

COMINCO LTD.

EXPLORATION  
NTS: 92P/9,16

WESTERN DISTRICT

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE PL 1, 2 AND 3 CLAIMS

GRIZZLY LAKES AREA, KAMLOOPS M.D., B.C.

LATITUDE: 51°26'N; LONGITUDE: 129°29'W

PERIOD OF FIELD WORK: MAY 8 - JUNE 15 AND SEPTEMBER 4, 1981

9690

OCTOBER 1981

S.L. GARDINER

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- Appendix A - Statement of Expenditures
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### ILLUSTRATIONS

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MB-81-3 - Sample Location	1: 10,000
MB-81-4 - Geochemistry Zn, Cu	1: 10,000
MB-81-5 - Geochemistry Mo, W, Sn (F)	1: 10,000
MB-81-6 - Geochemistry Pb, Ag, Au	1: 10,000

GEOLOGICAL AND GEOCHEMICAL REPORT  
ON THE PL 1, 2 and 3 CLAIMS  
GRIZZLY LAKES AREA, KAMLOOPS M.D., B.C.

I. INTRODUCTION

The PL claims 1, 2 and 3 were staked in October, 1979 as a result of a regional geochemical reconnaissance program conducted by Bethlehem Copper Corporation. Three additional claims (PL 4, 5, 6) were staked during the summer of 1980 after analyses of soils from detailed sampling returned good results.

Detailed geological mapping was undertaken in 1981 in two areas of PL 1, 2 and 3 where molybdenum was anomalous in soils and in south central PL 3 where an Induced Polarization geophysical survey defined a strong chargeability high and resistivity low. Total area covered by mapping is approximately 3 square kilometres at a scale of 1:10,000. One 2m x 1m x 3m trench was excavated in north central PL 3. Soil, stream sediment and rock chip sampling accompanied the mapping and trenching.

Previous work in the area is outlined in Assessment Report #8588 by N.J. Wilson, a geological and geochemical report on the PL 1 through 6 claims.

II. LOCATION AND ACCESS (drawing MB-81-1)

The PL claims are located at latitude - 51°46'N and longitude - 129°29'W, 29 kilometres northwest of Clearwater, B.C. and lie between 1462 and 1819m elevation.

The property is accessible by logging roads on Clearwater Timber Products tree farm license #18. The area covered by this report can be reached by CTP's roads 2 and 6 to road 192. Road 192 crosses western PL 3 and continues to Camp Lake which is west of the LCP for PL 1, 2 and 3 claims.

III. TITLE AND OWNERSHIP

The property, located in Kamloops Mining Division, consists of 6 modified grid claims totalling 91 units. PL 1, 2 and 3 are comprised of 48 units and record numbers are 2618 (10), 2169 (10) and 2170 (10), respectively.

2.

The claims are held by Bethlehem Copper Corporation on behalf of the Molybdenum Belt Joint Venture. The 1981 work was done by Cominco Ltd. as manager of the interest of Bethlehem.

#### IV. REGIONAL GEOLOGY

The property is located in the northeast part of the Bonaparte Lake map-area (Campbell and Tipper, 1969) and is underlain primarily by rocks of the Cretaceous Raft Batholith. Fine grained metasedimentary rocks of Mid to Late Jurassic age occur in the southernmost part of the claim block, on PL 2 and southwestern PL 3.

#### V. LOCAL GEOLOGY (drawing MB-81-20)

The intrusive rocks on the property are primarily a medium to coarse grained, hypidiomorphic granular biotite granodiorite. These rocks are generally fresh. Some iron staining occurs on fracture surfaces and only local occurrences of alteration to epidote are found. A small pod of coarse grained diorite was observed near the contact in the north central part of PL 2.

In the contact zone on PL 2, three lenses of grey, fine grained dacite occur. Disseminated pyrite ( 1%) was observed in the volcanic rocks at one location.

The metasedimentary rocks vary from relatively massive argillite in central PL 2 to banded, locally graphitic, argillite and fine grained biotite schist along road 192 in PL 3. The rocks are pervasively fractured and commonly iron stained and pyritic. Abundant pyrite was observed in the outcrop along road 192. Here the metasediments have quartz bands, local occurrences of crosscutting calcite stringers and cleavage, and show evidence of tilting or folding. The mineralization occurs primarily in lenses paralleling the foliation and in fractures. The attitude of the foliation is approximately  $323^{\circ}/60^{\circ}$  SW.

Two dykes intrude banded argillite in the section along road 192 (see drawing number 2c). One is a coarse grained biotite granodiorite and the other a porphyritic biotite dacite. The dykes cut the foliation in the metasediments and are probably related to the main intrusive rocks on the property. Three pods of porphyritic basalt also occur in this area. Medium grained diabase, intrudes massive argillite in one location in PL 2. Alaskite dykes cut the intrusive rock in one location in north central PL 2.

#### VI. MINERALIZATION

No mineralization was observed in outcrop in the intrusive rocks on the PL claims. One sample of float taken in north central PL 2 had a molybdenite veinlet and geochemical analysis returned a value of 127 ppm for molybdenite.

The metasedimentary rocks were often pyritiferous and show abundant pyrite (5%+) in some parts of the outcrop along road 192.

#### VII. GEOCHEMISTRY (drawings MB-81-4 to MB-81-6)

Forty-one soil, stream sediment (silts and heavy mineral concentrates) and rock chip samples were taken during the 1981 survey. The soil samples were collected from the B soil horizon with a trowel at an average depth of 35 cm. The silt samples were collected by hand and stream heavies were panned and sieved through a 10 mesh screen and put into plastic bags. All other samples were put into Kraft bags. These were sent to the Cominco Exploration and Research Laboratory for geochemical analysis. Those in area A (see drawing MB-81-3) were analyzed for copper, molybdenum, zinc and tungsten. The rock chip samples were also analyzed for tin and fluorine. The samples taken in area B were analyzed for copper, lead, zinc, silver and gold. Analytical procedures are listed with the results in Appendix C.

In addition, forty-nine samples taken in southwestern PL 3 were analyzed for lead, zinc, silver and gold. These samples were taken during the 1980 survey and concurrently were analyzed for copper, molybdenum and uranium. The analyses were done by the Kamloops Research and Assay Laboratory, Kamloops, B.C.

Soil anomalies for molybdenum were outlined from 1980 results in two areas, one in northcentral PL 2 and the other near the border of PL 3 and PL 1. The soil and stream sediment samples taken during the 1981 survey returned generally threshold values, 5-15 ppm molybdenum. The rock chip sample analyses indicate that the molybdenum content of the metasedimentary rocks is as high or higher than that of the intrusive rocks, but even these values are mostly less than 10 ppm.

Five samples taken in southwestern PL 3 around road 192 returned good values for gold. Threshold values for gold occur in most of the other samples in this area taken during 1980. However, only 1 sample, a rock chip, taken during the 1981 survey had detectable gold.

#### VIII. TRENCHING (drawing MB-81-2b)

One trench, located 470 m 113° from LCP, was completed in June. The trench was approximately 3 metres deep, 1 meter wide and 2 metres long (see drawing MB-81-2b). Eleven soil (C-horizon) and rock chip samples were taken at 30 cm intervals and ranged from 11 ppm to <2 ppm molybdenum.

