PHELPS DODGE CORPORATION OF CANADA, LTD.

GEOLOGICAL AND GEOCHEMICAL REPORT

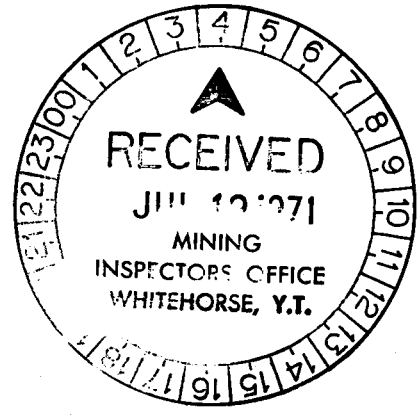
ON THE HAYES CK PROJECT CLAIMS,

PDY GROUP,

CLAIM SHEET 115I5

PROSPECTOR MOUNTAIN AREA

YUKON TERRITORY



Approximately

Longitude 137° 50' W

Latitude 62° 15' N

9594.05

NTS 115I5

Work done during

June 16 - Aug. 7, 1970

by

F.M. Smith

January, 1971

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $9594.05

D.B. Craig

Resident Geologist or
~~Resident Mining Engineer~~

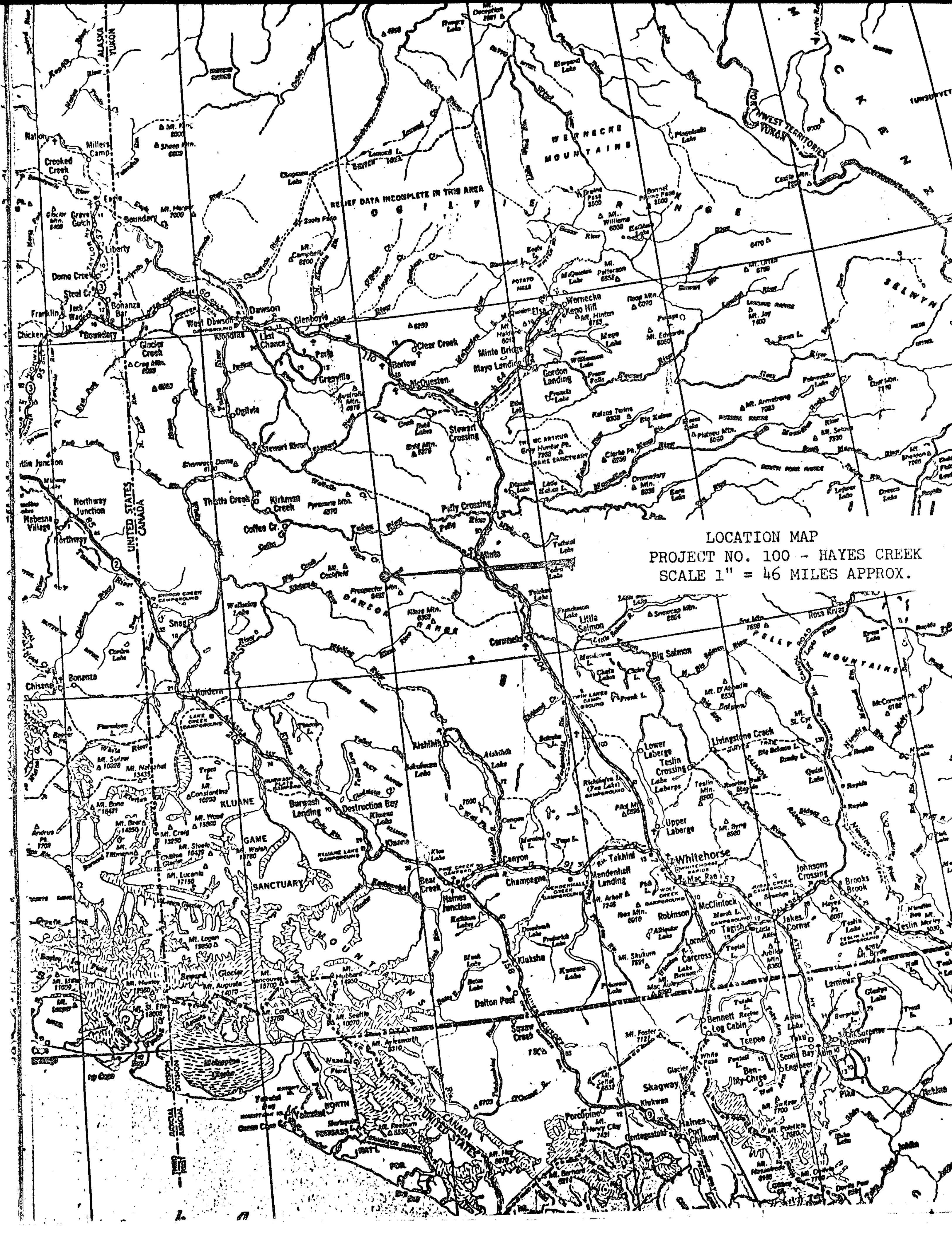
Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

INDEX

Maps in accompanying folder

Geochem sample and Geology Map (Regional)	1" : ½ mi.
Geology and Claim Map	1" : 400'
Copper Geochemistry	1" : 400'
Lead "	1" : 400'
Zinc "	1" : 400'



LOCATION MAP
PROJECT NO. 100 - HAYES CREEK
SCALE 1" = 46 MILES APPROX.

PHELPS DODGE CORPORATION OF CANADA, LIMITED
FIDELITY LIFE BUILDING
404-1112 WEST PENDER STREET
VANCOUVER 1, BRITISH COLUMBIA

NEW YORK OFFICE
300 PARK AVENUE
NEW YORK 22, N.Y., U.S.A.

106 Main St., Whitehorse, Y.T.

TORONTO OFFICE
55 YONGE STREET
TORONTO 1, ONTARIO

Project 100 - Hayes Ck
Geological and Geochemical Report

Introduction

The PDY claim group area came to the attention of Phelps Dodge Corporation of Canada, Ltd. during regional evaluation around other holdings in the same area. Reconnaissance geochem stream sampling identified the region covered by the PDY group as anomalous in copper, lead and zinc.

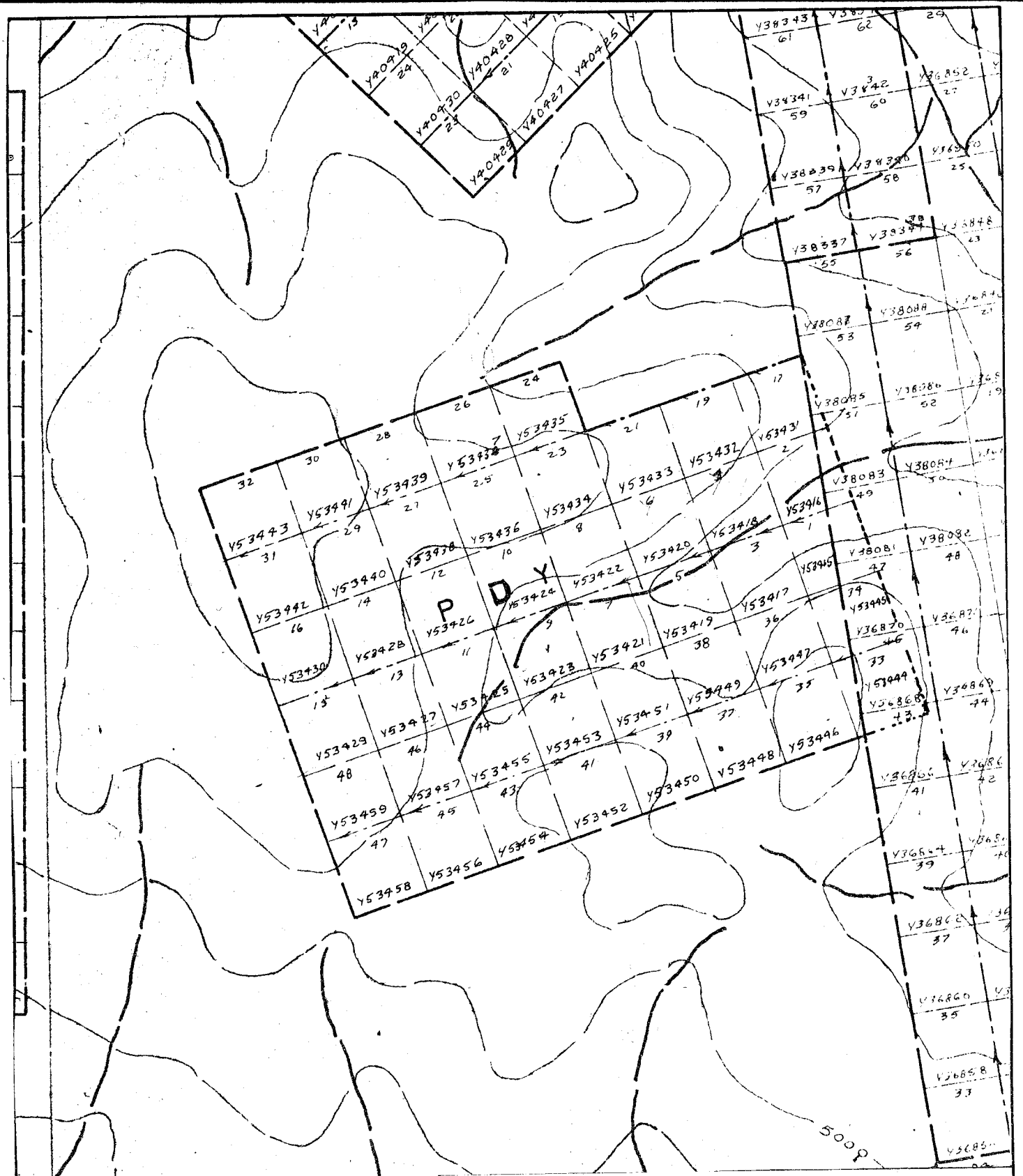
After the claims were staked a regional evaluation of the geology and geochem was attempted. Immediately after a tape and compass grid was laid out over the central important portion of PDY grid.

Location and Access

The PDY Group is located on the west side of the south fork of Hayes Ck near its headwaters. The claims lie on the east flank of Apex Mountain on claim sheet 115I5. Access during the field season was by helicopter based at Casino Air strip or at Minto Air strip. There is a "winter" tote trail into a camp at the junction of the south fork and the east fork of Hayes Ck but this road is virtually unusable during the summer months. The camp for the work on this project was based on Apex Creek and crews were positioned by chopper in the morning and returned to camp at night.

