NNW at Merritt. Access to the property is obtained by a 9.5 Km. gravel road which runs southeasterly from a point on Highway #5 some 43 Km. south of Merritt. (See Drawing No. 75-1A0)

Topography and Physical Environment

The area is characterized by generally moderate topography with altitude ranges from 1250 metres to 1370 metres A.S.L. The central portion of the claim block is in the bottom of a low wide north-south trending valley with the eastern and western limits of the property situated on higher ridges. A major portion of the valley floor is clear of any timber cover due to recent logging operations and a forest fire. The remaining area is covered by moderate stands of lodgepole pine and to a lesser extent groves of aspen.

Two small lakes and numerous small sloughs are situated in the area. The two lakes do not have any official designation although the one located to the immediate south and west of the drill area has been referred to as Duke Lake.

Rotary Drilling

The rotary drilling was performed by A & H Construction Ltd. utilizing a Koehring Speedstar Model SS-15 air rotary drill with top-head drive and 5 5/8" bit.

Hole No. L-75-4 was located 60 metres south of Hole Nos. L-75-1 and L-75-3 and was started on August 5, 1975. Overburden was encountered to only 3.05 metres and the drilling proceeded to 218.24 metres when excessive water and caving ground forced a cessation to the hole on August 10, 1975. The rotary drill was then moved from the collar and a diamond drill was set up in an attempt to core the hole deeper.

Samples from the drill cuttings were taken on ten foot intervals and sent to Bethlehem's Highland Valley laboratory for assay. The cuttings were also logged by S. H. M. Marr using a Nikon binocular microscope and a copy of the detailed geologic log is appended in Section E.

Diamond Drilling

An E. J. Longyear Model 44 diamond drilling unit owned by Shepherd Enterprises Ltd. was employed in the effort to extend the hole. Unfortunately, the rock conditions did not allow any further penetration and the hole was abandoned on August 15, 1975 after the loss of a substantial amount of casing as well as the casing shoe, an NQ bit and an NQ shell. The location of the hole is shown on Drawing Nos. 75-2A, 75-3A and 75-4A which are appended in Section F.

Control Survey

A control survey tying in all the percussion and diamond drill holes and relating them to a newly established co-ordinate grid was carried out in November 1975 by McWilliam Whyte Goble and Associates of Kamloops. Details of the work performed is set out in Section D.

Summary of Costs

The total expenditures incurred were \$17,246.05, the details of which are set out in Section B. The expenditures for the services of contractors totalled \$14,706.05 or 85.27% of the gross outlay while costs generated within the Bethlehem organization totalled \$2,540.00 or 14.73%. The overall average drilling cost was \$79.02/metre or \$24.09/foot. This cost, while being higher than normal, reflects the drilling difficulties that were encountered.

Respectfully submitted,



R. E. Anderson, P.Eng.
Exploration Manager

SECTION B - STATEMENT OF EXPENDITURES

CONTRACTORS (see accompanying invoices)

1. Tri-Valley Construction Ltd. - bulldozer used
for site preparation and moving drill unit
(Aug. 5-22, 1975)

| | | | |
|------------------|----------------------|---|---------------|
| D-5 Caterpillar | - 16 hours @ \$30.00 | = | \$480.00 |
| Lowbed transport | - 10 hours @ \$30.00 | = | <u>300.00</u> |

TOTAL \$780.00

2. A & H Construction Ltd. - rotary drilling
(Aug. 5-12, 1975)

| | |
|-----------------|---------------|
| Drilling (716') | \$7,240.00 |
| Materials | 40.00 |
| Mobilization | <u>950.00</u> |

TOTAL \$8,230.00

3. Shepherd Enterprises Ltd. - diamond drilling
(Aug. 12-15, 1975)

| | |
|-----------|--------------|
| Drilling | \$1,481.70 |
| Materials | 2,219.08 |
| Mud | <u>85.40</u> |

TOTAL \$3,786.18

4. McWilliam, Whyte, Goble and Associates - survey contractor
(Nov. 17-24, 1975)

TOTAL \$1,740.00

5. Altair Drafting Services Ltd. - preparation of report drawings

| | | |
|--------------------------------|---|--------------|
| Drafting - 14½ hours @ \$10.00 | = | \$145.00 |
| Printing - 213 sq. ft. | = | <u>25.05</u> |

TOTAL \$170.05

TOTAL CONTRACTORS' EXPENDITURES

\$14,706.05

BETHLEHEM EXPENDITURES

1. Personnel

R. E. Anderson, P.Eng. - Exploration Manager
- a total of 3 days during the period
August 5 to 22, 1975
3 days @ \$140.00 = \$420.00

E. Andersen - Property Agent
- a total of 6 days during the periods
August 5-22 and Nov. 17-24, 1975
6 days @ \$75.00 = \$450.00

S.H.M. Marr - Geologist
- a total of 10 days during the period
August 5-15, 1975
10 days @ \$60.00 = \$600.00

J. G. Collins - Field Supervisor
- a total of 10 days during the period
August 5-16, 1975
10 days @ \$65.00 = \$650.00

N. Shaw - Secretary
- a total of 2 days during the period
January 23-26, 1976
2 days @ \$35.00 = \$ 70.00

TOTAL \$2,190.00

2. Transportation

S.H.M. Marr - 1 Toyota Sedan
10 days @ \$15.00/day - \$150.00

J. G. Collins - 1 Ford F-250
4 x 4 Pickup
10 days @ \$20.00/day - 200.00

TOTAL \$350.00

TOTAL BETHLEHEM EXPENDITURES - \$2,540.00

TOTAL EXPENDITURES - \$17,246.05

REAJ
HNE

PHONES:
T. G. Stout
295-3944
W. Wilkinson
295-6186
L. Mckenzie
295-6270

Tri Valley Construction Ltd.

PRINCETON, B. C.
Bulldozing & Craning

P. O. BOX 808

Sept. 12, 1975.

Bethlehem Copper Ltd.,
c/o John Collins,
Ashcroft,
B. C.

STATEMENT

Re. Drill site at Aspen Grove.

Bethlehem
for R & H
50% Bethlehem
50% Shepherd

| | | | | |
|-------------|---------|----------------|------------|-------------------------|
| Aug. 5 | D5 Cat. | 8 hrs. | | |
| " 12 | " | 8 " | | |
| " 22 | " | 8 " | | |
| | | <u>24 hrs.</u> | @ \$ 30.00 | -- \$ 720.00 |
| Aug. 5 | Lowbed | 5 hrs. @ \$ | | |
| " 12 | " | 5 " | | |
| " 22 | " | 5 " | | |
| | | <u>15 hrs.</u> | @ \$ 30.00 | -- <u>150.00</u> \$ 450 |
| TOTAL | | | | \$1870.00 |

| | |
|--------------|------------------|
| Bethlehem | \$780.00 |
| Shepherd | \$390.00 |
| <u>Total</u> | <u>\$1170.00</u> |

OK for Payment.
003-857.
780.00
REW

Charge acct. #3. *of*



A & H Construction Ltd.