#### IX. GEOPHYSICS

Twenty-four line km of I.P. were run on PL 2 and 3 in August, 1981. A strong chargeability high and resistivity low was defined in southwestern PL 3 and follow-up mapping and sampling was done (area B) to prospect for massive sulphide mineralization. Full details of the geophysical survey can be found in an assessment report by A.R. Scott, October, 1981.

X. CONCLUSIONS AND RECOMMENDATIONS

Soil, stream sediment and rock chip samples from northcentral PL 2, and northern PL indicate that threshold (5-15 ppm) amounts of molybdenum are present. No visible molybdenite or evidence of leached sulfides was observed in outcrop in these areas. Therefore, it is suspected that the anomalies from the 1980 survey are the result of molybdenum that has been transported and deposited with glacial material.

Five samples in the southwestern part of PL 3 returned good values for gold. Threshold values for gold occur in other soils from 1980 sampling.

The location of two of the anomalous gold samples coincides with a geophysical chargeability high. Other threshold and anomalous gold results are in the area of the low resistivity results. However, abundant pyrite and the locally graphitic nature of the metasedimentary rocks in these areas could also account for the geophysical anomalies,

XI. REFERENCES

Campbell, R.B. and Tipper, H.W., 1971, Geology of the Bonaparte Lake Map area, British Columbia, Memoir 363, Geological Survey of Canada.

Wilson, N.J., 1980, Geological and Geochemical Report on the PL claims, Grizzly Lakes area, B.C., assessment report number 8588, B.C.M.E.M.P.R.

Report by: S.L. Gardiner  
S.L. Gardiner  
Geologist

Endorsed by: [Signature]

Approved for  
Release by: W. J. Neulfe

SLG/vmk

Distribution:

APPENDIX A

PATRICIA LAKE EXPENDITURES

SALARIES

1 Geologist - 34 days @ \$124.08/day	\$ 4,218.72	
1 Geologist - 26 days @ 148.72/day	3,866.72	
1 Assistant - 25 days @ 93.28/day	2,332.00	
1 Assistant - 8 days @ 93.28/day	746.24	
1 Assistant - 1 day @ 90.20/day	90.20	<u>\$11,253.92</u>

ROOM & BOARD

94 man days @ \$48.00/day	<u>\$ 4,512.00</u>	<u>\$ 4,512.00</u>
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FIELD EQUIPMENT

Deakin Equipment	\$ 19.00	
Pack & Boots Store	47.50	
JIC Enterprises Ltd.	<u>112.34</u>	<u>\$ 178.84</u>

SAMPLE SHIPMENT

Greyhound Express	<u>\$ 15.55</u>	<u>\$ 15.55</u>
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GEOCHEMICAL ANALYSIS

15 rock samples @ \$16.15/sample (Cominco Lab)	\$ 242.25	
26 soil and silt samples @ \$7.40/sample (Cominco Lab)	192.40	
67 soil and silt samples @ \$8.50/sample (Kamloops Lab)	<u>332.50</u>	<u>\$ 767.15</u>

COMMUNICATIONS

1 radio telephone rental - 1 mo. @ \$150/mo.	\$ 150.00	
1 radio telephone rental (Clearwater Timber Products) - 1.5 mo. @ \$30.00/mo.	<u>45.00</u>	<u>\$ 195.00</u>

TRUCK RENTAL

1 ½ ton 4x4 - 33 days @ \$40.00/day	\$ 1,320.00	
1 ½ ton 4x4 - 27 days @ \$37.65/day	<u>1,016.55</u>	<u>\$ 2,336.55</u>

2.

TRENCHING

1 Backhoe  
1 Flatbed

\$ 270.00  
202.50

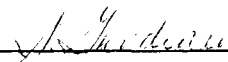
\$ 472.50

REPORT WRITING & DRAFTING

\$ 600.00

TOTAL

\$20,331.51

  
\_\_\_\_\_  
S.L. Gardiner  
Geologist

SLG/vmk



APPENDIX B

STATEMENT OF QUALIFICATIONS

I, S. GARDINER, GEOLOGIST, WITH BUSINESS ADDRESS AT 700 - 409 GRANVILLE STREET, VANCOUVER, BRITISH COLUMBIA, HEREBY CERTIFY:-

1. THAT I am a graduate in Earth Sciences (Applied Geology) with a B.Sc. (Hons. - Cooperative) in 1979 from the University of Waterloo.
2. THAT from 1979 to 1981, I was employed by Bethlehem Copper Corporation and from the 30th day of April, 1981 by Cominco Ltd.
3. THAT I personally participated in the field work on the PL claim group and have interpreted all the data resulting from this work.

S.L. Gardiner  
S.L. Gardiner  
Geologist I

Dated this 23 day of April, 1981,  
at Vancouver, British Columbia.

MO BELT (PATRICIA LK)

JOB V81 - 0253H

REPORTING DATE 24 JUL 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	WEIGHT GRAM	VOLUME ML	RATIO G/L	CU PPM	ZN PPM	MO PPM	W PPM	SN(4) PPM
H81 00375	I PL001	9.82	450	22	31	170	13	65	37
H81 00376	I PL002	5.01	600	8	36	85	19	150	80
H81 00377	I PL005	5.16	750	7	14	40	15	340	60 <sup>a</sup>
H81 00378	I PL006	2.72	600	5	12	52	10	E400	101 <sup>a</sup>
H81 00379	I PL008	5.92	600	10	21	52	12	100	101 <sup>a</sup>
H81 00360	I PL010	11.66	450	26	38	227	16	130	21
H81 00361	I PL012	7.63	450	17	54	570	21	25	25
H81 00382	I PL014	4.86	450	11	31	113	12	150	33

HMG YIELD DATA: 'VOLUME (ML)' IS THE APPROXIMATE VOLUME OF -18 MESH MATERIAL PROCESSED THROUGH HEAVY LIQUIDS; 'WEIGHT (GRAM)' IS THE WEIGHT OF HEAVIES (AFTER REMOVAL OF FERROMAGNETICS) OBTAINED FROM THAT VOLUME; 'RATIO (G/L)' IS THE YIELD PER UNIT VOLUME

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN, RESULTS ARE TO FOLLOW  
 E - VALUE EXCEEDS OPTIMUM WORKING RANGE; ESTIMATE ONLY; REQUEST ASSAY IF PRECISE VALUE REQUIRED

ANALYTICAL METHODS

W PYROSULPHATE FUSION / COLORIMETRIC  
 Mo HNO3 - HClO4 DIGESTION / COLORIMETRIC  
 Cu ZN AQUA REGIA DIGESTION / AA  
 Sn(4) X-RAY FLUORESCENCE

MOORE W-1000-1

MO. RES. TECH. COL. (L)

JOB 081 - 021

REPORTING DATE 21 SEP 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	TYPE	Cu PPM	Zn PPM	Hg PPM	H PPM
SB1 03414	1	PL003	18	32	5	2
SB1 03415	1	PL004	26	44	6	5
SB1 03416	1	PL007	8	19	12	3
SB1 03417	1	PL009	23	122	5	2
SB1 03418	1	PL011	33	260	5	2
SB1 03419	1	PL013	36	148	3	4

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN, RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