Property

The PDY claims are recorded in the name of Phelps Dodge Corporation of Canada, Limited. They border on the previously staked FROG group (to the east) and may slightly overlap some of this previously



PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

PROJECT 100 HAYES CK.

PDY CLAIMS

N?

11515

SCALE:	DATE:	SURVEYED BY:	DRAWN BY:
1" : 1/2 mi	JULY 1971	DIAND	F MS

staked ground in the extreme south east corner of the group. No previous staking is known to have occurred in the area covered by the remaining PDY claims. The groups immediately north and west are much further north and west (respectively) than plotted on the claim sheets 115I5, 115I12, 115J8, 115J9.

Physiography and Vegetation

The central portion of the PDY claims is a recessive ridge running from the south fork of Hayes Creek to the Apex Mountain peak on the ESE. On either side are two creeks parallel to the ridge running approximately WNW to Hayes Creek.

The southern, western and northern boundaries are dominant ridges of volcanics running about parallel to the central recessive ridge. The sides of all ridges are felsenmere or talus covered with valley floors showing little soil development. Some evidence exists of extremely ancient valley glaciation with Apex mountain having some signs of being a badly weathered "Horn". Present "soil" over outcrops having shallow slopes appears to be residual material rather than altered fill on glacial material.

Vegetation in the area of the PDY group is extremely sparce. Only south facing slopes have any stubby spruce and only low areas have anything but moss or other primitive alpine vegetation.

Regional Geology

The general geology for the Prospector Mountain portion of map area 115I (Carmacks Sheet) was mapped during 1932 to 1934 by H.S. Bostock (Member 189, Geological Survey of Canada). Unfortunately the area around "Apex" Mountain (mentioned in this report) is only provisionally mapped and the Hayes Creek valley itself was the only area traversed.

The main rock type suggested to underlay the PDY group is Unit 9 (Jurassic or later) as Syerite, Monzonite and allied rock types. This unit locally on Hayes Creek is usually Monzonite having definite fine grained portions proximal to the enclosing Mount Nansen Volcanics and relatively coarse grained on the central recessive ridge. No sign was noted of the more common Hornblende Granodiorite (the common intrustive to the north). The Yukon group meta sediments were noted immediately

north of the Mount Nansen Volcanics with the Mount Nansen having an unconformity in contact with this unit (Unit 1). The Unit 10 (Granodiorite) had been noted to the north and west as granitizing the older Yukon Group but not altering the overlying Mount Nansen in this area. (A further discussing of this occurs in Report for Assessment purposes Kook, Apex, Pat Claims 11538,9 R.G. Hilker Ltd. October 30, 1970). The Mt. Nansen Volcanics were locally differentiated from the more common Carmacks Series (Unit 12) due to the anomalous quantities of copper found in the Mt. Nansen. This condition will be discussed later under "Stream Geochemical Work"

Table of Formations

GENOZOIC

Tertiary

13	Quartz porphyry, granite porphyry, rhyolite
12	Carmacks Volcanics: Basalt, andesite, dacite and trachyte flows, breccias and tuffs.

MESOZOIC

Jurassic or Later

10	Granite, Granodiorite, and allied rock types
7	Mount Nansen Group: Basalt, andesite and dacite flows, breccias and tuffs
1	Mica-quartz schist; some chlorite schist, graphite schist, quartzite, serpentine, gneiss, limestone

Geology of PDY Group and Immediate Area

The PDY claim group covers a "window" of red brown weathering coarse to fine grained Biotite Quartz Monzonite to Granite. (Unit 13) There is no clear transition zone between these predominant rocks and occasional patches of Feldspar Porphyry Granite (in the central portion). Due to a large amount of skree on side hills few contacts could be defined.

The contact between the more acid phases and the Mt. Nansen Volcanics was noted only occasionally. The Unit 13 Granites to Quartz Monzonites intruded the volcanics but little thermal alteration is evident. The Granite near the contact becomes richer in hornblende, pyrite and

devoid of biotite. It is usually fine grained with fine veinlets of quartz, sphalerite and galena. The volcanics are more chloritized and show epidote and quartz veinlets near the contact. The flows and tuff-agglomerates are more compact and darker green in colour than assembledges further up the sequence. Minor bornite with zeolites was noted in occurrences immediately north of PDY #26 on the ridge top, in a crushed shear-vein assembledge parallel to the banding (ie horizontal to slight dip SE) of the volcanic assembledge. Attitudes of the volcanics locally varies rapidly or is not discernible. Jointing directions varied rapidly but usually could be noted as due to near granite contacts and/or rhyolite dikes.

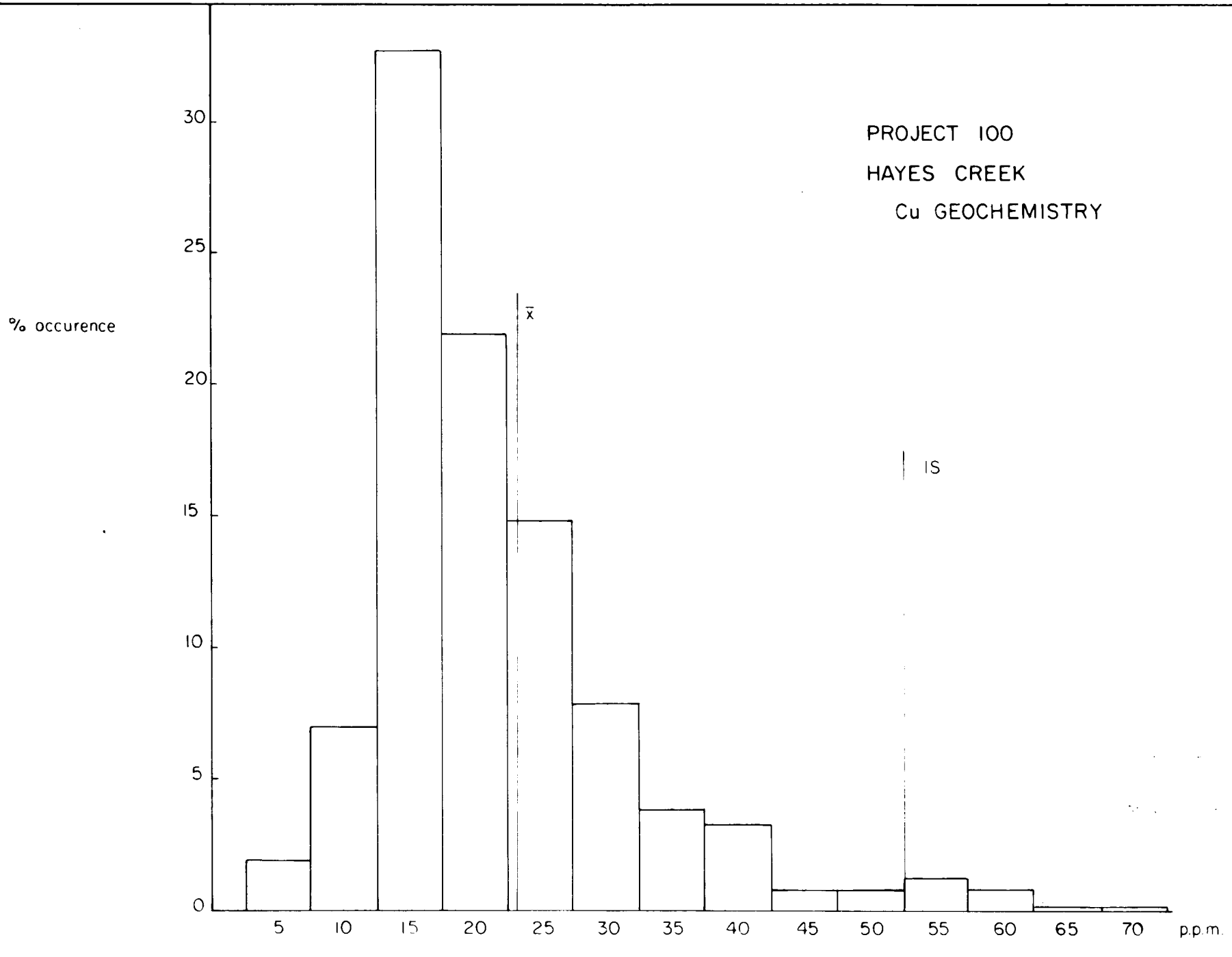
The rhyolite dikes are of varied thickness (a few inches to 20 feet) but have a general direction of NNE. They appeared to be vertical but few contacts were observed over long distances. The material is grey to white with little crystallinity. Flow banding parallel to the walls was common with banding due to varying shades of grey. They gave high values in copper molybdenum and zinc even though there was little visible sulfides. It is proposed that these dikes are part of Unit 13 intrusive as no rhyolite dikes were noted cutting this unit.