"Specializing in Water Wells, Soil Sampling, Exploration"

TELEPHONE
(604) 853-2513

AUG 20 1975
Alie
✓ REH

1681 SALTON RD.,
P.O. BOX 38,
ABBOTSFORD, B.C.
V2S 4N7

INVOICE No 295

LOG OF WELL

| | |
|------|--------------------------|
| 20' | Casing. |
| 146' | App. 60 G.P.M. water |
| 716' | Bed rock. |
| | Abandonment Hole Caving. |

944-003
110-002

TO..... Bethlehem Copper Corporation Ltd., Hole No. Log 75-4.
 ADDRESS..... Suite 2100, Guinness Tower, 1055 W. Hastings, Vancouver, B.C.
 WELL DRILLED AT..... Missezula Lake.
 WELL COMPLETED..... August 12/75..... INVOICE DATE August 13/75.

| | | | |
|-------------------------------------|--------------------------------------|-----------------|---------------------|
| ..... | Machine Hours at | per Hour | ..... |
| 696 | Feet of Drilling at \$10.00 | per Foot | \$6,960.00 ✓ |
| 20 | Feet of Drilling & Casing at \$14.00 | per Foot | 280.00 ✓ |
| ..... | Feet of | Casing at | per Foot |
| ..... | Feet of | Casing at | per Foot |
| ..... | Feet of | Casing at | per Foot |
| 1 | Drive Shoes at \$40.00 | each | 40.00 ✓ |
| ..... | Feet of | Screen | ..... |
| Installation of Screen | | | |
| Pump Testing | | | |
| Surging and Baling | | | |
| Other Charges: | | | |
| Moving on Site and Setting Up | | | 950.00 |
| Blasting ..... |  |  | ..... |
| Other ..... |  |  | ..... |
| Room and Board ..... |  |  | ..... |
| Travelling and Tolls ..... |  |  | ..... |
| TOTAL INVOICE PRICE | | | <u>\$8,230.00</u> ✓ |

Notations

✓ for Pay
003-944
RCH
for

- Account due on presentation of this invoice. -
Interest at 1% per Month (18% per Annum) on all accounts overdue 30 days.

A & H Construction Ltd.

1681 SALTON RD., P.O. BOX 38,
ABBOTSFORD, B.C.
(604) 853-2513 V2S 4N7

DAILY REPORT

August 6/75. Drilling rate from 12ft. to 148ft. Approximately 1 hour = 52ft.
" " " 148ft. to 184ft. " 1 " 15 min. = 20ft.

August 7/75. Drilling rate from 184ft. to 342ft. Approximately 1 hr. 15 min. = 20ft.
" " " 342ft. to 384ft. " 50 min. = 20ft.
Change of rock at 384ft. Harder.

August 8/75. Drilling rate from 384ft to 500ft Approximately 1 hr. 30 min. = 20ft.

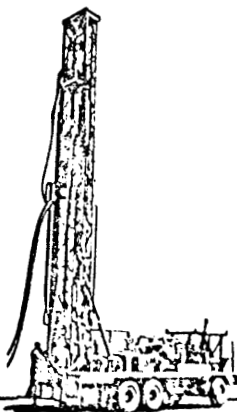
August 9/75. No cavein when pulling rods or running back down hole.
Day shift. Drilling rate from 500ft. to 526ft. Approximately 3hrs. = 20ft.
" " " 526ft. to 550ft " 2hrs. 45 min. = 20ft.

August 9/75. Drilling rate from 550ft to 600ft. " 1hr. 45 min. = 20ft.
Night shift. Fault zone 576ft to 580ft. Water very foamy approximately 3½ tubs
or better of material.
2½ hrs. cleaning zone.

August 10/75. 600ft. pulled rods, changed bit to a tri-cone.
Day shift. Drilling rate from 600ft. to 686ft. approximately 1 hr. 15 min. = 20ft.
Very soft for a tri-cone.
Lots of water in hole. Some problem blowing hole clean when running
back down.

August 10/75. Rock very soft. Have to stop between samples and blow out hole.
Night shift. Lost ground at 716ft., back to 710ft. After blowing hole for 5 hrs
at 710ft still getting lots of caving. Cannot get past 710ft.
Hole up above 710ft holding very good.

End of hole 716 feet.



"Specializing in Water Wells, Soil Sampling, Exploration"

INVOICE

AUG 29 1975 HGE
REA-

SHEPHERD ENTERPRISES LTD.

804 - 470 Granville Street, Vancouver, B.C. V6C 1V5
Box 21 - 24, Station A, Kamloops, B.C. V2B 7K6

Bethlehem Copper Corporation Ltd.,

Invoice No. 0060

Suite 2100 - 1055 West Hastings Street,

Date August 28, 1975

VANCOUVER, B. C.

Period August 12 -- 15

Property ASPEN GROVE

FIELD COST ON HOLE #26-75-4:

| | | | |
|-----------|-------------------------|---|-----------------|
| August 12 | 30 Man Hours @ \$9.75 | - | 292.50 |
| | 4 Drill Hours @ \$8.50 | - | 34.00 |
| August 13 | 30 Man Hours @ \$9.75 | - | 292.50 |
| | 10 Drill Hours @ \$8.50 | - | 85.00 |
| August 14 | 20 Man Hours @ \$9.75 | - | 195.00 |
| | 10 Drill Hours @ \$8.50 | - | 85.00 |
| August 15 | 32 Man Hours @ \$9.75 | - | 312.00 |
| | 6 Drill Hours @ \$8.50 | - | 51.00 |
| | | | <u>1,347.00</u> |
| | Plus 10% | | <u>134.70</u> |

1,481.70

EQUIPMENT LOST IN HOLE:

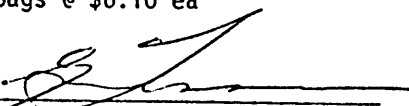
| | | |
|----|------------------------------------|-----------------|
| 1 | NW Casing Shoe NEW | 186.75 |
| 1 | NQ Bit #5757 NEW | 392.60 |
| 1 | NQ Shell #3188 NEW | 253.73 |
| 44 | 10' NW Casing New Price \$63.00 ea | |
| | @ 50% = \$31.50 ea | <u>1,386.00</u> |

2,219.08

MUD

14 Bags @ \$6.10 ea

85.40

PER: 
E. Tessmer, General Manager

TOTAL INVOICE:

\$3,786.18

Engineering Approval _____ Date _____

204 - 153 SEYMOUR STREET
KAMLOOPS, BRITISH COLUMBIA

INVOICE

NOV 27 1975
TELEPHONE: 372-8835

NOVEMBER 25th, 1975

McWilliam, Whyte, Goble & Associates

BRITISH COLUMBIA LAND SURVEYORS
KAMLOOPS - PRINCE GEORGE - SMITHERS

BETHLEHEM COPPER CORPORATION

1055 WEST HASTINGS STREET

VANCOUVER, BRITISH COLUMBIA


A service charge of 1½% (\$1.00 min.) per month,
18% per annum, will be charged on statement
balances carried forward from previous month.

OUR JOB # 75-357

YOUR FILE # ATTN: MR. E. ANDERSEN, PROPERTY AGENT

RE: MISSEZULA LAKE PROJECT
DRILL HOLE SURVEY,

| | |
|------------------------------|-------------------|
| FEES: | \$ 990.00 |
| FIELD WAGES: | 576.00 |
| HEWLETT PACKARD ELECTRONIC) | |
| DISTANCE METER 2 days) | 100.00 |
| TRANSPORTATION | 60.00 |
| OFFICE WAGES & PRINTING | 14.00 |
| TOTAL | <u>\$1,740.00</u> |

3-845


TIME SHEET

altair drafting services ltd.