Cu      Zn      20% HNO<sub>3</sub> digestion / AA  
R      Pyrosulphate fusion / colorimetric  
Hg      HNO<sub>3</sub> - HClO<sub>4</sub> digestion / colorimetric

MO BELT (PATRICIA LK)

JOB V81 - 0356R

REPORTING DATE 21 SEP 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	Co PPM	Zn PPM	Mo PPM	H PPM	F PPM	SN(4) PPM
R81 07222	IPL- 15	30	80	5	2	680	<20
R81 07223	IPL- 16	98	45	11	<2	730	<20
R81 07224	IPL- 21	6	16	22	2	99	<20
R81 07225	IPL- 30	15	84	4	<2	420	<20
R81 07226	IPL- 32	7	15	3	<2	399	<20
R81 07227	IPL- 33	16	20	127	3	390	<20
R81 07228	IPL- 34	76	33	6	<2	780	<20
R81 07229	IPL- 35	34	22	13	<2	890	<20
R81 07230	IPL- 36	19	32	9	2	510	<20
R81 07231	IPL- 38	57	35	4	<2	495	<20
R81 07232	IPL- 39	86	91	10	2	376	<20
R81 07233	IPL- 40	55	71	4	2	401	<20
R81 07234	IPL- 41	17	27	3	<2	495	<20
R81 07235	IPL- 42	8	43	3	5	560	<20
R81 07236	IPL- 43	15	36	3	3	400	<20
R81 07237	IPL- 55 R	11	53	2	2	500	<20

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN/ RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

Mo PYROPHOSPHATE FUSION / COLORIMETRIC  
 HNO3 - HClO4 digestion / COLORIMETRIC  
 Co Zn AQUA REGIA DIGESTION / AA  
 F SPECIFIC ION  
 SN(4) X-RAY FLUORESCENCE

NO BELT PATRICIA LTD

JOB U81 - 0358H

REPORTING DATE 21 SEP 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	WEIGHT GRAM	VOLUME ML	RATIO G/L	CU PPM	ZN PPM	MO PPM	W PPM	SI(4) PPM
H81 00488	EPL-020	3.25	450	7	10	69	970	650	83

HMG YIELD DATA: 'VOLUME (ML)' IS THE APPROXIMATE VOLUME OF #18 MESH MATERIAL PROCESSED THROUGH HEAVY LIQUIDS; 'WEIGHT (GRAM)' IS THE WEIGHT OF HEAVIES (AFTER REMOVAL OF FERROMAGNETICS) OBTAINED FROM THAT VOLUME; 'RATIO (G/L)' IS THE YIELD PER UNIT VOLUME

HIGHER ANALYSIS REQUESTED BUT NO VALUES SHOWN; RESULTS ARE TO FOLLOW

E - VALUE EXCEEDS OPTIMUM WORKING RANGE; ESTIMATE ONLY; REQUEST ASSAY IF PRECISE VALUE REQUIRED

ANALYTICAL METHODS

H PYROLYSATE FUSION / COLORIMETRIC  
 Mo HNO3 - HClO4 DIGESTION / COLORIMETRIC  
 Cu Zn DRUG MEDIA DIGESTION / AA  
 Si(4) X-RAY FLUORESCENCE

NO BELT OPERATOR LND

JOB V81 - 09925

REPORTING DATE 21 SEP 1961

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	TYPE	Pb PER	Ag PER	Au PER
SEL 03417	1	PL009	7	6.4	<10
SEL 03418	1	PL011	7	6.4	<10
SEL 03419	1	PL013	8	7.5	<10

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN/ RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

Pb Ag 20% HNO<sub>3</sub> DIGESTION / AA  
Au DIPA SEE A REQUESTED / SEC-DIT EXTRACTION / BA

FORM 1710-1-61

## MO BELT (PATRICIA LK)

JOB V81 - 03579

REPORTING DATE 22 SEP 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	TYPE	Cu PPM	Zn PPM	Mo PPM	H PPM
S81 08217	IPL- 17	S	4	14	5	2
S81 08218	IPL- 18	S	4	25	6	2
S81 08219	IPL- 19	S	53	63	195	2
S81 08220	IPL- 22	S	6	20	38	2
S81 08221	IPL- 23	S	3	27	21	2
S81 08222	IPL- 24	S	8	33	69	2
S81 08223	IPL- 25	S	5	14	59	3
S81 08224	IPL- 26	S	4	14	49	4
S81 08225	IPL- 27	S	4	16	32	7
S81 08226	IPL- 28	S	4	22	9	2
S81 08227	IPL- 29	S	5	35	8	2
S81 08228	IPL- 31	S	4	51	18	2
S81 08229	IPL- 37	S	20	106	17	2
S81 08230	IPL- 45	S	12	46	6	9
S81 08231	IPL- 46	S	13	54	5	9
S81 08232	IPL- 47	S	6	26	3	4
S81 08233	IPL- 48	S	5	14	(2	2
S81 08234	IPL- 49	S	7	27	(2	2
S81 08235	IPL- 50	S	15	53	3	7
S81 08236	IPL- 51	S	13	51	3	6
S81 08237	IPL- 52	S	10	41	5	3
S81 08238	IPL- 53	S	11	47	5	9
S81 08239	IPL- 54	S	8	32	7	4
S81 08240	IPL- 55	S	7	34	11	4

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN; RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

Cu Zn 20% HNO3 DIGESTION / AA  
 W PYROSULPHATE FUSION / COLORIMETRIC  
 Mo HNO3 - HCL04 DIGESTION / COLORIMETRIC

MO BELT (PATRICIA LK)

JOB V81 10305

REPORTING DATE 7 OCT 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	TYPE	Co PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
881 47194	IPL 56	S	10	11	58	<.4	<10
881 47195	IPL 57	S	5	7	89	<.4	<10
881 47196	IPL 58	S	21	6	65	<.4	<10
881 47197	IPL 59	S	10	9	93	<.4	<10
881 47198	IPL 60	S	25	9	62	.4	<10
881 47199	IPL 61	S	9	9	75	<.4	<10
881 47200	IPL 62	S	24	9	117	<.4	<10
881 47201	IPL 64	S	12	8	125	<.4	<10
881 47202	IPL 66	S	26	8	136	<.4	<10
881 47203	IPL 68	S	15	9	72	<.4	<10
881 47204	IPL 70	S	5	8	23	<.4	<10
881 47205	IPL 71	S	23	11	104	<.4	<10
881 47206	IPL 72	S	41	8	255	<.4	<10
881 47207	IPL 73	S	17	8	193	<.4	<10
881 47208	IPL 74	S	28	9	170	<.4	<10
881 47209	IPL 75	S	20	12	212	<.8	<10
881 47210	IPL 76	S	12	7	226	<.4	<10
881 47211	IPL 77	S	12	7	279	<.4	<10
881 47212	IPL 78	S	8	10	373	<.4	<10
881 47213	IPL 79	S	37	8	301	<.4	<10

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN/ RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

Co Pb Zn Ag 20% HNO3 DIGESTION / AA  
 Au ARORA REGIA DIGESTION / SOLVENT EXTRACTION / AA



MO BELT (PATRICIA LN)

JOB V81 - 0993H

STARTING DATE 14 OCT 1981

PAGE 1

SAMPLE ID	FIELD NUMBER	WEIGHT GRAM	VOLUME ML	RATIO G/L	Pb PPM	Zn PPM	Au PPB
1 00380	I PL010	11.86	450	26	21	227	<10
1 00381	I PL012	7.63	450	17	26	570	<20
1 00382	I PL014	4.86	450	11	22	113	<20