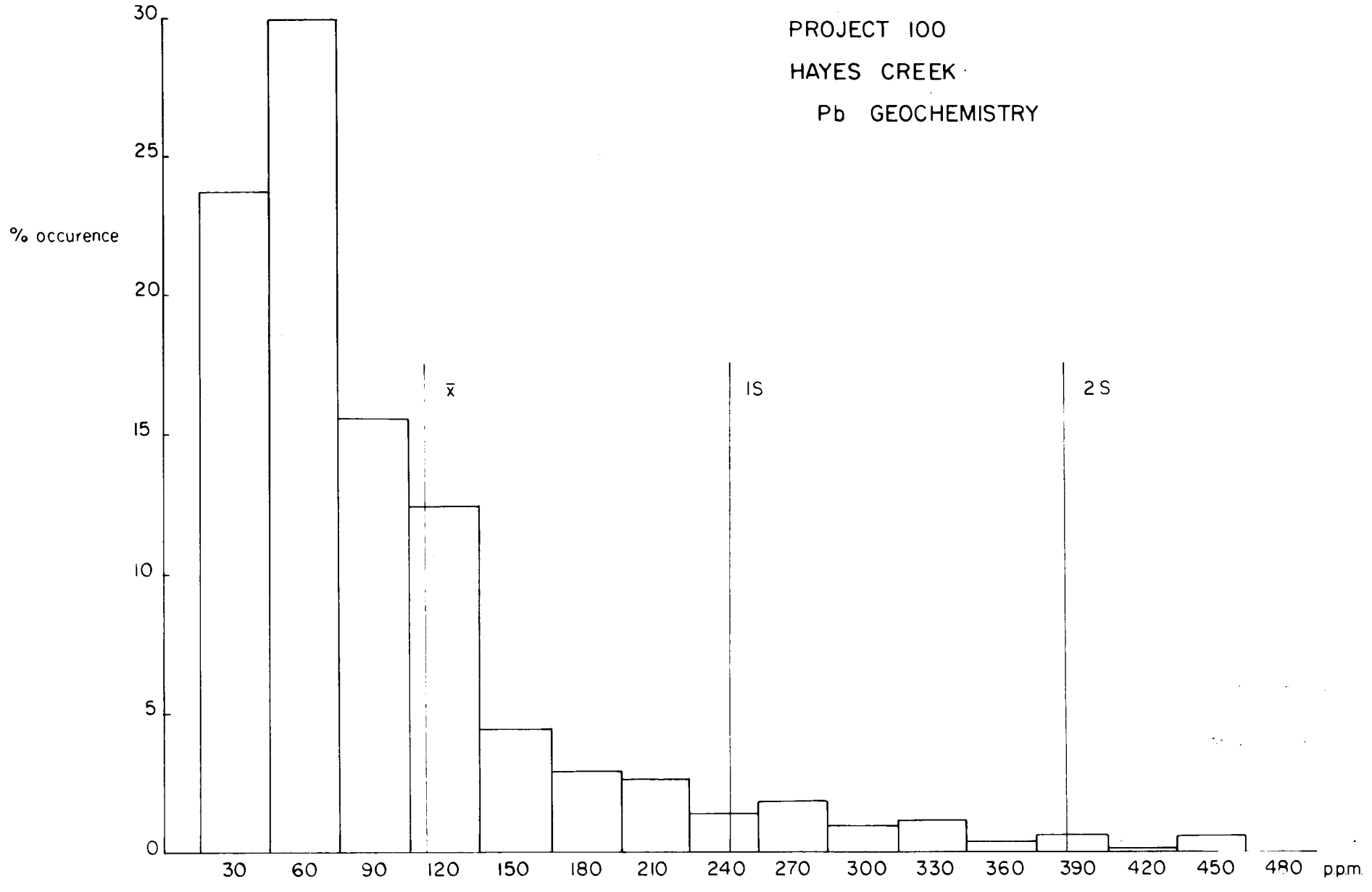
The mapping on a regional scale was tied to topography as defined on the 1" : ½ mi claim maps (115I5,12; 115J8,9). The mapping of the area within the PDY claims was tied to a chained picketed base and cross lines as laid out by the project crew. The central claim line bearing was used as the basis for the main line with cross lines normal to this (ie. base line aligned approximately 250°Az).

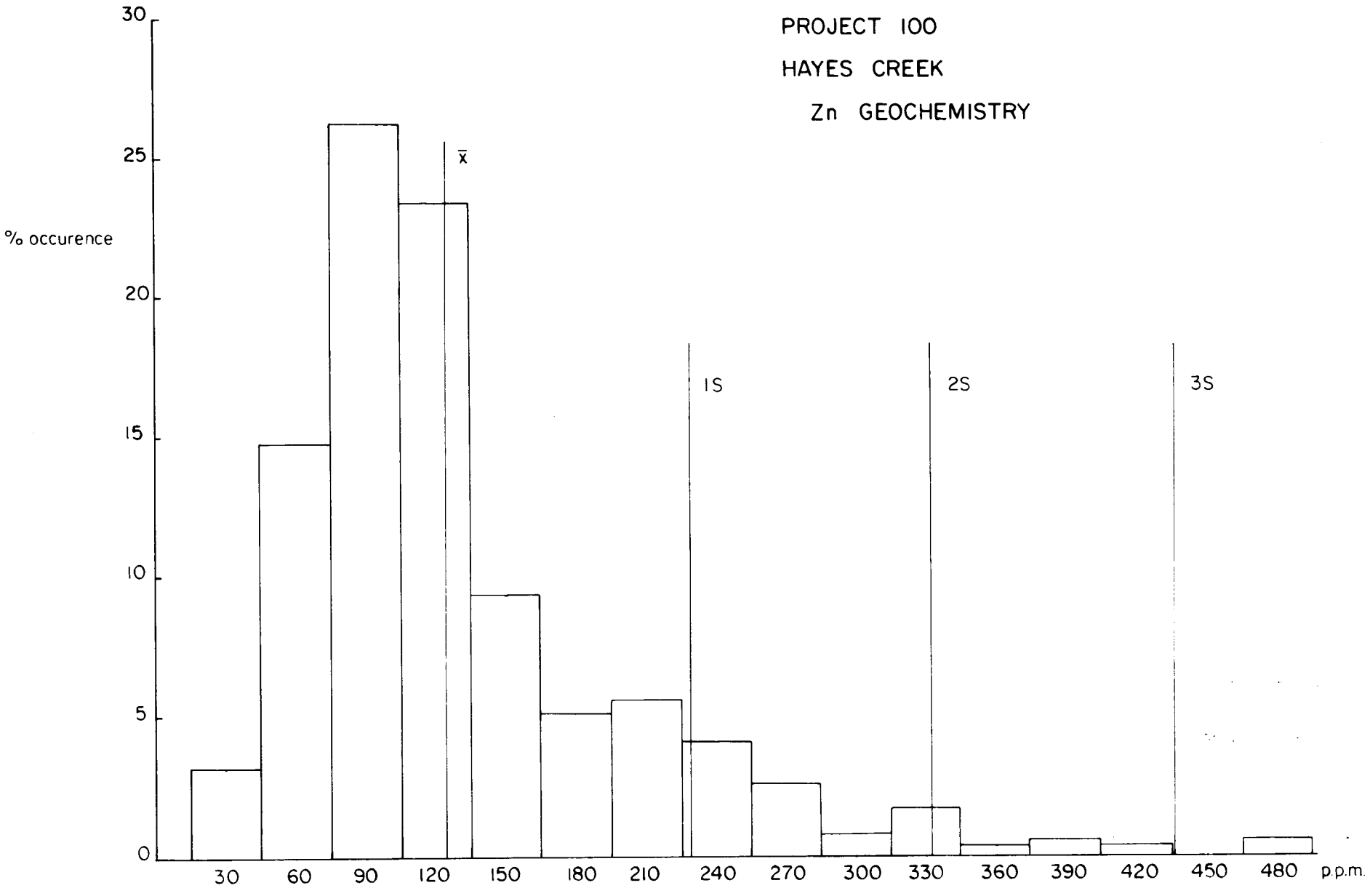
Geochemistry

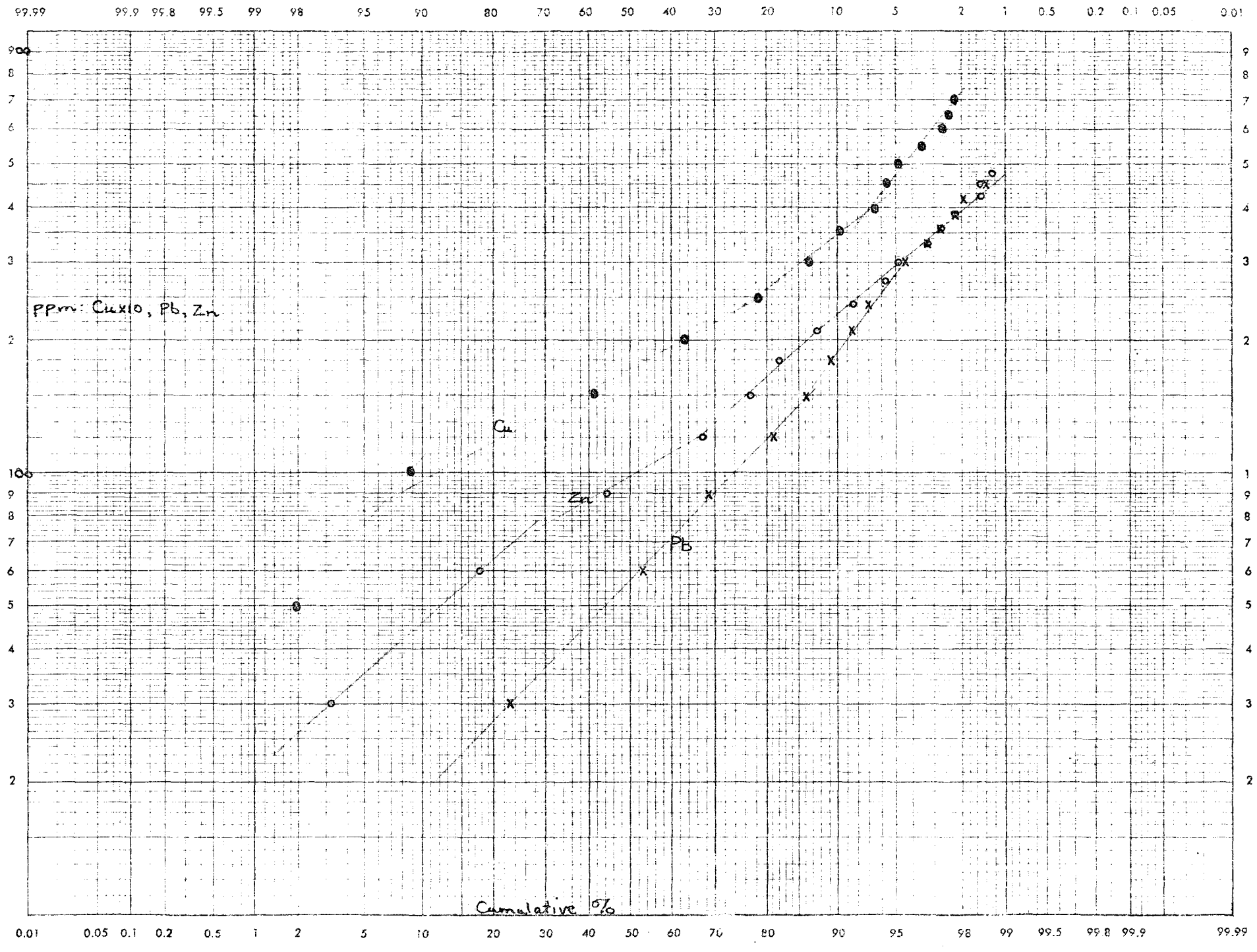
The PDY claims were staked to overlay an area showing high copper, lead and zinc values in streams. Early regional work had noted coincident high molybdenum values with the high copper values as long as the zinc values were also anomalous. The test for areas of interest was defined by coincident copper and zinc anomalous condition (copper greater than 75 ppm, zinc over 150 ppm). All early sampling including sampling regionally after staking, was analyzed at the Whitehorse Barranger Research Labs, on a Techtron AA5, atomic absorption machine, after disolving a portion of the 80 mesh fraction by the perchlorate digestion.