DRAFTSMAN M. KUSNEZOV DATE DEC. 1 to DEC. 5

| DATE | COMPANY NAME | PROJECT | DESCRIPTION | SCALE | MAN HOURS |
|----------------------------|------------------------------------|-----------------------|-------------|----------------|-----------|
| TUESDAY | BETHLEHEM COPPER CORPORATION | DRILL HOLE OVERLAY | 108 | | 5 |
| | | ALASKA GOLD RANGE | 30 | | 2 |
| WEDNESDAY | 11 | MISSEZULA LAKE | 3 | | 7 |
| THURSDAY | 11 | MISSEZULA LAKE | 3 | | 6 1/2 |
| | | MAGGIE MINE | 9 | | 1/2 |
| FRIDAY | 11 | MISSEZULA LAKE | 3 | | 1 |
| | | MAGGIE MINE | 9 | | 2 |
| | | SIERRA MADRE | 24 | BEAR - TWIT 19 | 2 |
| FRIDAY | 11 | MAGGIE MINE | 9 | | 4 1/2 |
| TOTAL OVERTIME HOURS _____ | | | | TOTAL HOURS | 32 1/2 |

SECTION C - STATEMENT OF EMPLOYEE QUALIFICATIONS

SANDRA H. M. MARR - Mrs. Sandra Marr graduated in 1968 from the University of St. Andrews, Scotland with a B.Sc.(Hons.) degree in Geology. She was employed from November 1969 to March 1970 as a Research Assistant to Professor A. C. Turnock at the University of Manitoba; from April 1970 to November 1971 as a Geological Technician for Anaconda American Brass in Noranda, Quebec and from June 1972 to April 1973 as a Geological Technician with Dundee-Palliser Resources in Calgary, Alberta. Mrs. Marr joined the exploration staff of Bethlehem Copper Corporation in May 1973 and has been primarily responsible for conducting research into geological projects in both the metal and coal industries as well as maintaining the company's geological library. She has also assisted on some of Bethlehem's drilling projects.

Mrs. Marr has carried out her assignments in a competent and professional manner.



R. E. Anderson, P.Eng.
Exploration Manager

NOV 27 1975

A. W. McWILLIAM
D. G. WHYTE
R. J. GOBLE
R. C. DOMINIK
A. DANILUCK
V. BARTELL
P. PENNER

McWilliam, Whyte, Goble & Associates

British Columbia Land Surveyors

KAMLOOPS - PRINCE GEORGE - SMITHERS

PHONE 372-8835

EA ✓
HGE
REA

OUR FILE 75-357

SUITE 204
153 SEYMOUR STREET
KAMLOOPS, B.C. V2C 2C7

November 24th, 1975

Bethlehem Copper Corporation
1055 West Hastings
Vancouver, British Columbia

Dear Sirs:

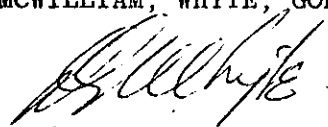
RE: MISSEZULA LAKE PROJECT
DRILL HOLE SURVEY OF NOVEMBER 1975,

The survey was carried out on the 17th and 18th of November 1975. The survey comprised of the location of and assigning verticle and horizontal values to ten Percussion Drill Holes and five Diamond Drill Holes in addition to the location of the L.C.P. of the Log 1-4 MC's and a tie to the N.W. corner of D.L. 4524, K.D.Y.D.

The horizontal and vertical values were obtained by using a Wild Theodolite Model T-16 and a Hewlett-Packard distance Meter Model 3800. Bearings are astronomic and were derived from B. C. Hydro Plan #C10275. Elevations are more or less Geodetic and are derived from the National Topographic Map Sheet of the area. An assumed value of 4150 feet A.S.L. was assigned to the top of the Log 1-4 L.C.P. and all other elevations shown on the plan are derived from that point.