HMG YIELD DATA: 'VOLUME (ML)' IS THE APPROXIMATE VOLUME OF -18 MESH MATERIAL PROCESSED THROUGH HEAVY LIQUIDS; 'WEIGHT (GRAM)' IS THE WEIGHT OF HEAVIES (AFTER REMOVAL OF FERROMAGNETICS) OBTAINED FROM THAT VOLUME; 'RATIO (G/L)' IS THE YIELD PER UNIT VOLUME

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN, RESULTS ARE TO FOLLOW

## ANALYTICAL METHODS

AU AQUA REGIA DIGESTION / SOLUBLE EXTRACTION / AA  
Pb Zn AQUA REGIA DIGESTION / AA

MO RCLT (PATRICIA LN)

JOB 081 - 1032R

REPORTING DATE 15 OCT 1981

PAGE 1

SAMPLE NUMBER	FIELD NUMBER	CU	Pb	Zn	Ag	AU
		PPM	PPM	PPM	PPM	PPM
R81 15914	IPL63	42	16	76	.9	<10
R81 15915	IPL65	81	<4	178	1.3	<10
R81 15916	IPL67	10	5	82	<.4	<10
R81 15917	IPL69	18	13	119	.9	<10
R81 15918	IPL70	55	10	220	2.5	<10
R81 15919	IPL61	55	6	673	1.8	<10
R81 15920	IPL62	26	<4	87	.4	<10
R81 15921	IPL83	36	<4	65	<.4	90
R81 15922	IPL84	11	4	47	<.4	<10
R81 15923	IPL85	45	9	102	.6	<10
R81 15924	IPL86	53	4	252	.2	<10
R81 15925	IPL87	57	<4	108	.6	<10
R81 15926	IPL86	49	<4	168	.9	<10

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN/ RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

AU BRON REGIA DIGESTION / SOLVENT EXTRACTION / AA  
 CU Pb Zn Ag BRON REGIA DIGESTION / AA

**KAMLOOPS  
RESEARCH & ASSAY  
LABORATORY LTD.**

B.C. CERTIFIED ASSAYERS

2095 WEST TRANS CANADA HIGHWAY — KAMLOOPS B.C.  
V1S 1A7  
PHONE: (804) 372-2784 — TELEX: 048-8320

**GEOCHEMICAL LAB REPORT**

Cominco Ltd.  
700 - 409 Granville Street  
Vancouver, B.C.  
V6C 1T2

DATE October 13, 1981

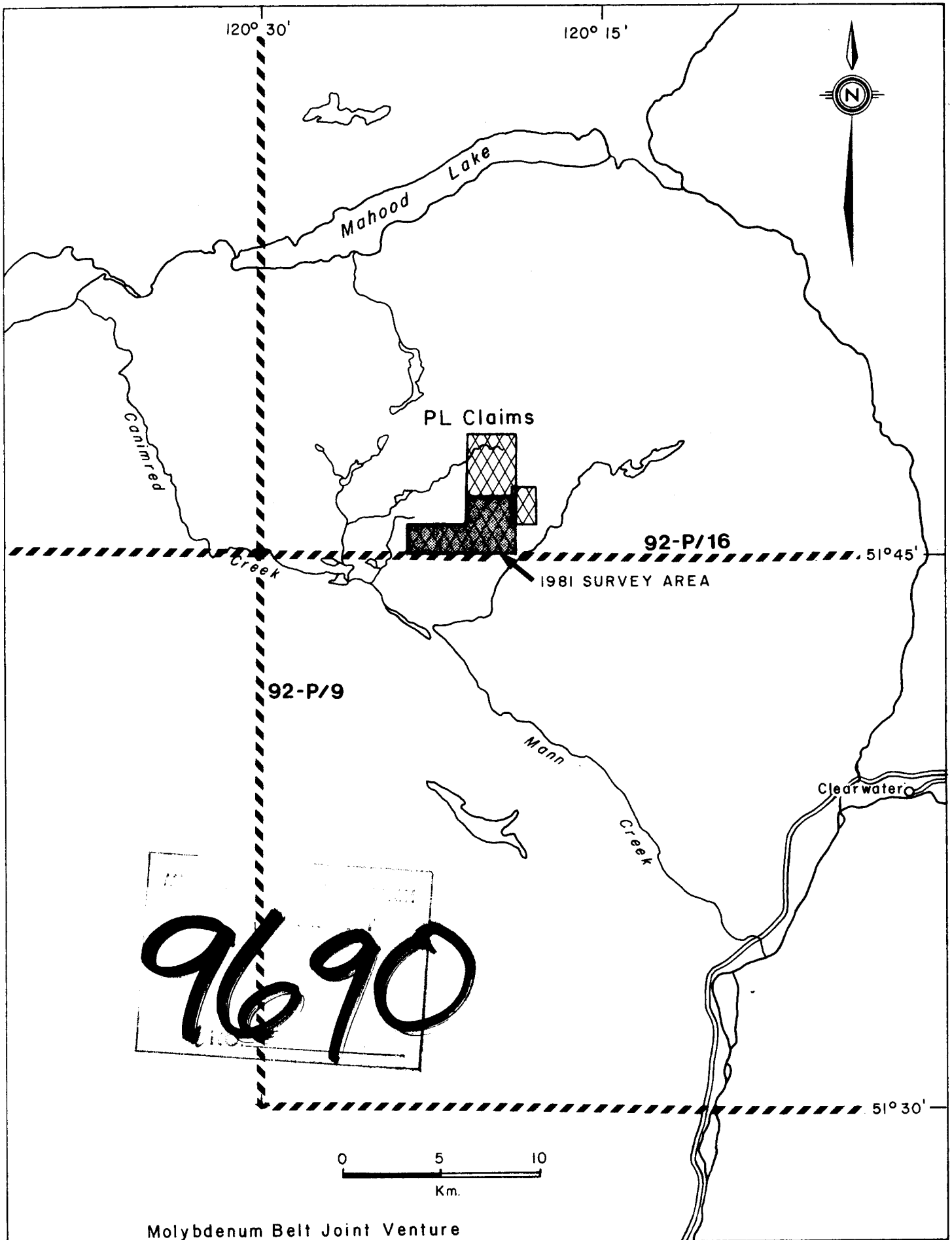
ANALYST \_\_\_\_\_

ATTENTION: SHARON GARDINER

FILE NO. G-618

KRAL NO.	IDENTIFICATION	ppb Au	ppm Pb	ppm Zn	ppm Ag				
1	OPL 256	15	6	21	.3				
2	257	20	17	76	1.2				
3	258	15	14	133	1.5				
4	259	NES	15	230	.8				
5	OPL 260	40	21	195	1.5				
6	261	30	15	54	.6				
7	262	20	6	11	.4				
8	263	10	9	28	.6				
9	264	20	9	20	.4				
10	265	20	11	27	.6				
11	OPL 266	20	5	11	.5				
12	OPL 643	NES	12	60	.4				
13	644	550	4	13	.3				
14	645	NES	20	151	1.0				
15	647	NES	13	76	.4				
16	648	NES	18	145	.7				
17	649	NES	10	57	.3				
18	OPL 650	NES	17	52	.4				
19	651	50	18	51	.4				
20	652	NES	16	44	.6				
21	653	NES	17	45	.5				
22	654	NES	13	22	.5				
23	655	30	4	10	.4				
24	656	NES	5	11	.5				
25	658	30	4	5	.3				
26	659	450	4	5	.4				
27	OPL 660	35	10	9	.4				
28	661	NES	5	25	.5				
29	OPI 678	30	11	46	.4				
30	OPL 679	30	11	55	.4				





9690

Molybdenum Belt Joint Venture

NCI 218 A4 - B.C.