Later sampling on the grid lines by the Project crew were


PROJECT 100
HAYES CREEK
Cu GEOCHEMISTRY
% occurence
30
25
20
15
10
5
0
$\bar{x}$
IS
5
10
15
20
25
30
35
40
45
50
55
60
65
70
p.p.m.


PROJECT 100
HAYES CREEK
Pb GEOCHEMISTRY
% occurence
30
25
20
15
10
5
0
x̄
1S
2S
30
60
90
120
150
180
210
240
270
300
330
360
390
420
450
480
ppm.


PROJECT 100
HAYES CREEK
Zn GEOCHEMISTRY
% occurence
30
25
20
15
10
5
0
x̄
1S
2S
3S
30
60
90
120
150
180
210
240
270
300
330
360
390
420
450
480
p.p.m.


99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
ppm: Cu x10, Pb, Zn
Cu
Zn
Pb
Cumulative %
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99

sent to the Smithers Laboratory of Phelps Dodge Corporation of Canada, Ltd. These were run by the same system as the Barranger Labs uses but on a Techtron AA4 machine. These samples were run for total copper, lead and zinc and a few were run for silver (on a trial basis).

The grid soil samples were taken from 'B' or 'C' zone depending on the thickness of the soil in the sample area. Only on the flat areas near streams were there sufficient depths of fine material for the development of the redish brown 'B' zone. Most skree areas and ridge tops had sparce if any soil.

The regional sampling was only of ridge tops or silt and only these were checked for pH variations. A large difference was noted between the pH over volcanics from those soils differed from the acid intrusives. The pH over unaltered Mt. Nansen rocks on ridge tops ranged from 7.8 to 9.4. The residual soil over granitic rocks ranged from 3.5 to 5.0. Streams in the PDY area were mixed pH but usually were closer to the near neutral range (6.5 to 7.5).

Results and Interpretation

The list of results are included in Appendix A following. The values were analyzed to determine the mean and standard deviation of each of the three elements. This was done by the "normal" method rather than the log-normal procedure. The latter requires taking the logs of the values before determining the mean and standard deviation; and is used when the frequency of occurrence graphs show the distribution of values to be log-normally rather than normally distributed. (This creates a small error in the $\bar{X}$ and S values but saves considerable mechanical work).
The following are for grid soil samples only:

Copper	mean: $\bar{X}$:	23.15	ppm
	standard deviation : S:	29.57	ppm
	mode:Xm:	15.	ppm
Lead	mean: $\bar{X}$	93.77	ppm
	standard deviation : S:	146.74	ppm
	mode:Xm:	60.	ppm
Zinc	mean: $\bar{X}$	124.72	ppm
	standard deviation : S:	103.73	ppm
	mode:Xm:	90.	ppm

A test of how the values related at the sample sites and the chart of the cumulative probability for each element both showed that the lead and zinc are tightly related (especially in the anomalous condition), but are probably unrelated in the less anomalous areas. The 'r's (sample correlation coefficient) values for the relations of lead to zinc and copper to zinc were determined.

Cu to Zn r=.15

Pb to Zn r=.82

Thus, 67% of the lead values in the samples can be explained by the associative zinc values. This implies significant dependence, as expected. In the few sulfide veins noted in the finer grained granitic material, sphalerite and galena were commonly associated, conversely if a porphyry copper were expected in the area we would want a poor correlation of copper to zinc locally. In the correlation test only 2.3% of the copper values can be explained by the associate zinc values in the samples taken. Thus any copper anomalies noted in the area should bear little relation to the lead or zinc anomalies.

The cumulative probability chart justifies this argument. The lead and zinc values are dissimilar in the low or background range but quite similar in the anomalous range (approach the same line and finally occupy the same probability line). The copper in the whole range is dissimilar from both lead and zinc and pulls away from their probability shapes in the moderate and higher ranges.

Recommendations and Conclusions

The geology and geochemistry of the PDY group has not defined targets for intensive physical work. The anomalous copper, lead and zinc in the central and southeastern portion of the grid possibly warrants a small induced polarization survey to evaluate the near contact area with the volcanics with the possibility of mineralization within the volcanics and quartz monzonite dikes being extensive enough to warrant a geochemistry, magnetics and geology mapping of this southern portion of the group. No other work would appear to be justified at this time.

Date July 7 / 1971

F. Marshall Smith

F. Marshall Smith,
Area Geologist,
Phelps Dodge Corporation of Canada, Ltd

APPENDIX "A"

Statistics methods and formulas described in Geochemistry portion of report.

The mean ($\bar{X}$) or average value is computed by the following formula:

$$\bar{X} = \frac{\Sigma X}{n}$$

Where X are values (copper, lead, zinc ppm)
n is the total number of values

The mode (Xm) is taken as the commonest value from the bar graph.

This is only an approximate mode and is determined for reference sake.

The larger the unsigned value of ($Xm-\bar{X}$) the greater the skewing of the probability curve and thus the larger the probability the distribution of values is the 'log' normal or skewed frequency type.

The standard deviation (s) or product moment, is computed by the following formula:

$$S = \sqrt{\Sigma X^2 - n\left(\Sigma X\right)^2)/n(n-1)}$$

The sample correlation coefficient (r) is derived in the following manner:

$$R = \frac{Sx.y}{Sx.x \;\; Sy.y}$$

Where

$$Sx.y = \Sigma(x_2 y) - n(\Sigma X).(\Sigma Y)$$
$$Sx.x = \Sigma X^2 - n(\Sigma X)^2$$
$$Sy.y = \Sigma Y^2 - n(\Sigma Y)^2$$

All these values ($\bar{X}$, s, and r) can all be derived on an electric calculator.

APPENDIX "B"

CERTIFICATE OF EXPENDITURE

PHELPS DODGE CORPORATION OF CANADA, LIMITED
904-55 YONGE STREET
TORONTO 215, ONTARIO

NEW YORK OFFICE
300 PARK AVENUE
NEW YORK, N.Y. 10022

VANCOUVER OFFICE
1112 WEST PENDER STREET
VANCOUVER, BRITISH COLUMBIA

June 11th, 1971.

Certificate of Expenditure
for Assessment Purposes
for the period June 1st, 1970 to November 30th, 1970

on
Project 100 - Hayes Creek
Yukon Territory

Labour	$2,181.25
Transportation - Airborne	5,273.80
Assaying	2,139.00
	$9,594.05

AFFIDAVIT

I, George W. Stanley - Accountant
residing at Apt. 201 - 100 Coe Hill Dr.,
Toronto, Ontario, do solemnly declare
the above to be true and correct.
DECLARED before me at Toronto, Ontario
in the County of York this 11th day of
June 1971.

Certified Correct

G. W. Stanley - Accountant

PHELPS DODGE CORPORATION OF CANADA, LIMITED
904-55 YONGE STREET
TORONTO 215, ONTARIO

NEW YORK OFFICE
300 PARK AVENUE
NEW YORK, N.Y. 10022

VANCOUVER OFFICE
1112 WEST PENDER STREET
VANCOUVER, BRITISH COLUMBIA

June 11th, 1971.

Labour Costs Incurred
Project 100 - Hayes Creek
Yukon Territory
1970

B. J. Vanderkamp - Geologist June 23-30) July 1-15) Aug. 1- 7)	$ 775.00
B. D. Jolliffe - Geological Assistant June 23-30) July 1-15)	437.50
L. E. Watt - Geological Assistant June 23-30) July 1-15)	437.50
E. A. Williams - Geological Assistant June 23-30) July 1-15)	531.25
	$2,181.25

AFFIDAVIT

I, George W. Stanley - Accountant
residing at Apt. 201 - 100 Coe Hill Dr.,
Toronto, Ontario, do solemnly declare
the above to be true and correct.
DECLARED before me at Toronto, Ontario
in the County of York this 11th day of
June 1971.

A Commissioner, Public, etc.
Province of Ontario

Certified Correct

G. W. Stanley - Accountant

TRANS NORTH TURBO AIR LTD.

BOX 1977 PHONE 668-2177
WHITEHORSE, YUKON

2,4 3 5.4 2
2,6 1 9.5 0
2 1 8.8 8
5,2 7 3.8 0 T

Corp. of Canada Ltd.
st Pender Street
B.C.

RECEIVED
EXTN CHK'D
DISTRIBUTION
ACCT NO.
Lk Yukon-25 2433 42
Ft Hayes Creek-25 1516.00
3949 42
APPROVED RCC
CHEQUE NO.

DATE June 30, 1970 INVOICE NO. 301-70

P.O. NO.

TO TORONTO JUL 9 1970

TO: Charge you with the following helicopter charters:

Bell 47G-3B-2 Helicopter CF-QFQ
Pilot: Tom Vickers

FLYING: June 29 and 30, 1970
Daily Flight Report No. 5794,5795

Lk Yukon

2.8 hours at $155.00 per hour (rate when carrier supplies fuel) $ 434.00

7.5 hours at $144.00 per hour (rate when charterer supplies fuel) (135 gallons supplied at Alligator Lake) 1,080.00

Bell 47G-3B-2 Helicopter CF-QJW
Crew: Zutter and Orban

FLYING: June 23, 27-30, 1970
Daily Flight Report Nos. 3177,3182, 3185,3187,3190

Ft Hayes Creek

14.5 hours at $155.00 per hour (rate when carrier supplies fuel) 2,247.50

PLUS. Excess cost of fuel at Casino
Charterer assessed with cost of fuel over 60¢ per gallon

261 gallons at 72¢ per gallon 187.92

INVOICE TOTAL $3,949.42

TERMS: One per cent interest per month will be charged on all invoices not paid within 30 days of date issued.

TRANS NORTH TURBO AIR LTD.

BOX 1977 PHONE 668-2177
WHITEHORSE, YUKON

ATAC

PHELPS DODGE CORPORATION OF CANADA LTD. RECEIVED JUL 28 1970 VANCOUVER, B.C.

RECEIVED
EXTN CHK'D
DISTRIBUTION

ACCT NO.	$
1VE YUKON025	511 50
1VE HAYES CK. 025	2619 50
025 Hayes Creek	218 88
	3349 88

APPROVED
CHEQUE NO.