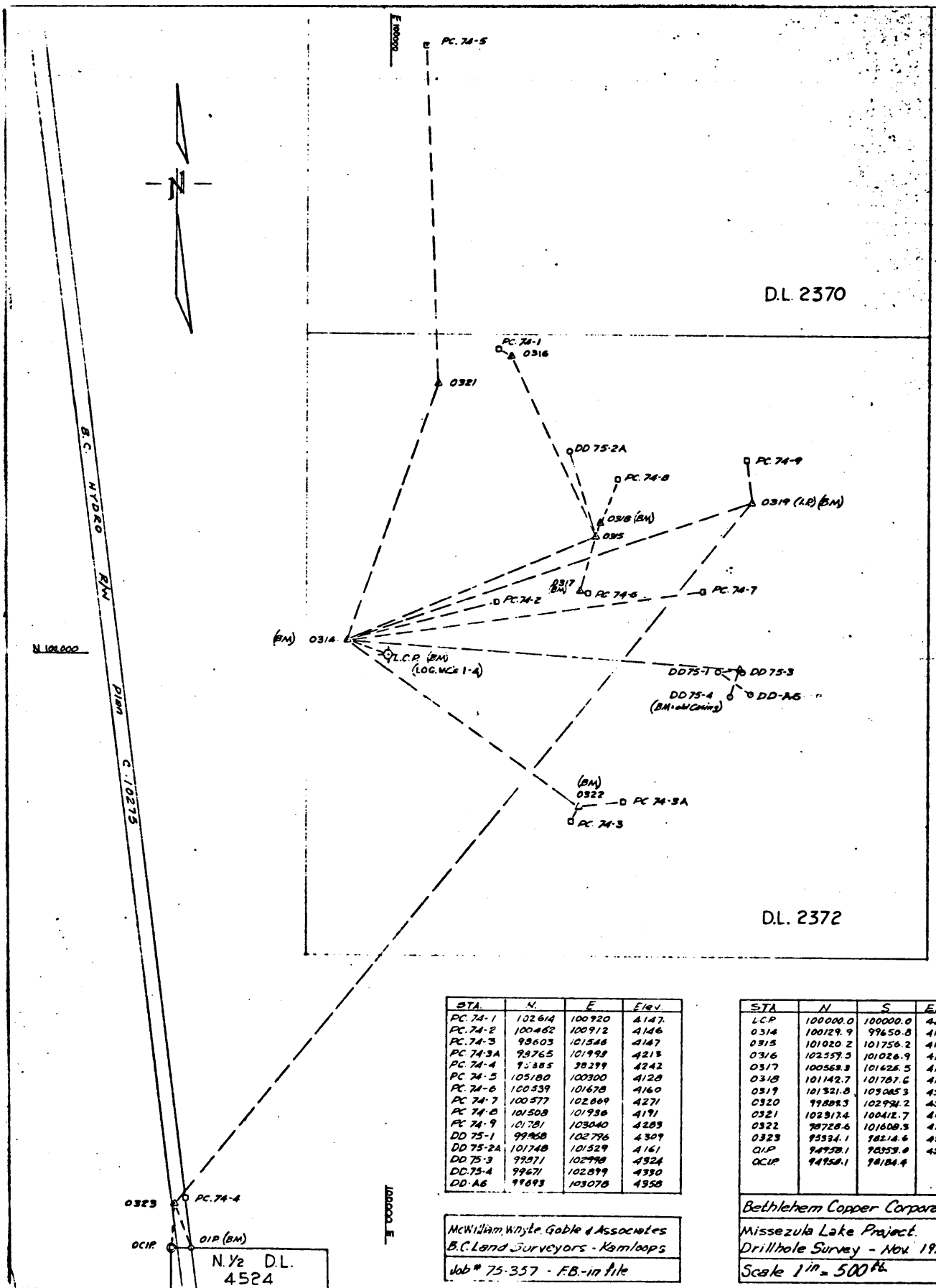
Yours truly

MCWILLIAM, WHYTE, GOBLE & ASSOCIATES


D. G. Whyte, B.C.L.S.

DGW/nc

Enclosure - 1 film sepia & 1 paper print of Drill Hole Survey Plan



| STA. | N. | E. | Elev. |
|----------|--------|--------|-------|
| PC 74-1 | 102614 | 100920 | 4147. |
| PC 74-2 | 100462 | 100912 | 4146 |
| PC 74-3 | 98603 | 101548 | 4147 |
| PC 74-3A | 98765 | 101998 | 4213 |
| PC 74-4 | 95385 | 98299 | 4242 |
| PC 74-5 | 105180 | 100300 | 4128 |
| PC 74-6 | 100539 | 101678 | 4160 |
| PC 74-7 | 100577 | 102609 | 4271 |
| PC 74-8 | 101508 | 101956 | 4191 |
| PC 74-9 | 101781 | 103040 | 4283 |
| DD 75-1 | 99968 | 102796 | 4309 |
| DD 75-2A | 101748 | 101529 | 4161 |
| DD 75-3 | 99971 | 102998 | 4324 |
| DD 75-4 | 99671 | 102899 | 4330 |
| DD A6 | 99693 | 103078 | 4358 |

| STA | N | S | Elev. |
|----------|----------|----------|--------|
| L.C.P. | 100000.0 | 100000.0 | 4150.0 |
| 0314 | 100129.9 | 99650.8 | 4175.8 |
| 0315 | 101020.2 | 101756.2 | 4171.7 |
| 0316 | 102357.5 | 101026.9 | 4149.0 |
| 0317 | 100568.8 | 101628.5 | 4162.9 |
| 0318 | 101142.7 | 101787.6 | 4176.6 |
| 0319 | 101321.8 | 103045.3 | 4393.9 |
| 0320 | 99888.3 | 102934.2 | 4386.0 |
| 0321 | 102317.4 | 100412.7 | 4154.5 |
| 0322 | 98728.6 | 101608.5 | 4165.2 |
| 0323 | 95534.1 | 98214.6 | 4264.9 |
| O.I.P. | 94938.1 | 98353.0 | 4252.8 |
| O.C.I.P. | 94956.1 | 98184.4 | - |

McWilliam, Whyte, Gable & Associates
 B.C. Land Surveyors - Kamloops
 Job # 75-357 - FB-in file

Bethlehem Copper Corporation
 Missetzula Lake Project
 Drillhole Survey - Nov. 1975
 Scale 1" = 500'

N.Y.2 D.L.
 4524

MISSEZULA LAKE PROJECT

DIAMOND DRILL HOLE CO-ORDINATES and ELEVATIONS

| <u>Hole No.</u> | <u>Latitude (N)</u> | | <u>Departure (E)</u> | | <u>Elevation*</u> | |
|-----------------|---------------------|----------|----------------------|----------|-------------------|--------|
| | metres | feet | metres | feet | metres | feet |
| 75-1 | 99959.8 | (99868) | 100852.2 | (102796) | 1313.4 | (4309) |
| 75-2A | 100532.8 | (101748) | 100466.0 | (101529) | 1268.3 | (4161) |
| 75-3 | 99960.7 | (99871) | 100913.8 | (102998) | 1318.0 | (4324) |
| 75-4 | 99899.7 | (99671) | 100883.6 | (102899) | 1319.8 | (4330) |

MISSEZULA LAKE PROJECT

PERCUSSION DRILL HOLE CO-ORDINATES and ELEVATIONS

| <u>Hole No.</u> | <u>Latitude (N)</u> | | <u>Departure (E)</u> | | <u>Elevation*</u> | |
|-----------------|---------------------|----------|----------------------|----------|-------------------|--------|
| | metres | feet | metres | feet | metres | feet |
| PC-74-1 | 100796.8 | (102614) | 100280 | (100920) | 1264.0 | (4147) |
| PC-74-2 | 100140.8 | (100462) | 100278 | (100912) | 1263.7 | (4146) |
| PC-74-3 | 99574.1 | (98603) | 100471.2 | (101546) | 1264 | (4147) |
| PC-74-3A | 99623.6 | (98765) | 100607.5 | (101993) | 1284.1 | (4213) |
| PC-74-4 | 98593.3 | (95385) | 99481.5 | (98299) | 1293.0 | (4242) |
| PC-74-5 | 101578.9 | (105180) | 100091.4 | (100300) | 1258.2 | (4128) |
| PC-74-6 | 100164.3 | (100539) | 100511.5 | (101678) | 1268.0 | (4160) |
| PC-74-7 | 100175.9 | (100577) | 100813.5 | (102669) | 1301.8 | (4271) |
| PC-74-8 | 100459.6 | (101508) | 100590.1 | (101936) | 1277.4 | (4191) |
| PC-74-9 | 100542.9 | (101781) | 100926.6 | (103040) | 1305.5 | (4283) |

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

SHEET No. 1

| Property | MISSEZULA LAKE | Hole No. | L-75-4 | Bearing | - | Elevation | ~ 4250' | Logged by | | | | | S. Marr |
|-------------|---|---------------------------|-----------------------------------|-------------|------|------------|--------------------|-----------|-------|--------|--------|----------|----------------|
| District | Nicola Mining Division | Length | 716' | Dip | -90° | Overburden | 10' | Date | | | | | August 8, 1975 |
| Commenced | August 5, 1975 | Latitude | 80's of #1 post of | Hor. Comp. | - | Recovery | Percussion to 716' | | | | | | |
| Completed | August 15, 1975 | Departure | LOG 63, 64 (abandoned) 30-7-73 | Vert. Comp. | 716' | Purpose | | | | | | | S. Marr |
| DESCRIPTION | | SULPHIDES | OXIDES | OTHERS | FROM | TO | SAMPLE No. | % Cu. | % Mo. | Oz Au. | Oz Ag. | % RECOV. | |
| 10-40 | Porphyritic volcanic with fine-grained pink ground mass, phenocrysts of plagioclase and chloritized mafics. Some epidote. | Weak pyrite | | | 10 | 20 | | | | | | | |
| | Rock darker in appearance due to increase in numbers of mafic phenocrysts. | " | | | 20 | 30 | | | | | | | |
| | As 20-30. Some sericitization and quartz veins. Occasional clusters of pyrite. | " | | | 30 | 40 | | | | | | | |
| 40-400 | Greenish-grey fine-grained intrusive? Constituents predominantly plagioclase, chloritized mafics and fine grained magnetite. Some epidote and K-spar. | " | | | 40 | 50 | | | | | | | |
| | Finer grained and more mafic than 40-50. Some epidote and some finely disseminated pyrite. | Weak pyrite Speck cpy. | | | 50 | 60 | | | | | | | |
| | Brownish in colour and finer grained | Weak pyrite | | | 60 | 70 | | | | | | | |
| | Some chips very mafic as 50-60; others high in magnetite. | " | | | 70 | 80 | | | | | | | |
| | Lighter in colour with constituents more evenly distributed. Epidote stronger. | " | | | 80 | 90 | | | | | | | |
| 90-120 | More mafic; epidote weak; occasional K-spar. Disseminated pyrite very common. | Mod. pyrite | | | 90 | 100 | | | | | | | |
| | Pyrite less common and tends to occur in clusters. | Weak pyrite | | | 100 | 110 | | | | | | | |
| | Epidote more widespread. | " | | | 110 | 120 | | | | | | | |
| 120-200 | As 110-120 but pyrite is again very common, occurring in clusters and disseminations. | Mod. pyrite | | | 120 | 130 | | | | | | | |