REVISED	Date	MADE BY	DESCRIPTION

DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT



BLIHEHEM  
COPPER  
CORPORATION

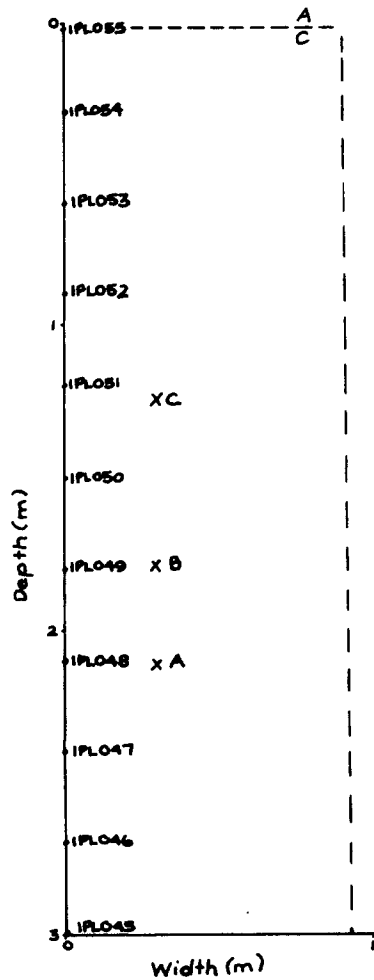
PL CLAIMS  
LOCATION

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:250,000	MB-81-1

**TRENCH #1**

Location: 470 m @ 113° bearing  
from LCP in PL3.

Scale



A HORIZON 0-3cm depth; brown; silt and gravel

C HORIZON WEATHERED BEDROCK  
3cm to 3m depth; grey to yellow brown;  
mixture of sand, silt, clay, boulders and  
fragments and fragments of bedrock.

Molybdenum  
(ppm)

11

7

5

5

3

3

<2

<2

3

5

6

9690

**BEDROCK DESCRIPTIONS**

- A (I.P.L.O.55R) medium grained biotite granodiorite, hypidiomorphic granular. Some saussurization of feldspars, approximately 1% hematite, 12% biotite, 5% quartz, 60% potassium feldspar, 22% plagioclase
- B medium grained, subporphyritic biotite granodiorite; slightly silicified, biotite is iridescent green
- C medium to coarse grained biotite granodiorite, hypidiomorphic granular; some chloritization of biotite.

NCI 218 A4 - B.C.

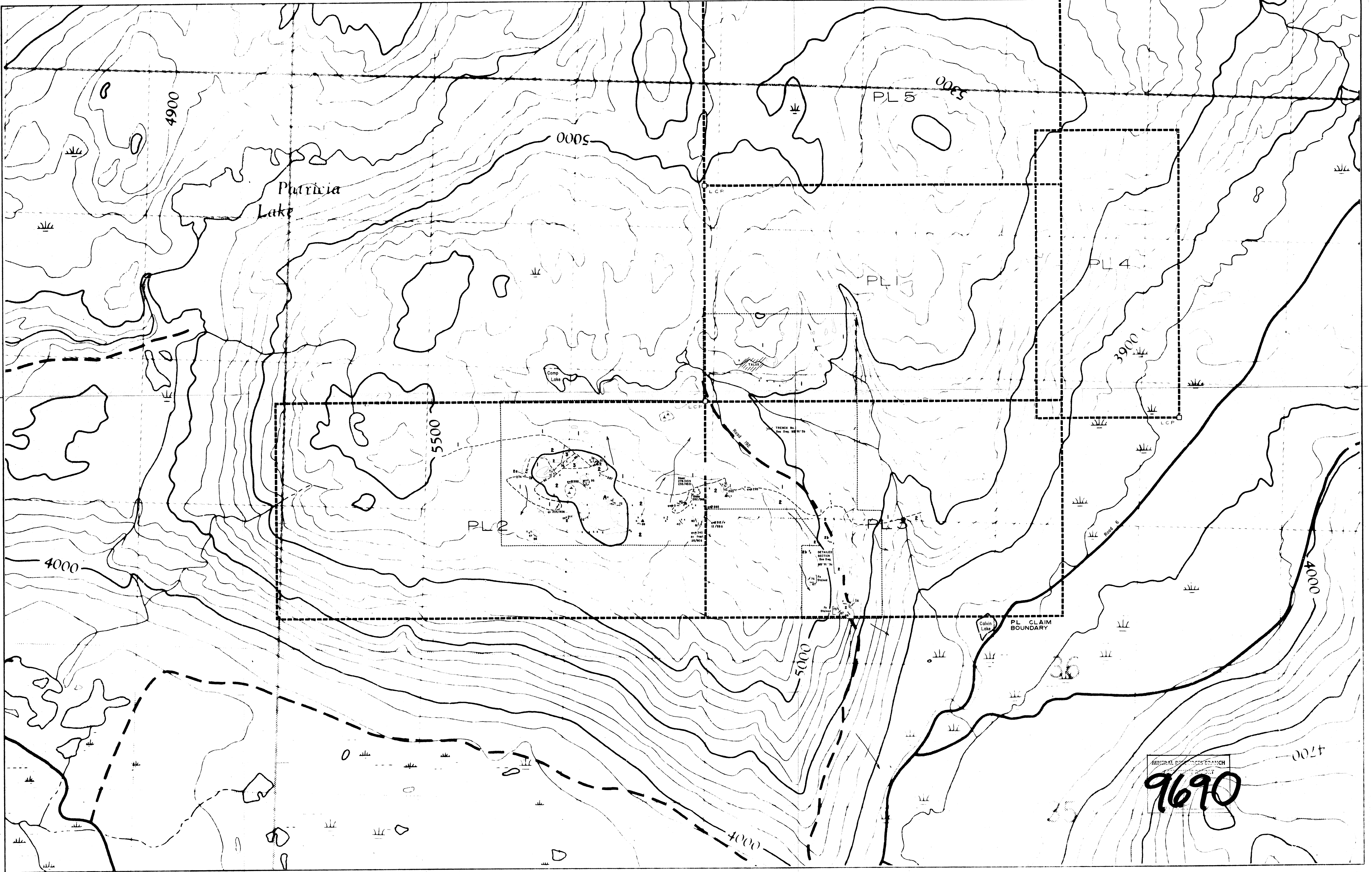
No.	Dsp	MADE BY	DESCRIPTION	DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT	SHEET NO. / TOTAL	SCALE	DRAWING NUMBER
1												
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3												
4												
5												
6												
					S.G.				Exploration		MB-91-2b	