TO: Phelps Dodge Corp. Canada Ltd.
404 - 112 West Pender Street
VANCOUVER 1, B.C.

TO TORONTO AUG 3 1970

DATE July 23, 1970 INVOICE NO. 359-70

P.O. NO.

TO: Charge you with the following helicopter charters:

Bell 47G-3B-2 Helicopter CF-QFQ
Crew: Armand and Casey

FLYING: July 1, 1970
Daily Flight Report No. 5796

3.3 hours at $155.00 per hour
(rate when carrier supplies fuel) $511.50

Yukon Hayes Creek 1/E

Bell 47G-3B-2 Helicopter CF-QJW
Crew: Zutter and Orban

FLYING: July 1 to 9, 1970 (both dates inclusive)
Daily Flight Report Nos. 3192, 3194, 3198, 3200, 3202, 3203, 3205, 3208, 3209

16.9 hours at $155.00 per hour
(rate when carrier supplies fuel) 2,619.50

Hayes Creek

PLUS: Excess cost of fuel at Casino
Charterer assessed with cost
of fuel over 60¢ per gallon

304 gallons at 72¢ per gallon 218.88

INVOICE TOTAL $3,349.88

TERMS: One per cent interest per month will be charged on all invoices not paid within 30 days of date issued.

PHELPS DODGE CORPORATION OF CANADA, LIMITED
904-55 YONGE STREET
TORONTO 215, ONTARIO

NEW YORK OFFICE
300 PARK AVENUE
NEW YORK, N.Y. 10022

VANCOUVER OFFICE
1112 WEST PENDER STREET
VANCOUVER, BRITISH COLUMBIA

June 11th, 1971.

Laboratory Costs applicable to assays performed on samples taken from Project 100 - Hayes Creek - Yukon Territory in 1970: assays performed in our laboratory located at Smithers, British Columbia.

July to November 1970

713 @ $3.00 unit cost = $2,139.00

AFFIDAVIT

I, George W. Stanley - Accountant residing at Apt. 201 - 100 Coe Hill Dr., Toronto, Ontario, do solemnly declare the above to be true and correct.
DECLARED before me at Toronto, Ontario in the County of York this 14th day of June 1971.

a Notary Public in and for the Province of Ontario

Certified Correct

G. W. Stanley - Accountant

APPENDIX "C"

GEOCHEM RESULTS

Proj 100 - Hayes Creek

AREA: HAYES CREEK GRID ANALYST: J. D. GARTSHORE

COLLECTOR: B. J. VANDERKAMP ANALYTICAL METHOD:

DATE: JULY 13, 1970 DATE: AUG 3, 1970

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
July 1, 1970								
MO-1		8"	BL 130 W	wet, roots	20	45	65	.4
MO-2		8"	128 W	rocky, some roots	36	85	111	.3
MO-3		8"	126 W	good soil, some roots	17	79	91	.6
MO-4		8"	124 W	wet, rooty	55	220	218	2.5
MO-5		10"	122 W	good soil, rooty	24	108	96	.5
MO-6		10"	120 W	good dry soil	24	103	136	1.7
MO-7		10"	118 W	good dry soil	30	177	200	1.5
MO-8		10" ORGANIC	116 W	rocky, rooty	30	70	115	.8
MO-9		10"	114 W	very rocky, dry	25	97	175	.2
MO-10		8"	112 W	wet, rooty, rocky	26	100	113	.2
MO-11		8"	110 W	wet, coarse	22	308	1000	1.3
MO-12		6"	108 W	dry, coarse	17	183	145	1.3
MO-13		8"	106 W	damp, rocky	29	163	145	1.0
MO-14		6" ORGANIC	104 W	good coarse soil	21	252	161	1.9
MO-15		8" ORGANIC	102 W	rooty	27	242	236	1.9
MO-16		12"	100 W	light, dry, rooty	26	158	200	1.0
MO-17		6" ORGANIC	98 W	rooty	22	113	130	1.7
MO-18		10"	96 W	damp, rooty	15	70	88	.4
MO-19		10"	94 W	rocky, dry	12	52	92	.4
MO-20		6" ORGANIC	92 W	damp, rooty	14	78	118	1.1
MO-21		8"	90 W	damp, rooty	25	77	118	.4
MO-22		8"	88 W	fine dry soil	10	50	65	.1
MO-23		6"	86 W	dry, rocky	21	37	86	.3
MO-24		6"	84 W	damp, rooty	27	48	88	.4
MO-25		8"	82 W	rooty	22	32	74	.3
MO-26		6"	80 W	wet, coarse	26	42	89	.4
MO-27		8"	78 W	fine dry soil	13	25	38	.2
MO-28		8"	76 W	fine dry soil	21	33	63	.2

AREA: HAYES CREEK GROUP

COLLECTOR: B. T. VANDERKAMP

DATE: JULY 13, 1970

ANALYST: D. GARTSHORE

ANALYTICAL METHOD:

DATE: AUG 3, 1970

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-29		10"	BL 74W	dry, coarse	14	33	65	.2
MO-30		10"	72W	dry, rooty	22	58	71	.8
MO-31		10" ORGANIC	70W	rooty	17	92	194	.5
MO-32		12" ~~ORGANIC~~	68W	damp, coarse	27	107	209	.8
MO-33		6" ORGANIC	66W	poor rocky soil	7	11	30	.2
MO-34		8" ~~ORGANIC~~	64W	rocky	27	75	193	1.6
MO-35		6"	62W	rocky	15	93	103	5.3
MO-36		8"	60W	fine dry soil	17	75	125	.6
MO-37		8" ORGANIC	58W	rooty	11	40	43	1.5
MO-38		8" ~~ORGANIC~~	56W	dry, coarse	18	110	243	.8
MO-39		6"	54W	rocky	17	47	101	.4
MO-40		8"	52W	fine dry soil	12	40	71	.6
MO-41		10"	50W	light dry soil	18	53	79	1.3
MO-42		10"	48W	fine dry soil	12	28	76	.5
MO-43		10" ORGANIC	46W	light dry soil	12	40	110	.4
MO-44		12" ORGANIC	44W	light, rooty	17	25	43	.2
MO-45		12" ~~ORGANIC~~	42W	coarse	12	68	91	.2
MO-46		8"	40W	wet, rooty	13	73	124	.4
MO-47		8"	38W	dry, coarse	15	58	181	.3
MO-48		10"	36W	wet, coarse	10	61	117	.3
MO-49		10" ORGANIC	34W	coarse	12	47	102	.4
MO-50		10" ~~ORGANIC~~	32W	dry coarse soil	193	1425	258	2.3
MO-51		12"	30W	from permafrost	26	195	108	1.5
MO-52		12"	28W	partly volcanic ash	15	70	93	1.0
MO-53		8"	26W	damp, rooty	29	165	198	4.1
MO-54		8"	24W	fine damp soil	18	206	71	3.2
MO-55		12"	22W	damp, rooty	81	850	475	10.4
MO-56		10" ORGANIC	20W	fine wet soil	34	288	365	5.4

AREA:_____ ANALYST:_____

COLLECTOR:_____ ANALYTICAL METHOD:_____

DATE:_____ DATE:_____

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-57		12"	BL 18W	wet, coarse, rooty	21	104	221	.8
MO-58		12"	ORGANIC 16W	rooty	38	73	78	1.5
MO-59		6"	14W	rooty	26	200	214	2.8
MO-60		8"	ORGANIC 12W	poor rooty, ashy sample	5	8	26	.4
MO-61		14"	10W	poor rooty soil	12	55	89	.4
MO-62		10"	ORGANIC 8W	wet, rooty, coarse	18	83	101	.8
MO-63		10"	6W	melting permafrost; rooty	9	70	95	1.2
MO-64		8"	~~ORGANIC~~ 4W	rooty	6	25	48	.5
MO-65		10"	~~ORGANIC~~ 2W	rooty	10	60	50	.7
MO-66		8"	ORGANIC 0 0	melting permafrost; rooty	9	27	48	.9
MO-67		10"	~~ORGANIC~~ 9S	rooty, rocky	499	1110	298	8.3
MO-68		8"	0+8S	rooty, wet	242	282	199	4.6
MO-69		8"	0+6S	dry coarse soil	114	58	125	.9
MO-70		10"	ORGANIC 4S	poor ashy soil	6	9	20	.4
MO-71		10"	0+2S	rocky, rooty	126	400	390	2.7
MO-72		8"	8W+7S+200S	from permafrost; S of creek	105	113	221	1.2
MO-73		8"	8W+6S	wet, rooty	12	76	105	1.3
MO-74		12"	ORGANIC 4S	from permafrost; rooty	23	11	56	1.0
MO-75		8"	8W+2S	rooty (grey soil)	15	59	97	.5
July 2, 1970		~~6"~~	~~0~~					
MO-76		6" 8"	0+2N	damp, coarse	15	33	94	.5
MO-77		8"	ORGANIC 0+4N	coarse	9	25	64	.4
MO-78		8"	ORGANIC 0+6N	rooty	41	18	42	TOO ORGANIC
MO-79		10"	~~6"~~ 0+8N	coarse	33	33	91	.5
MO-80		6"	0+10N	light, rooty	16	55	96	1.0
MO-81		6"	ORGANIC 0+12N	light, rooty	33	28	64	.7
		8"	0+14N	ashy, rooty	7	5	42	.4

AREA:

COLLECTOR:

DATE:

ANALYST:

ANALYTICAL METHOD:

DATE:

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-83		6"	O+16 N	rooty	39	48	93	1.9
MO-84		8"	ORGANIC O+18 N	light, rooty	17	35	76	.7
MO-85		8"	ORGANIC O+20 N	rooty	13	20	57	.4
MO-86		8"	O+22 N	rooty	13	25	66	.4
MO-87		8"	ORGANIC O+24 N	ashy	3	5	33	.2
MO-88		8"	ORGANIC O+26 N	light, rooty	11	14	86	.4
MO-89		6"	O+28 N	rocky	16	107	88	.4
MO-90		6"	O+30 N	coarse	17	82	170	.7
MO-91		6"	ORGANIC O+32 N	coarse	8	45	99	.1
MO-92		10"	O+34 N	damp, rocky	20	198	500	1.3
MO-93		8"	O+36 N	rooty	15	98	235	.7
MO-94		6"	O+38 N	rooty	28	82	100	.4
MO-95		4"	O+40 N	rooty	14	7	26	.2
MO-96		8"	O+42 N	coarse	14	45	116	.2
MO-97		4"	ORGANIC O+44 N	rooty	15	32	70	.3
MO-98		6"	O+46 N	wet, coarse, rooty	13	48	147	1.5
MO-99		6"	O+48 N	rooty	34	153	686	1.7
MO-100		6"	ORGANIC O+50 N	coarse, rooty	18	28	90	.4
MO-101		8"	O+52 N	coarse	20	27	81	.7
MO-102		8"	O+54 N	rooty	17	24	70	.5
MO-103		8"	O+56 N	light, rooty	16	24	64	.6
MO-104		8"	8W+60 N	rooty	13	35	66	2.1
MO-105		8"	8W+58 N	coarse	9	22	55	.8
MO-106		10"	8W+56 N	rooty	18	47	79	1.5
MO-107		8"	ORGANIC 8W+54 N	coarse	23	26	61	1.2
MO-108		10"	ORGANIC 8W+52 N	light, rooty	29	9	42	.5
MO-109		8"	ORGANIC 8W+50 N	rooty, coarse	16	45	100	.5
MO-110		10"	ORGANIC 8W+48 N	sand, very rooty	23	8	55	.8

9 E Hayes Creek

AREA: HAYES CREEK GROUP

ANALYST: J. D. GARTSHORE

COLLECTOR: B. VANDERKAMP

ANALYTICAL METHOD: TOTAL Cu Pb Zn Ag

DATE: AUG 7/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-111		8"	8W +46 N	coarse, humic	13	66	139	.7
MO-112		8" ORGANIC	8W +44 N	light, rooty	19	66	155	1.3
MO-113		1"	8W +42 N	light, rooty (on scree slope)	6	16	39	.4
MO-114		4" ORGANIC	8W +40 N	rooty	4	6	29	.7
MO-115		3" ORGANIC	8W +38 N	very rooty (scree slope)	10	30	46	.4
MO-116		2" ORGANIC	8W +36 N	light, rooty	15	28	73	TOO ORGANIC
MO-117		4"	8W +34 N	rooty	13	45	95	.2
MO-118		4" ORGANIC	8W +32 N	light, rooty	11	14	34	.4
MO-119		6"	8W +30 N	coarse	15	38	67	.3
MO-120		6"	8W +28 N	light, dry soil	17	26	87	.3
MO-121		10"	8W +26 N	fine dry soil	20	38	65	.3
MO-122		6"	8W +24 N	rooty	22	45	71	.3
MO-123		6" ORGANIC	8W +22 N	rooty	21	77	115	.2
MO-124		8"	8W +20 N	coarse	21	57	99	.3
MO-125		8"	8W +18 N	coarse	30	50	99	.9
MO-126		6" ORGANIC	8W +16 N	rooty	26	48	90	.8
MO-127		4"	8W +14 N	light, rooty	18	43	88	.2
MO-128		8" ORGANIC	8W +12 N	coarse	15	33	88	.5
MO-129		10" ORGANIC	8W +10 N	light, rooty soil	19	47	97	1.0
MO-130		6"	8W +8 N	rooty	15	38	86	.2
MO-131		8"	8W +6 N	damp, rooty	14	55	85	1.1
MO-132		8" ORGANIC	8W +4 N	coarse	23	95	170	.8
MO-133		6"	8W +2 N	damp, rooty	13	65	116	1.1
MO-134		6" ORGANIC	8W +7 S	ashy, rooty	3	1	13	.5
MO-135		10"	16W +16 S	wet, rocky	116	137	207	10.3
MO-136		8" ORGANIC	14 S	humic	4	4	25	.5
MO-137		12"	16W +12 S	rooty (S of creek)	58	133	178	.7
		8"	16W +10 S		39	50	123	.8

AREA: HAYES CREEK GROUP

COLLECTOR: B. VANDERKAMP

DATE:

ANALYST: J. D. GARTSHORE

ANALYTICAL METHOD: TOTAL Cu Pb Zn Ag

DATE: AUG 7/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-139		6"	16W+8S	very rooty from swampy ground	20	50	99	1.3
MO-140		8"	16W+5S	ashy, humic	15	11	52	.7
MO-141		10"	16W+4S	rooty, from permafrost	16	10	86	.8
MO-142		12"	16W+2S	rooty, from permafrost	52	28	82	1.2
July 3, 1970								
MO-143		8"	16W+2N	rooty	22	92	190	1.5
MO-144		6"	16W+4N	rooty	13	38	38	1.0
MO-145		6"	16W+6N	coarse	13	47	109	.5
MO-146		8"	16W+8N	damp, coarse	14	95	100	.2
MO-147		8"	16W+10N	coarse	21	263	186	1.0
MO-148		8"	16W+12N	light, rooty	7	40	51	2.0
MO-149		8"	16W+14N	rooty	13	93	91	.5
MO-150		8"	16W+16N	humic	10	17	38	.5
MO-151		6" ORG	16W+18N	rooty	13	95	106	1.2
MO-152		6"	16W+20N	good fine soil	19	38	58	.2
MO-153		8" ORG	16W+22N	good fine soil	14	30	63	.4
MO-154		6"	16W+24N	good fine soil	13	19	56	.2
MO-155		6"	16W+26N	coarse	57	804	750	
MO-156		6"	16W+28N	coarse	16	87	310	
MO-157		8" ORG	16W+30N	wet, humic (above permafrost)	79	33	82	
MO-158		4"	16W+32N	wet, humic (from scree slope)	17	53	114	
MO-159		8"	16W+34N	coarse	14	75	125	
MO-160		2"	16W+36N	light, rooty	4	9	19	
MO-161		3" ORG	16W+38N	light, rooty	12	45	42	
MO-162		3" ORG	16W+40N	light, rooty	8	25	59	
MO-163		10" ORG	16W+42N	coarse	7	30	76	

AREA: HAYES CREEK GROUP

COLLECTOR: B VANDERKAMP

DATE:

ANALYST: J.D. GARTSHORE

ANALYTICAL METHOD: TOTAL Cu Pb Zn Ag

DATE: AUG 7/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-164		8"	16W + 44N	coarse	5	27	39	
MO-165		8"	16W + 46N	rooty	8	19	46	
MO-166		6"	16W + 48N	very rooty	14	25	73	
MO-167		10"	16W + 50N	coarse	30	32	70	
MO-168		6"	16W + 52N	coarse	16	28	75	
MO-169		6"	16W + 54N	coarse	13	25	89	
MO-170		8"	16W + 56N	coarse	14	30	80	
MO-171		6"	24W + 52N	light, rooty	24	67	114	
MO-172		6"	24W + 50N	rocky	15	35	77	
MO-173		8"	24W + 48N	coarse	12	25	60	
MO-174		8"	24W + 46N	rocky	24	37	86	
MO-175		6"	24W + 44N	coarse	20	58	95	
MO-176		10"	24W + 42N	damp	14	65	160	
MO-177		8"	24W + 40N	damp, rooty	18	87	243	
MO-178		4"	24W + 38N	coarse	8	53	92	
MO-179		4"	24W + 36N	wet, coarse, rooty	21	332	480	
MO-180		6"	24W + 34N	rocky	13	68	198	
MO-181		2"	24W + 32N	light, rooty	17	20	73	
MO-182		4"	24W + 30N	light, dry soil	10	112	183	
MO-183		3"	24W + 28N	light, dry soil	15	68	120	
MO-184		3"	24W + 26N	light, rooty	5	4	23	
MO-185		2"	24W + 24N	rooty	11	25	61	
MO-186		4"	24W + 22N	light, dry soil	14	19	48	
MO-187		8"	24W + 20N	light, dry soil	16	35	75	
MO-188		2"	24W + 18N	light, rooty	15	30	89	
MO-189		4"	24W + 16N	light, rooty	11	20	71	
MO-190		4"	24W + 14N	light, rooty	11	6.5	99	
		6"	24W + 12N		11	135	233	

AREA: Hayes Creek Group

COLLECTOR: B. VANDERKAMP

DATE:

ANALYST: T. D. GARTSHORE

ANALYTICAL METHOD: Total Cu Pb Zn Ag

DATE: Aug 7/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-192		6"	24W + 10N	damp, rooty	32	375	380	
MO-193		8"	24W + 8N	light, dry	24	385	209	
MO-194		8"	24W + 6N	light, damp, rooty	76	1900	556	
MO-195		10"	24W + 4N	damp, rooty	40	330	375	
MO-196		6"	24W + 2N	damp, rooty	22	240	218	
MO-197		6"	24W + 2S	damp, humic	10	43	81	
MO-198		6"	24W + 4S	damp, rooty	66	70	318	
MO-199		6"	24W + 7S	rooty (from dry creek bed)	22	108	218	
MO-200		8"	24W + 8S	coarse soil - permafrost	39	103	308	
MO-201		10"	24W + 10S	rooty	37	102	177	
MO-202		6"	24W + 12S	coarse	30	75	118	
MO-203		6"	24W + 14S	coarse	19	32	84	
MO-204		8"	24W + 16S	damp, rooty	26	35	94	
MO-205		6"	24W + 18S	coarse	21	83	149	
MO-206		8"	24W + 20S	coarse	22	58	126	
MO-207		6"	24W + 22S	rooty	32	45	84	
MO-208		2"	24W + 24S	light, rooty	54	27	71	
MO-209		5"	24W + 26S	damp, rooty	19	25	70	
MO-210		6"	32W + 38S	rooty	48	68	127	
MO-211		8"	32W + 36S	rooty, rocky	29	27	84	
MO-212		8"	32W + 34S	damp, coarse	58	130	198	
MO-213		4"	32W + 32S	sandy - from dry creek bed	56	77	163	
MO-214		6"	32W + 30S	light, rooty	55	87	129	
MO-215		10"	32W + 28S	very poor soil, from permafrost	226	12	13	
MO-216		6"	32W + 26S	coarse	62	60	59	
MO-217		6"	32W + 24S	coarse	78	175	117	
MO-218		6"	32W + 22S	coarse	22	90	95	
MO-219		5"	32W + 20S	rooty	18	60	110	

1 of 2 Hayes Creek

AREA: HAYES CREEK GROUP ANALYST: J.D. GARTSHORE

COLLECTOR: B. VANDERKAMP ANALYTICAL METHOD: TOTAL Cu Pb Zn Ag

DATE: DATE: Aug 7/70

PHELPS DODGE CORPORATION OF CANADA LTD. RECEIVED AUG 31 1970 VANCOUVER, B.C.