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

SHEET No. 2

Property MISSEZULA LAKE Hole No. L-75-4 Logged by S. Marr Date August 8, 1975

| DESCRIPTION | SULPHIDES | OXIDES | OTHERS | FROM | TO | SAMPLE No. | % Cu. | % Mo. | Oz. Au. | Oz. Ag. | % RECOV. |
|---|-------------|--------|--------|------|-----|------------|-------|-------|---------|---------|----------|
| | Mod. pyrite | | | 130 | 140 | | | | | | |
| Fault at 145' as large volume of water entering hole. | " | | | 140 | 150 | | | | | | |
| | " | | | 150 | 160 | | | | | | |
| Percentage of magnetite has increased considerably. | " | | | 160 | 170 | | | | | | |
| Pyrite fairly massive in places. | " | | | 170 | 180 | | | | | | |
| Some chips resemble a flow unit again - with very fine grained green to pink ground mass - small porphyritic dyke? | " | | | 180 | 190 | | | | | | |
| | " | | | 190 | 200 | | | | | | |
| 200-330 Rock darker in colour - felsics finer grained and more mafics present. Moderate to strong epidote and chlorite. | " | | | 200 | 210 | | | | | | |
| | " | | | 210 | 220 | | | | | | |
| More silicic in appearance; less pyrite. | Weak pyrite | | | 220 | 230 | | | | | | |
| More silicic in appearance; less pyrite. | " | | | 230 | 240 | | | | | | |
| Less silicic than 220-40. | " | | | 240 | 250 | | | | | | |
| Less silicic than 220-40 and increase in pyrite. | Mod. pyrite | | | 250 | 260 | | | | | | |

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

SHEET No. 3

| Property | Hole No. | Logged by | Date | | | | | | | | | | |
|---|------------------------------|-----------------|----------------|------|-----|------------|-------|-------|--------|--------|--|----------|--|
| MISSEZULA LAKE | L-75-4 | S. Marr | August 8, 1975 | | | | | | | | | | |
| DESCRIPTION | SULPHIDES | OXIDES | OTHERS | FROM | TO | SAMPLE No. | % Cu. | % Mo. | Oz Au. | Oz Ag. | | % RECOV. | |
| Some siliceous areas. | Mod. pyrite | | | 260 | 270 | | | | | | | | |
| | " | | | 270 | 280 | | | | | | | | |
| | " | Hematite | | 280 | 290 | | | | | | | | |
| | " | Occas. hematite | | 290 | 300 | | | | | | | | |
| More mafic. | Mod. pyrite Speck cpy. | | | 300 | 310 | | | | | | | | |
| Generally less altered - less epidote. | Mod. pyrite | Occas. hematite | | 310 | 320 | | | | | | | | |
| Generally less altered - less epidote. | " | | | 320 | 330 | | | | | | | | |
| Chips pale green, often with dark soft mineral on their faces - chlorite? Quartz veining. | Mod. pyrite | | | 330 | 340 | | | | | | | | |
| 340-70 As 310-330 [342-84' - Drillers suspected fault zone.] | " | | | 340 | 350 | | | | | | | | |
| | Mod. pyrite Specks cpy. | | | 350 | 360 | | | | | | | | |
| More magnetite and much less pyrite present. | Weak pyrite Specks cpy. | | | 360 | 370 | | | | | | | | |
| Some chips similar to 360-70; others to 310-30, i.e. with more pyrite. | Weak-mod. py. Specks cpy. | | | 370 | 380 | | | | | | | | |
| Chips less mafic and with less magnetite. Several pinkish flow unit type chips. | Weak-mod. py. | | | 380 | 390 | | | | | | | | |

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

SHEET No. 4

| Property | | Hole No. | | Logged by | | Date | | | | | | | | | | | | |
|---|--|----------|---|-----------|---|----------------|-----------------------------|--------------------------------------|--------|------|-----|------------|-------|-------|--------|--------|----------|--|
| MISSEZULA LAKE | | L-75-4 | | S. Marr | | August 9, 1975 | | | | | | | | | | | | |
| DESCRIPTION | | | | | | | SULPHIDES | OXIDES | OTHERS | FROM | TO | SAMPLE No. | % Cu. | % Mo. | Oz Au. | Oz Ag. | % RECOV. | |
| Some chips similar to 380-90 while others show increase in mafics and/or magnetite. | | | | | | | Weak-mod.py. Specks cpy. | | | 390 | 400 | | | | | | | |
| 400- EOH | Rock with pinkish glassy groundmass containing phenocrysts of plagioclase and amphibole (variably chloritized) which appear to show orientation - flow unit? Spotty epidote. | | | | | | Weak-mod.py. | | | 400 | 410 | | | | | | | |
| Chips greener in appearance due to increase in chloritization and epidotization. | | | | | | | Mod. pyrite | | | 410 | 420 | | | | | | | |
| " | " | " | " | " | " | " | Weak-mod. pyrite | | | 420 | 430 | | | | | | | |
| " | " | " | " | " | " | " | Weak pyrite | | | 430 | 440 | | | | | | | |
| " | " | " | " | " | " | " | Weak-mod. pyrite | | | 440 | 450 | | | | | | | |
| " | " | " | " | " | " | " | Weak pyrite | | | 450 | 460 | | | | | | | |
| " | " | " | " | " | " | " | Weak-mod. pyrite | | | 460 | 470 | | | | | | | |
| Chips greener in appearance due to increase in chloritization and epidotization. More chips with pinkish groundmass present. | | | | | | | Mod. pyrite Speck cpy. | | | 470 | 480 | | | | | | | |
| More widespread epidotization. This could be a fault zone as high percentage ground material in sample. Amphiboles less chloritized. Chips often pinkish. | | | | | | | Weak-mod. pyrite | | | 480 | 490 | | | | | | | |
| As 480-90 plus many very mafic chips, some with heavy pyrite mineralization. | | | | | | | Mod. pyrite | Occasional massive specularite | | 490 | 500 | | | | | | | |
| As 480-90 - mainly greenish. Mafics generally chloritized. Some specularite and hematite crystals. | | | | | | | Weak-mod. pyrite | Some specularite | | 500 | 510 | | | | | | | |
| " | " | " | " | " | " | " | Weak pyrite | " | | 510 | 520 | | | | | | | |