**BETHLEHEM  
COPPER  
CORPORATION**

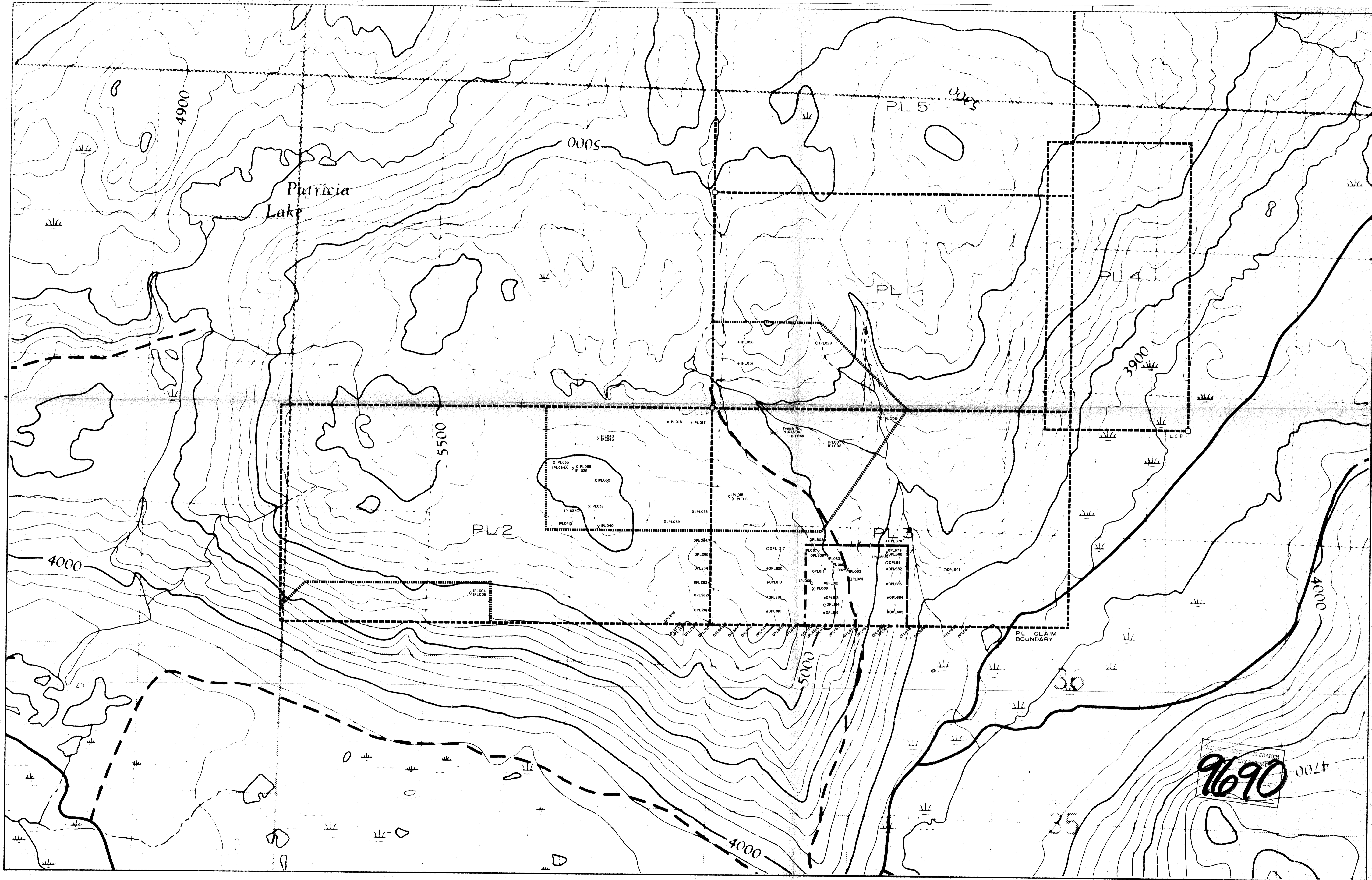
*Molybdenum Belt Joint Venture  
PL CLAIMS  
Trenching Plan*