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-220		4"	32W+18S	coarse	22	137	160	
MO-221		6"	32W+16S	light, dry soil	19	47	69	
MO-222		8"	32W+14S	damp, coarse	25	58	119	
July 4, 1970					—	—	—	—
MO-223		10"	32W+12S	coarse	11	25	42	
MO-224		6"	32W+10S	rooty - creek bed	38	112	153	
MO-225		6"	32W+8S	poor ashy soil	3	2	30	
MO-226		8"	32W+6S	coarse - from permafrost	24	78	218	
MO-227		6"	32W+4S	rooty	22	60	125	
MO-228		6"	32W+2S	coarse	13	38	110	
MO-229		6"	32W+2N	coarse, ashy	15	28	88	
MO-230		10"	32W+4N	ashy	11	15	49	
MO-231		8"	32W+6N	humic	28	88	220	
MO-232		8"	32W+8N	light, rooty	16	78	100	
MO-233		8"	32W+10N	damp, humic	24	8	50	
MO-234		6"	32W+12N	coarse	14	40	125	
MO-235		6"	32W+14N	coarse	10	17	45	
MO-236		6"	32W+16N	light dry soil	22	68	143	
MO-237		6"	32W+18N	coarse	15	20	60	
MO-238		6"	32W+20N	light dry	12	20	55	
MO-239		6"	32W+22N	coarse	28	265	475	
MO-240		4"	32W+24N	coarse	24	30	88	
MO-241		8"	32W+26N	very coarse; damp	12	52	125	
MO-242		6"	32W+28N	coarse	15	85	110	
MO-243		6"	32W+30N	coarse	111	78	133	
MO-244		6"	32W+32N	coarse	15	128	222	
MO-245		6"	32W+34N	coarse	17	67	222	
		4"	32W+36N	coarse	13	62	111	

GEOCHEMICAL DATA CONT.

AREA:

COLLECTOR:

DATE:

ANALYST: J.D. GARTSHORE

ANALYTICAL METHOD: TOTAL Cu Pb Zn

DATE: AUG 29/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-247		6"	32W + 38N	light, dry	11	68	157	
MO-248		6"	32W + 40N	light, dry	13	57	142	
MO-249		6"	32W + 42N	light, dry	10	120	229	
MO-250		8"	32W + 44N	coarse, rooty	12	60	99	
MO-251		8"	32W + 46N	light, rooty	14	63	203	
MO-252		10"	32W + 48N	rooty	5	24	48	
MO-253		3"	40W + 48N	light, dry	20	25	87	
MO-254		6"	40W + 46N	light, rooty	23	93	110	
MO-255		4"	40W + 44N	coarse	29	327	308	
MO-256		2"	40W + 42N	light, dry	15	67	119	
MO-257		2"	40W + 40N	coarse	12	200	253	
MO-258		3"	40W + 38N	light, rooty	11	11	32	
MO-259		3"	40W + 36N	rooty	11	27	63	
MO-260		2"	40W + 34N	light, dry	17	110	199	
MO-261		2"	40W + 32N	light, dry	12	82	119	
MO-262		6"	40W + 30N	coarse	13	33	92	
MO-263		8"	40W + 28N	light, dry	13	35	71	
MO-264		2"	40W + 26N	light, dry	17	97	216	
MO-265		4"	40W + 24N	light, dry	15	38	91	
MO-266		4"	40W + 22N	light, dry	14	33	101	
MO-267		4"	40W + 20N	coarse	13	55	100	
MO-268		3"	40W + 18N	light, dry	16	25	52	
MO-269		4"	40W + 16N	light, dry	16	203	242	
MO-270		6"	40W + 14N	light, dry	11	37	107	
MO-271		4"	40W + 12N	light, dry	12	115	70	
MO-272		6"	40W + 10N	damp, coarse	14	75	123	
MO-273		10"	40W + 8N	rooty	311	103	188	
		6"	40W + 6N	rooty	15	33	96	

AREA:

COLLECTOR:

DATE:

ANALYST: J. D. GARTSHORE

ANALYTICAL METHOD: TOTAL Cu Pb Zn

DATE: Aug 29/70

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
MO-275		6"	40W + 4N	rooty	32	65	96	
MO-276		4"	40W + 2N	rooty	19	105	246	
MO-277		10"	40W + 2S	light, rooty	14	40	107	
MO-278		5"	40W + 4S	coarse	14	43	78	
MO-279		4"	40W + 6S	poor humic soil	8	28	82	
MO-280		2"	40W + 8S	poor humic soil	7	11	21	
MO-281		4"	40W + 10S	damp, rooty	42	113	181	
MO-282		6"	40W + 12S	damp, coarse	19	43	112	
MO-283		6"	40W + 14S	rooty	39	265	238	
MO-284		6"	40W + 16S	damp, rooty	39	335	249	
MO-285		2"	40W + 17.5S	light, rooty	21	17	46	
MO-286		4"	48W + 13S	coarse	33	73	166	
MO-287		8"	48W + 12S	rooty	80	215	191	
MO-288		4"	48W + 10S	rooty	38	115	176	
MO-289		6"	48W + 8S	coarse	14	100	133	
MO-290		6"	48W + 6S	coarse	12	110	169	
MO-291		4"	48W + 4S	light, dry	17	80	187	
MO-292		6"	48W + 2S	coarse	54	320	325	
MO-293		6"	48W + 2N	light, dry	15	88	119	
MO-294		6"	48W + 4N	light, dry	14	43	78	
MO-295		4"	48W + 6N	light, rooty	21	40	101	
MO-296		4"	48W + 8N	coarse, rooty	18	25	92	
MO-297		4"	48W + 10N	rooty	9	18	43	
MO-298		3"	48W + 12N	light, dry	20	25	45	
MO-299		8"	48W + 14N	coarse	20	87	110	
MO-300		8"	48W + 16N	rooty	13	45	109	
MO-301		6"	48W + 18N	light, dry	14	25	62	
		6"	48W + 20N	light, dry	16	33	90	

AREA:

COLLECTOR:

DATE:

ANALYST:

ANALYTICAL METHOD:

DATE:

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn	Ag
July 7, 1970 MO-303		6"	48W+22N	light, dry	17	37	72	
MO-304		6"	48W+24N	coarse	13	21	80	
MO-305		4"	48W+26N	light, dry	13	13	39	
MO-306		6"	48W+28N	coarse	17	103	195	
MO-307		4"	48W+30N	light, dry	11	25	57	
MO-308		4"	48W+32N	light, dry, rooty	24	45	99	
MO-309		4"	48W+34N	rooty	37	450	325	
MO-310		6"	48W+36N	coarse	13	80	119	
MO-311		2"	48W+38N	dry, rooty	21	262	308	
MO-312		6"	48W+40N	coarse	15	135	223	
MO-313		6"	48W+42N	coarse	19	190	233	
MO-314		8"	48W+44N	damp, rooty	31	60	87	
MO-315		6"	48W+46N	dry, rocky	21	24	60	
MO-316		6"	48W+48N	rooty	12	14	31	
MO-317		4"	56W+46N	rocky, rooty	16	37	81	
MO-318		8"	56W+44N	damp, rooty	23	55	91	
MO-319		6"	56W+42N	damp, rooty	11	38	80	
MO-320		4"	56W+40N	coarse	14	105	170	
MO-321		2"	56W+38N	light, dry	14	43	66	
MO-322		2"	56W+36N	rooty	14	53	93	
MO-323		4"	56W+34N	coarse	17	53	103	
MO-324		6"	56W+32N	rooty	19	70	97	
MO-325		6"	56W+30N	coarse, damp	12	53	100	
MO-326		6"	56W+28N	coarse, dry	12	43	82	
MO-327		6"	56W+26N	light, dry	11	32	82	
MO-328		4"	56W+24N	coarse	40	58	85	
MO-329		6"	56W+22N	coarse	15	25	60	
		6"	56W+20N	coarse	15	18	48	

AREA:

COLLECTOR:

DATE:

ANALYST:

ANALYTICAL METHOD:

DATE:

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-331		4"	56W + 18N	coarse	13	28	70
MO-332		4"	56W + 16N	rooty	22	65	123
MO-333		6"	56W + 14N	rooty	12	25	48
MO-334		6"	56W + 12N	light, dry	13	33	58
MO-335		4"	56W + 10N	light, dry	13	25	58
MO-336		6"	56W + 8N	coarse	15	32	74
MO-337		4"	56W + 6N	coarse	13	30	53
MO-338		4"	56W + 4N	coarse, rooty	8	13	29
MO-339		6"	56W + 2N	rocky	8	58	103
MO-340		4"	56W + 2S	coarse	13	43	145
MO-341		4"	56W + 4S	light, dry	10	23	45
MO-342		6"	56W + 6S	rooty	31	190	220
MO-343		6"	56W + 8S	light, dry	27	93	122
MO-344		2"	56W + 10S	rooty	50	105	130
MO-345		2"	56W + 12S	damp, rooty	90	98	165
MO-346		6"	64W + 14S	rooty; from permfrost	30	72	110
MO-347		8"	64W + 12S	coarse, wet	49	363	345
MO-348		8"	64W + 10S	rooty	12	33	36
MO-349		12"	64W + 8S	rooty	21	45	83
MO-350		6"	64W + 6S	rooty	17	37	76
MO-351		3"	64W + 4S	light, dry	11	78	165
MO-352		8"	64W + 2S	coarse	24	138	209
MO-353		10"	64W + 2N	coarse	16	105	110
MO-354		6"	64W + 4N	rooty	28	127	190
MO-355		6"	64W + 6N	rooty	26	55	95
MO-356		6"	64W + 8N	coarse	15	63	85
MO-357		8"	64W + 10N	coarse	17	50	75
		6"	64W + 12N	coarse	15	28	77