DRILL HOLE LOG

BETHLEHEM COPPER CORPORATION

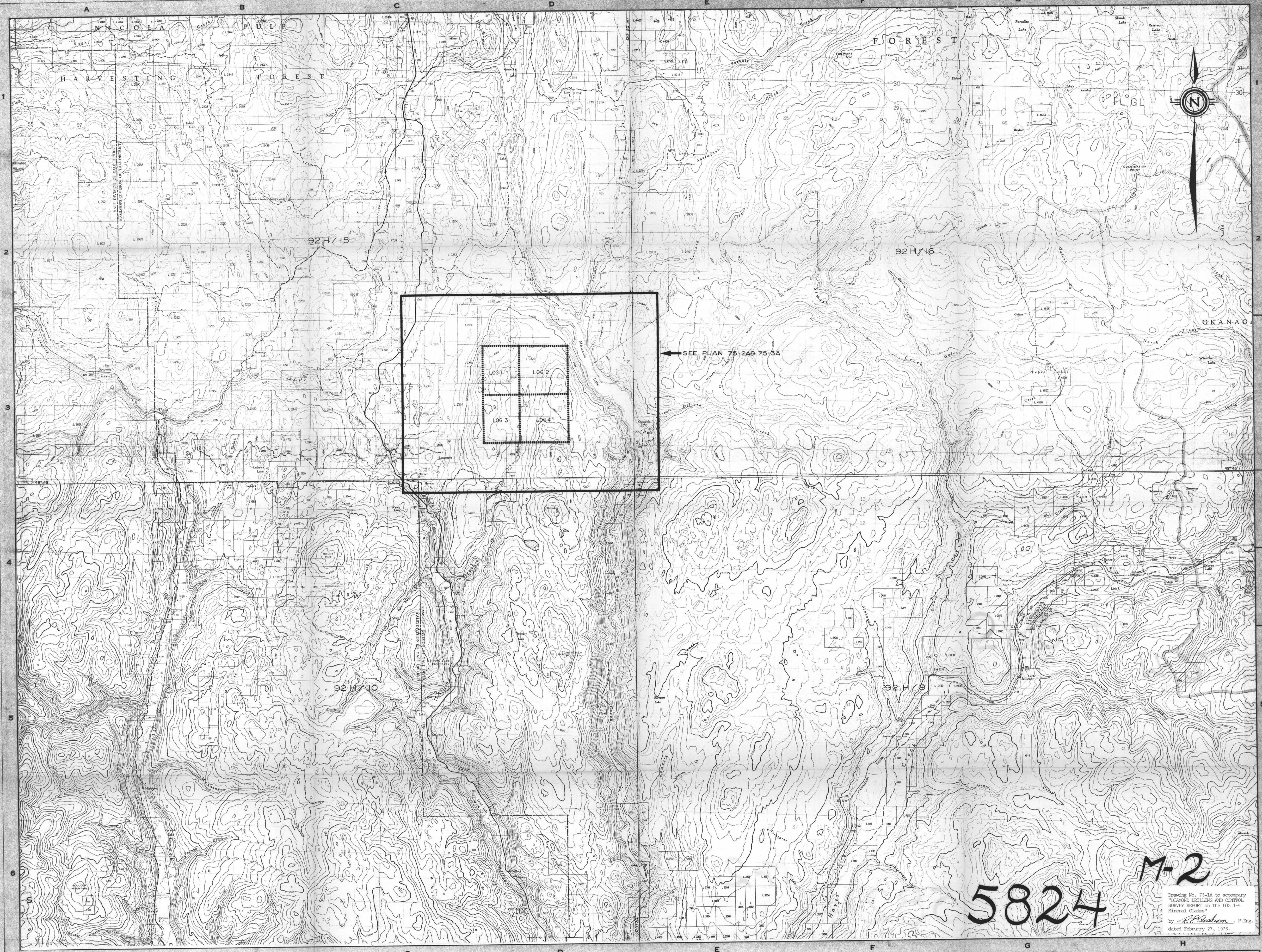
SHEET No. 5

Property MISSEZULA LAKE Hole No. L-75-4 Logged by S. Marr Date August 10, 1975

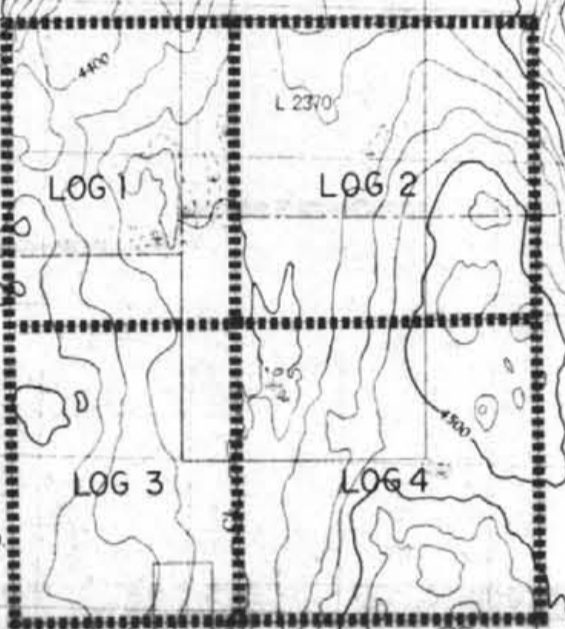
| DESCRIPTION | SULPHIDES | OXIDES | OTHERS | FROM | TO | SAMPLE No. | % Cu. | % Mo. | Oz Au. | Oz Ag. | | % RECOV. |
|---|--|--------|--------|------|-----|------------|-------|-------|--------|--------|--|----------|
| As 480-90 but amphiboles less chloritized and epidotization stronger. Epidote also in thin veins. | Weak pyrite | | | 520 | 530 | | | | | | | |
| Groundmass again pinkish in colour. Epidotization strong and in thin veins. Chloritization weak to moderate. | Mod.-strong pyrite | | | 530 | 540 | | | | | | | |
| 40% chips pinkish as 530-40; rest greenish, some being finer grained and more mafic. | Mod. pyrite Specks cpy. | | | 540 | 550 | | | | | | | |
| Chips all green, fine grained and mafic with chlorite throughout and some epidote. Magnetite. | Mod. pyrite | | | 550 | 560 | | | | | | | |
| Chips all green, fine grained and mafic with chlorite throughout and w-m epidote. Magnetite. | Weak pyrite Specks cpy. | | | 560 | 570 | | | | | | | |
| As above but strongly altered and bleached to pale green - very soft. (feldspars → clays). Some weak epidote. | Weak-mod. pyrite | | | 570 | 580 | | | | | | | |
| Some chips as 570-80. Rest less strongly altered (less bleached) and some are again like the pinkish flow unit (also variably altered). | Weak-mod. pyrite Specks cpy. | | | 580 | 590 | | | | | | | |
| Variably altered pinkish flow unit. Chlorite and epidote weak-strong. | " | | | 590 | 600 | | | | | | | |
| Chips again more strongly altered - plagioclase greenish. Chips darker in colour. | Mod.-strong pyrite Specks cpy. | | | 600 | 610 | | | | | | | |
| Chips more strongly chloritized and epidotized than 600-610. Possible fault zone as cuttings finer than average. | Weak-mod. pyrite Specks cpy. | | | 610 | 620 | | | | | | | |
| Flow unit with pinkish-grey groundmass. Mod.-strong chlorite; weak-moderate epidote. Some quartz veining. Magnetite. | Weak-mod. pyrite Specks and smears cpy. | | | 620 | 630 | | | | | | | |
| Increase in mafics (chloritized); weak-moderate epidote. | Weak-mod. pyrite Specks cpy. | | | 630 | 640 | | | | | | | |
| Pink flow unit chloritized and bleached with weak-moderate epidotization. Alteration to clays in parts. Hematite. | Weak-mod. py. Cpy. in stringers | | | 640 | 650 | | | | | | | |