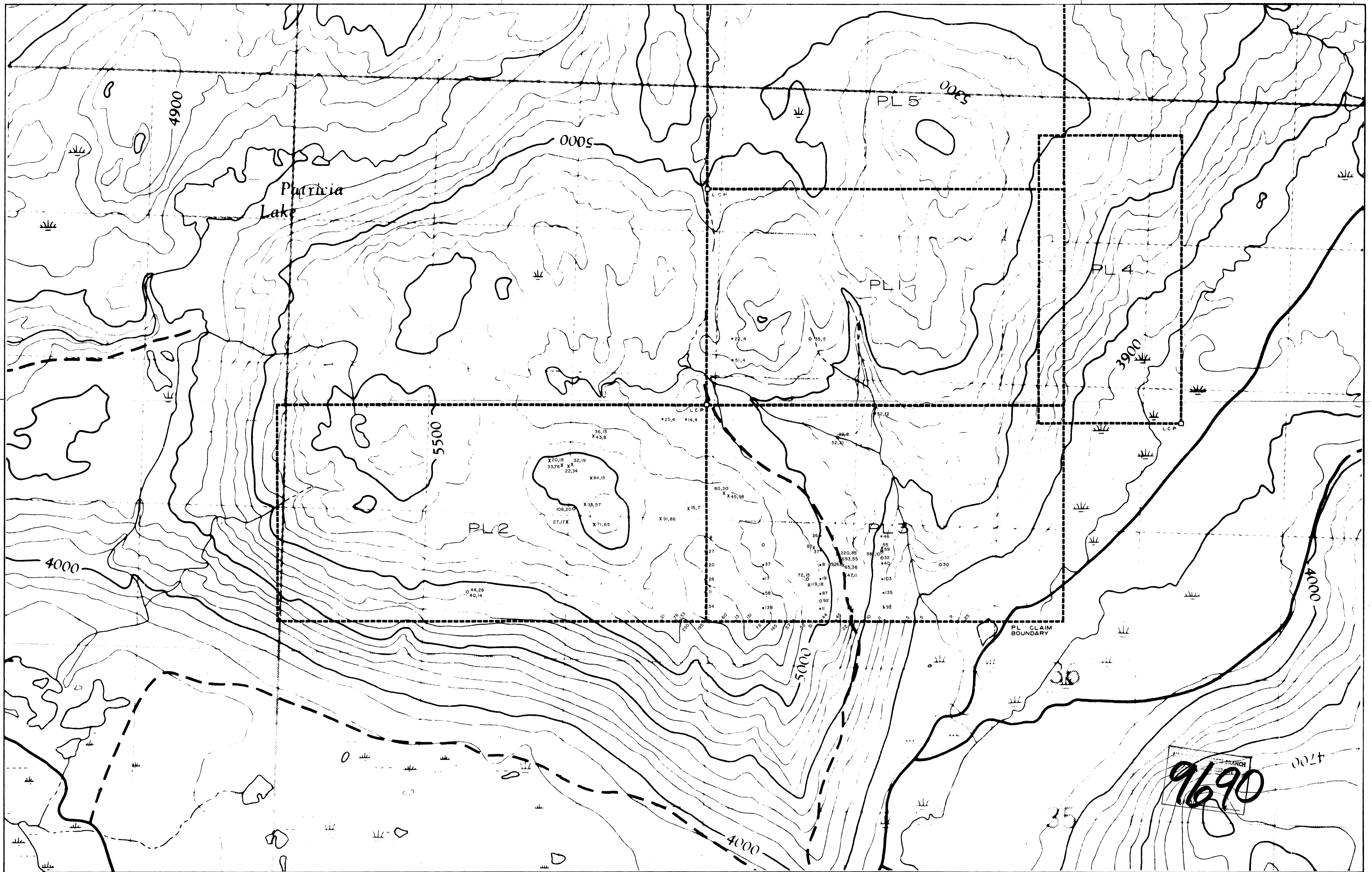


<ul style="list-style-type: none"> <li> Outcrop</li> <li> Small Outcrop</li> <li> Contact defined, assumed</li> <li> Bedding or Intergranular Texture Definition</li> <li> Fracture</li> </ul>	<ul style="list-style-type: none"> <li> Trench</li> <li> Quartz Vein</li> <li> Foliation</li> <li> Topography</li> <li> Creek</li> </ul>	<ul style="list-style-type: none"> <li> Road</li> <li> Swamp</li> <li> Pyrite</li> <li> Molybdenite</li> <li> Shear</li> </ul>	<ul style="list-style-type: none"> <li> Area of 1981 Detailed Mapping</li> </ul> <p><b>CRETACEOUS</b>            Ref1 Batholith rocks; medium to coarse grained Biotite Granodiorite, 1a coarse grained Diorite, meta Granodiorite, 1b medium to fine grained Granite, 1c dyke rock.  <b>MIDDLE to LATE JURASSIC</b>            fine grained Argillite, 2a banded Argillite, 2b fine grained Biotite Schist.            fine grained grey Dacite.</p>	<p>1:10,000</p>	<p>Sept 25, 1981 a.m.b. S.G.</p>	<p><b>B</b> BATHULITH COPPER CORPORATION</p>	<p>MOLYBDENUM BELT JOINT VENTURE            CLARKWORTH AREA  <b>PL CLAIMS</b>  <b>GEOLOGY</b></p> <p>MAP INDEX NUMBER: 92 P/9,16            SCALE: 1:10,000            SHEET: MB RI 2a</p>
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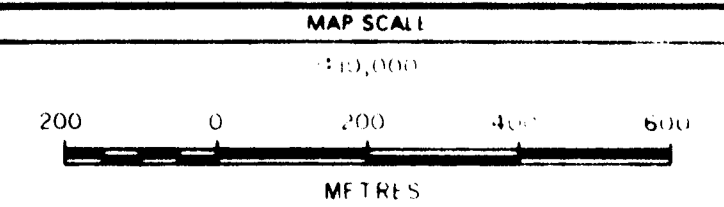
<ul style="list-style-type: none"> <li>○ Stream Sediment Sample</li> <li>• Soil Sample</li> <li>X Rock Sample</li> </ul>	<ul style="list-style-type: none"> <li>————— AREA A</li> <li>————— AREA B</li> <li>----- CLAIM BOUNDARY</li> </ul>	<p>MAP SCALE</p> <p>1 : 10,000</p> <p>200 0 200 400 600</p> <p>METRES</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>MADE BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td></tr> </tbody> </table>	REV.	DATE	MADE BY	DESCRIPTION	1				2				3				4				5				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>DRAWN BY</th> <th>CHECKED</th> <th>APPROVED</th> <th>OFFICE</th> <th>DEPARTMENT</th> <th>MAP INDEX NUMBER</th> <th>SCALE</th> <th>DRAWING NUMBER</th> </tr> </thead> <tbody> <tr> <td>Sept 25, 1981</td> <td>a.m.b.</td> <td>S.G.</td> <td></td> <td>VANCOUVER</td> <td>EXPLORATION</td> <td>92 P/9 J6</td> <td>1 : 10,000</td> <td>MB-91-3</td> </tr> </tbody> </table>	DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT	MAP INDEX NUMBER	SCALE	DRAWING NUMBER	Sept 25, 1981	a.m.b.	S.G.		VANCOUVER	EXPLORATION	92 P/9 J6	1 : 10,000	MB-91-3	<p><b>B</b> BETHLEHEM COPPER CORPORATION</p> <p>MOLYBDENUM-BELT JOINT VENTURE CLEARWATER AREA PL CLAIMS SAMPLE LOCATIONS</p>
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Sept 25, 1981	a.m.b.	S.G.		VANCOUVER	EXPLORATION	92 P/9 J6	1 : 10,000	MB-91-3																																							



○ Stream Sediment Sample  
 ● Soil Sample  
 × Rock Sample

○ 44,26 - Silt  
 ○ 40,14 - Heavy mineral concentrate

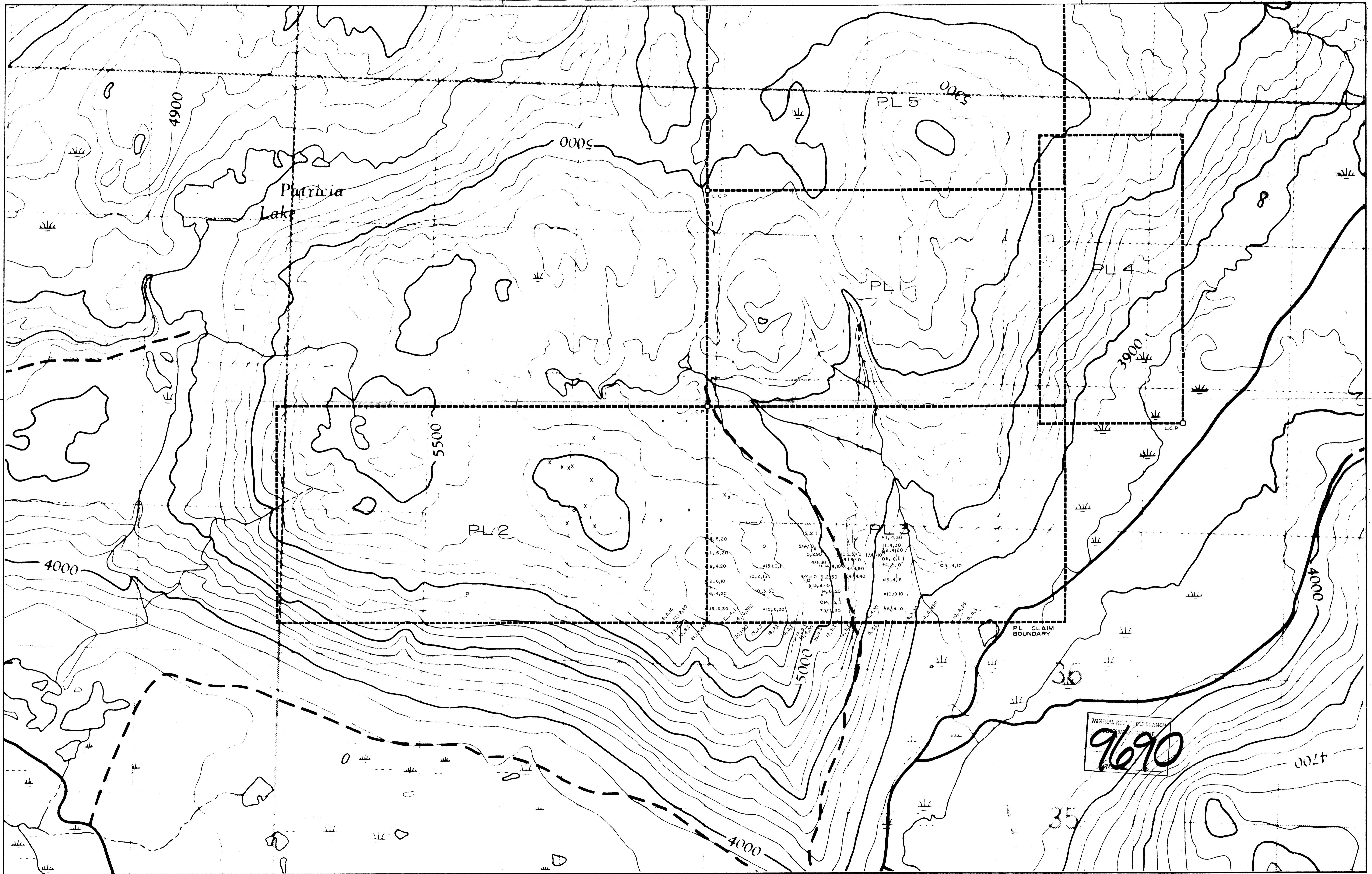
**SAMPLE RESULTS**  
 45,98 = Zn(ppm), Cu(ppm)  
 45 = Zn(ppm)