SECTION F - ILLUSTRATIONS

| <u>Description</u> | <u>Drawing No.</u> |
|---|--------------------|
| General Location Plan - Scale 1:50,000 | 75-1A |
| Mineral Claim Plan with Drill Hole Locations - Scale 1:10,000 | 75-2A |
| Geological Plan with Drill Hole Locations - Scale 1:10,000 | 75-3A |
| Drill Hole Plan - Scale 1:1,250 | 75-4A |



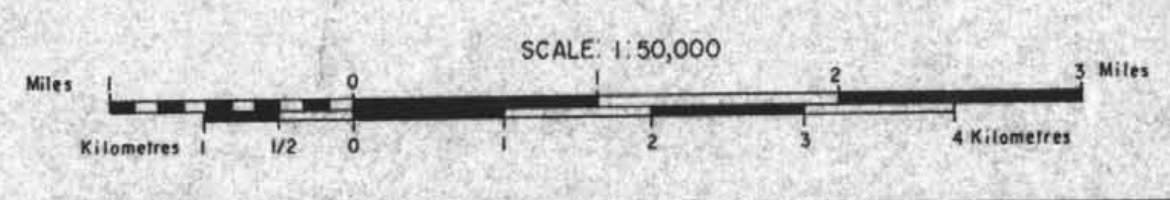
SEE PLAN 75-2A& 75-3A



5824 M-2

Drawing No. 75-1A to accompany
"PLANNED DRILLING AND CONTROL
SURVEY REPORT on the LOG 1-4
Mineral Claims"
by *A.P. Jackson*, P.Eng.
dated February 27, 1976.

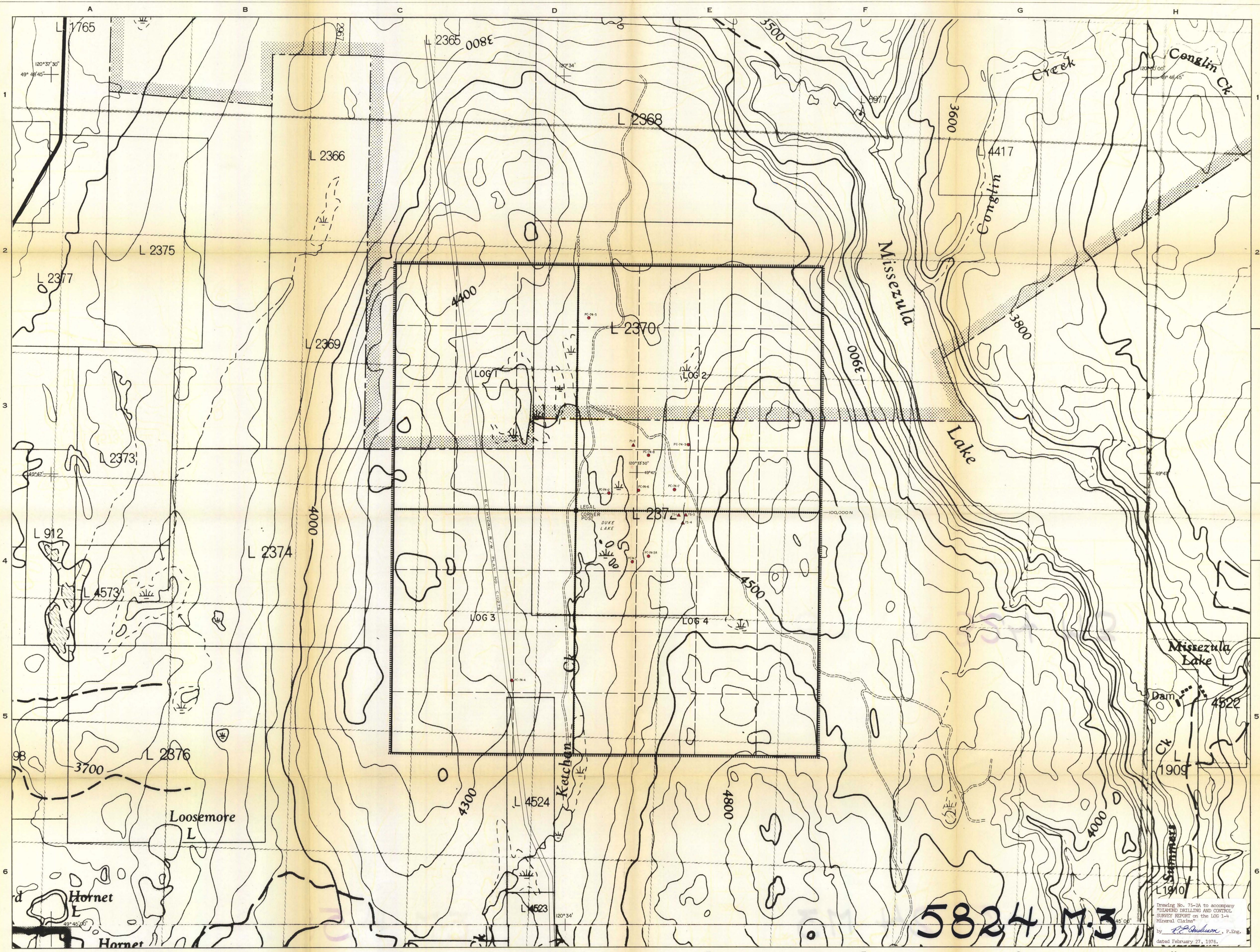
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5824 MAP 2



| | | |
|---------------|------|-------------------------|
| DATE REVISED | BY | DEPT. - EXPLORATION |
| SEPT 3 / 1975 | M.S. | DRAWN BY - A1141 / M.S. |
| | | CHECKED - E.A. |
| | | APPROVED - |
| | | DATE - DEC. 1974 |
| | | SCALE - 1:50,000 |

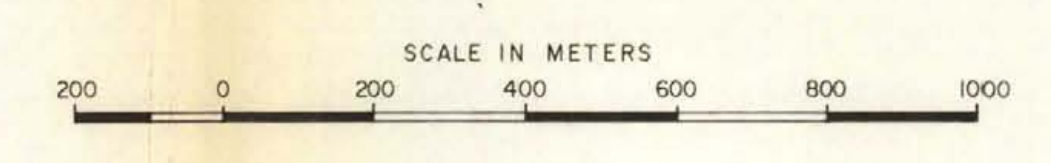
**Bethlehem
Copper**
INCORPORATED
VANCOUVER BRITISH COLUMBIA

| | |
|---|---------------------------|
| TITLE MISESE LAKE PROJECT GENERAL LOCATION PLAN | |
| FILE NUMBER - N.T.S. 92H9, 10, 15, 16 | DRAWING NUMBER - 75-1A |



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 5824 MAP 3

LEGEND
 75-4 Diamond Drill Hole
 PC-244 Percussion Drill Hole

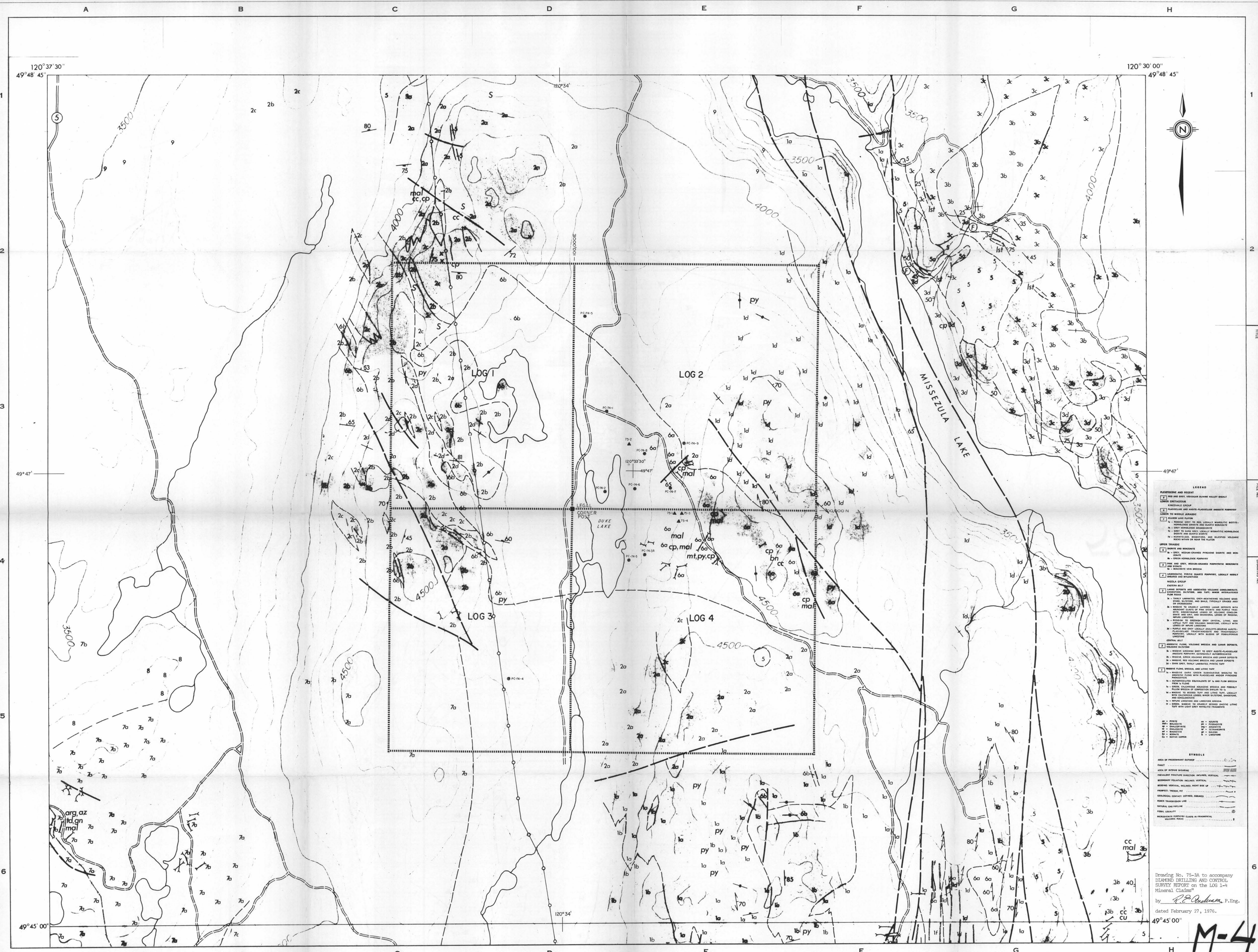


| | | |
|--------------|----|------------------------|
| DATE REVISED | BY | DEPT. - EXPLORATION |
| | | DRAWN BY - Altair/m.k. |
| | | CHECKED - E.A. |
| | | APPROVED - |
| | | DATE - SEPT / 1975 |
| | | SCALE - 1:10,000 |

**Bethlehem
Copper**
VANCOUVER BRITISH COLUMBIA

TITLE - COPPER BELT-SOUTH MISSEZULA LAKE PROJECT MINERAL CLAIM PLAN
 FILE NUMBER - DRAWING NUMBER - 75-2A

Drawing No. 75-2A to accompany
DIAMOND DRILLING AND CONTROL
SURVEY REPORT on the LOG 1-4
Mineral Claims
by R.P. Anderson, P.Eng.
dated February 27, 1976.



LEGEND

PERITROPE AND REEFT

75-4 Diamond Drill Hole

PC-24 Percussion Drill Hole

SYMBOLS

AREA OF PROSPECT GROUP

AREA OF INTEREST

PROPERTY TRAIL, etc.

LEGEND

PERITROPE AND REEFT

75-4 Diamond Drill Hole

PC-24 Percussion Drill Hole

SYMBOLS

AREA OF PROSPECT GROUP

AREA OF INTEREST

PROPERTY TRAIL, etc.

Drawing No. 75-3A to accompany
DIAMOND DRILLING AND CONTROL
SIRREY REPORT ON THE LOG 1-4
MINERAL CLAIMS
by R.P. Anderson, P.Eng.
dated February 27, 1976.

M-4

**Department of
Mines and Petroleum Resources**

ASSESSMENT REPORT

NO. 5824 MAP 4

LEGEND

75-4 Diamond Drill Hole

PC-24 Percussion Drill Hole

SCALE IN METERS

0 200 400 600 800 1000

| | | |
|---------------|----|--------------------------|
| DATE REVISION | BY | DEPT. - EXPLORATION |
| | | DRAWN BY - Altior / m.k. |
| | | CHECKED - E.A. |
| | | APPROVED - |
| | | DATE - SEPT / 1975 |
| | | SCALE - 1:10,000 |

**Bethlehem
Copper**

BRITISH COLUMBIA

TITLE - **COPPER BELT-SOUTH
MISSEZULA LAKE PROJECT
GEOLOGICAL PLAN**

FILE NUMBER - **5824**

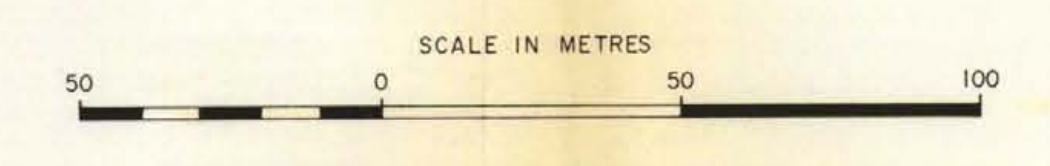
DRAWING NUMBER - **75-3A**



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5824 MAP 5

LEGEND
 ▲ 75-1 DIAMOND DRILL HOLE
 ● PC-74-4 PERCUSSION DRILL HOLE

NOTE: ROAD LOCATIONS ARE APPROXIMATE ONLY.



| DATE REVISED | BY | DEPT. - EXPLORATION |
|--------------|----|------------------------|
| | | DRAWN BY - A.H.G./m.k. |
| | | CHECKED - E.A. |
| | | APPROVED - |
| | | DATE - DEC./1975 |
| | | SCALE - 1:1250 |



| | |
|--|------------------|
| TITLE - COPPER BELT-SOUTH MISSEZULA LAKE PROJECT DRILL HOLE PLAN | |
| FILE NUMBER - | DRAWING NUMBER - |
| | 75-4A |