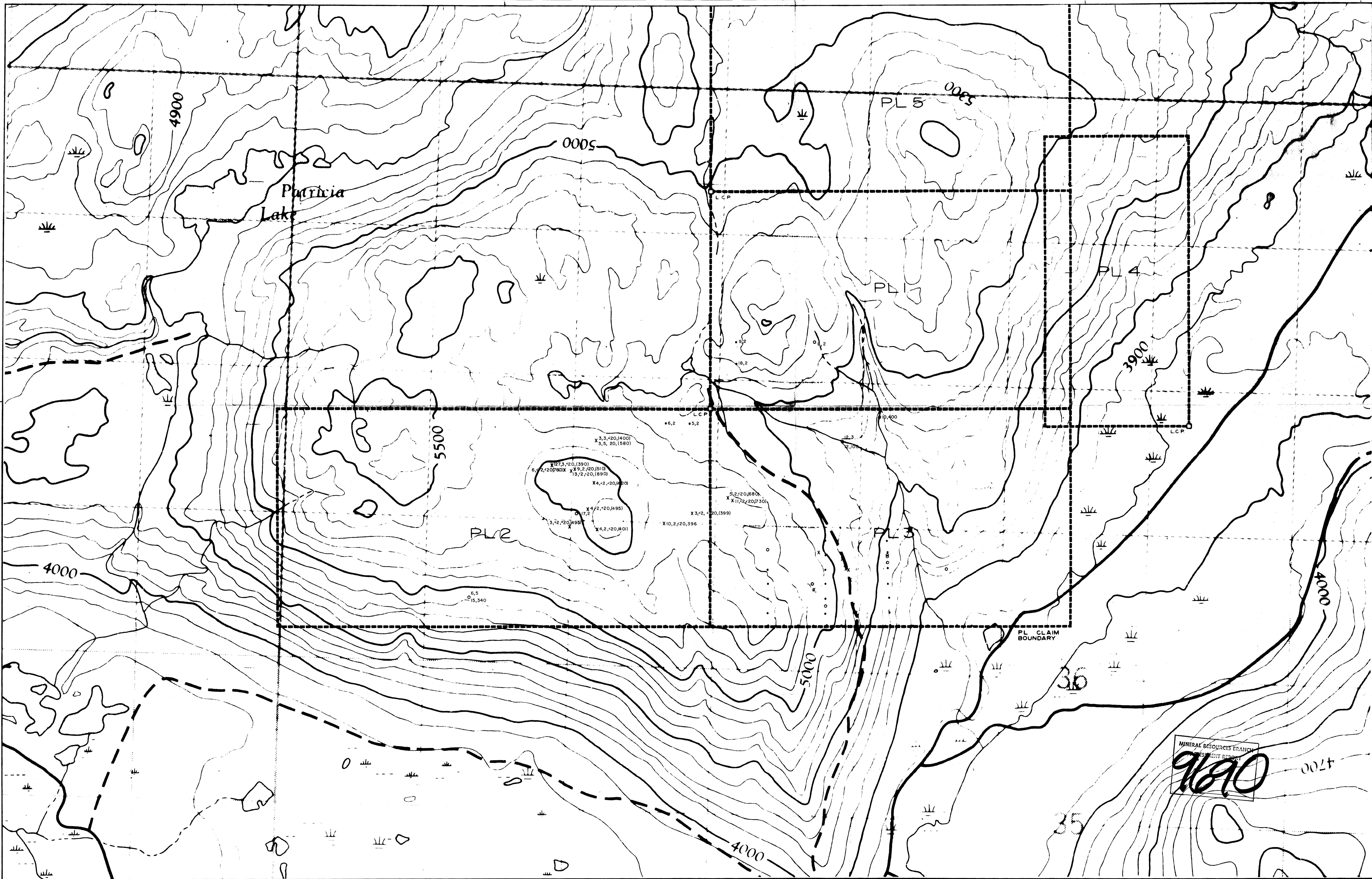
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3										
4										
5										



BETHLEHEM COPPER CORPORATION  
 GEOCHEMISTRY Zn, Cu  
 CLEARWATER AREA PL CLAIMS  
 92 P/9,16  
 1:10,000  
 MB-91-4



<ul style="list-style-type: none"> <li>○ Stream Sediment Sample</li> <li>• Soil Sample</li> <li>x Rock Sample</li> </ul>	<p><b>SAMPLE RESULTS</b>          6, 4, 20 = Pb (ppm), Ag (ppm), Au (ppb)</p>	<p><b>MAP SCALE</b>          1:10,000</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Date</th> <th>MADE BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td></tr> </tbody> </table>	No.	Date	MADE BY	DESCRIPTION	1				2				3				4				5				<p><b>BETHLEHEM COPPER CORPORATION</b></p>	<p>MOYBUENUM BELT JOINT VENTURE          CLEARWATER AREA          PL CLAIMS          GEOCHEMISTRY          Pb, Ag, Au</p>
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<ul style="list-style-type: none"> <li>o Stream Sediment Sample</li> <li>• Soil Sample</li> <li>X Rock Sample</li> </ul>	<p>6,5 — Silt 15,340 — Heavy mineral concentrate</p>	<p>Sample Results 3, 2, 20,(399) = Mo(ppm), W(ppm), Sn(4)(ppm), F(ppm)</p>	<p>MAP SCALE 1:10,000 0 200 400 600 METERS</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No</th> <th>Date</th> <th>MADE BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td></tr> </tbody> </table>	No	Date	MADE BY	DESCRIPTION	1				2				3				4				5				<p><b>BETHLEHEM COPPER CORPORATION</b></p>	<p>MINERAL RESOURCES BRANCH ASSESSMENT REPORT <b>91890</b></p>	<p>MCC/BUENUM BELT JOINT VENTURE CLEARWATER AREA PL CLAIMS GEOCHEMISTRY Mo, W, Sn, F</p>
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