AREA:_____ ANALYST:_____

COLLECTOR:_____ ANALYTICAL METHOD:_____

DATE:_____ DATE:_____

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-359		6"	64W + 14N	coarse	19	57	90
MO-360		6"	64W + 16N	light, dry	31	53	86
MO-361		6"	64W + 18N	light, dry	16	25	61
MO-362		4"	64W + 20N	light, dry	14	33	53
MO-363		4"	64W + 22N	coarse	8	20	46
MO-364		4"	64W + 24N	damp, coarse	9	25	49
MO-365		4"	64W + 26N	coarse	13	38	74
MO-366		6"	64W + 28N	rooty; from permafrost	15	35	75
MO-367		8"	64W + 30N	rooty	12	33	65
MO-368		6"	64W + 32N	coarse	11	27	44
MO-369		6"	64W + 34N	rooty	15	57	100
MO-370		4"	64W + 36N	coarse	14	57	111
MO-371		4"	64W + 38N	rooty	13	72	110
MO-372		6"	64W + 40N	rooty; above permafrost	11	62	106
MO-373		6"	64W + 42N	coarse	16	15	44
MO-374		4"	64W + 44N	coarse	15	25	44
MO-375		4"	72W + 30N	coarse	20	45	79
MO-376		6"	72W + 28N	permafrost	15	25	56
MO-377		8"	72W + 26N	very coarse	12	25	56
MO-378		8"	72W + 24N	coarse	16	25	71
MO-379		8"	72W + 22N	coarse	16	25	54
MO-380		6"	72W + 20N	coarse	16	115	112
MO-381		8"	72W + 18N	coarse	19	43	83
MO-382		6"	72W + 16N	coarse	19	32	80
MO-383		4"	72W + 14N	light, dry	17	118	105
MO-384		4"	72W + 12N	light, dry	14	62	112
MO-385		2"	72W + 10N	light, dry	9	105	405
		6"	72W + 8N	light, dry	10	35	85

AREA:

COLLECTOR:

DATE:

ANALYST:

ANALYTICAL METHOD:

DATE:

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-387		8"	72W+6N	light, dry	20	137	230
MO-388		6"	72W+4N	coarse	21	315	308
MO-389		6"	72W+2N	rooty	21	52	156
MO-390		8"	72W+2S	light, dry	19	208	78
MO-391		6"	72W+4S	coarse	13	38	79
MO-392		6"	72W+6S	rooty	27	50	76
MO-393		6"	72W+8S	damp, rooty	15	25	69
MO-394		6"	72W+10S	coarse	13	38	73
MO-395		4"	72W+12S	damp, rooty	25	177	280
MO-396		6"	72W+13S	coarse	24	105	141
MO-397		2"	80W+11S	coarse, dry	30	173	130
MO-398		6"	80W+10S	damp, rooty; mixed with hailstones	32	97	132
MO-399		6"	80W+8S	damp, coarse	28	93	102
MO-400		6"	80W+6S	rooty, from permafrost	26	45	92
MO-401		4"	80W+4S	light, dry	19	33	68
MO-402		4"	80W+2S	damp, rooty	16	25	74
July 8, 1970							
MO-403		6"	112W+22S	rocky	30	43	80
MO-404		6"	112W+20S	rocky	21	45	72
MO-405		4"	112W+18S	rocky	16	87	105
MO-406		6"	112W+16S	rooty	21	25	36
MO-407		4"	112W+14S	permafrost	33	47	71
MO-408		4"	112W+12S	rooty	18	50	85
MO-409		4"	112W+10S	coarse	20	77	115
MO-410		4"	112W+8S	coarse	23	185	240
		6"	112W+6S	coarse	17	25	80

AREA: _____ ANALYST: _____

COLLECTOR: _____ ANALYTICAL METHOD: _____

DATE: _____ DATE: _____

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-412		4"	112W + 4S	coarse	25	63	106
MO-413		4"	112W + 2S	coarse	21	443	1065
MO-414		6"	104W + 2S	rooty	29	85	105
MO-415		4"	104W + 4S	coarse	34	272	145
MO-416		6"	96W + 2S	rooty	21	143	123
MO-417		4"	96W + 4S	coarse	26	165	151
MO-418		2"	96W + 6S	light, dry	7	16	17
MO-419		4"	96W + 7S	coarse, rooty	6	15	34
MO-420		4"	88W + 8S	rooty	28	215	129
MO-421		4"	88W + 6S	rooty	33	100	145
MO-422		8"	88W + 4S	rooty	18	123	119
MO-423		6"	88W + 2S	coarse	16	73	95
MO-424		4"	80W + 2N	light, dry	15	37	41
MO-425		6"	80W + 4N	coarse	15	40	56
MO-426		4"	80W + 6N	rooty	20	63	78
MO-427		4"	80W + 8N	coarse	17	65	84
MO-428		6"	80W + 10N	rooty	12	33	85
MO-429		6"	80W + 12N	rooty	16	40	59
MO-430		4"	80W + 14N	coarse	18	33	76
MO-431		4"	80W + 16N	rooty	12	25	47
MO-432		6"	80W + 18N	wet, coarse	14	28	71
MO-433		6"	80W + 20N	coarse	14	19	60
MO-434		4"	80W + 22N	coarse, rooty	14	15	50
MO-435		4"	80W + 24N	coarse	16	25	68
MO-436		6"	80W + 26N	coarse, wet	18	32	71
MO-437		6"	80W + 28N	coarse	11	20	49
MO-438		4"	88W + 22N	coarse	13	28	60
		4"	88W + 20N	coarse	11	27	59

AREA: _____ ANALYST: _____

COLLECTOR: _____ ANALYTICAL METHOD: _____

DATE: _____ DATE: _____

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-440		2"	88W +18N	rooty	23	58	101
MO-441		4"	88W +16N	coarse	18	28	77
MO-442		4"	88W +14N	coarse	12	25	57
MO-443		4"	88W +12N	coarse	12	93	275
MO-444		6"	88W +10N	coarse	18	80	115
MO-445		6"	88W + 8N	coarse	21	35	63
MO-446		6"	88W + 6N	coarse	25	55	103
MO-447		6"	88W + 4N	rooty	18	27	63
MO-448		6"	88W + 2N	rooty	21	57	96
MO-449		6"	96W + 2N	coarse	13	85	68
MO-450		8"	96W + 4N	wet, coarse	13	143	102
MO-451		8"	96W + 6N	poor rooty soil	17	55	65
MO-452		4"	96W + 8N	rooty	19	78	98
MO-453		6"	96W +10N	coarse	41	115	164
MO-454		6"	96W +12N	rooty	27	55	111
MO-455		4"	96W +14N	coarse	49	102	136
MO-456		6"	96W +16N	coarse	17	45	93
MO-457		6"	96W +18N	rooty	27	150	169
MO-458		4"	104W+14N	coarse	21	35	82
MO-459		6"	104W+12N	rooty	20	45	78
MO-460		8"	104W+10N	coarse	18	63	98
MO-461		6"	104W+ 8N	coarse	17	132	120
MO-462		6"	104W+6N	coarse	19	107	105
MO-463		6"	104W+4N	coarse	18	123	122
MO-464		6"	104W+2N	wet, coarse	17	103	124
MO-465		4"	112W+2N	coarse	17	65	111
MO-466		2"	112W+4N	coarse	22	83	99
[illegible]		4"	112W+6N	coarse	38	112	244

AREA:_____ ANALYST:_____

COLLECTOR:_____ ANALYTICAL METHOD:_____

DATE:_____ DATE:_____

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-468		2"	112W + 8N	coarse	33	780	245
MO-469		4"	112W + 10N	coarse	23	225	75
MO-470		4"	112W + 12N	coarse	14	60	144
MO-471		4"	112W + 14N	very coarse	30	35	87
MO-472		4"	112W + 16N	coarse	25	113	162
MO-473		2"	112W + 18N	coarse	25	440	119
MO-474		4"	112W + 20N	rocky, rooty	25	182	145
MO-475		4"	120 #2 W + 20N	coarse	18	102	121
MO-476		4"	120W + 18N	rooty	11	130	221
MO-477		2"	120W + 16N	light, dry	16	78	77
MO-478		2"	120W + 14N	light, dry	15	157	112
MO-479		4"	120W + 12N	coarse	18	213	204
MO-480		4"	120W + 10N	coarse	38	300	278
MO-481		2"	120W + 8N	coarse	20	140	119
MO-482		4"	120W + 6N	coarse	23	88	140
MO-483		4"	120W + 4N	coarse	13	57	45
MO-484		4"	120W + 2N	coarse	53	240	280
MO-485		2"	120W + 2S	light, dry	52	1035	252
MO-486		2"	120W + 4S	coarse	22	140	127
MO-487		6"	120W + 6S	coarse	20	163	188
MO-488		2"	120W + 8S	light, dry	17	133	116
MO-489		2"	120W + 10S	coarse	14	100	101
MO-490		2"	120W + 12S	coarse	13	323	350
MO-491		4"	120W + 14S	rooty	25	163	239
MO-492		6"	120W + 16S	wet, coarse	36	150	185
MO-493		6"	120W + 18S	rooty	45	120	133
MO-494		4"	120W + 20S	rooty	31	88	110
		2"	128W + 20S	rooty	23	225	253

AREA:

COLLECTOR:

DATE:

ANALYST:

ANALYTICAL METHOD:

DATE:

SAMPLE NO.	LAB. NO.	Depth	LOCATION	REMARKS	PARTS PER MILLION Cu	Pb	Zn
MO-496		4"	128W+18S	rooty	31	145	156
MO-497		4"	128W+16S	coarse, rooty	21	120	136
MO-498		4"	128W+14S	permafrost	21	120	21
MO-499		4"	128W+12S	coarse	30	185	330
MO-500		4"	128W+10S	coarse, rooty	14	112	143
MO-501		4"	128W+8S	rooty	25	150	146
MO-502		2"	128W+6S	coarse, rooty	24	243	182
MO-503		6"	128W+4S	coarse	23	283	157
MO-504		4"	128W+2S	coarse	34	180	144
MO-505		4"	128W+2N	light, dry	15	58	83
MO-506		4"	128W+4N	light, dry	36	262	247
MO-507		4"	128W+6N	rooty	28	172	171
MO-508		2"	128W+8N	rooty	17	97	97
MO-509		4"	128W+10N	coarse	14	110	98
MO-510		2"	128W+12N	coarse, rooty	17	107	83
MO-511		2"	128W+14N	rooty	14	62	57
MO-512		4"	128W+16N	light, dry	17	117	88
MO-513		4"	128W+18N	coarse	23	95	115
MO-514		4"	128W+20N	coarse	11	77	71

RAVEN GROUP

B M GROUP

138° 00'

I.M.S. TAD GROUP

APEX GROUP

KOOK GROUP

GAM GROUP (LAPSED)

10

APEX GROUP

62° 30'

I.M.S. TAD GROUP

VEE GROUP

LOBO GROUP (LAPSED)

PRO GROUP

185/770/405

130/105/50

20/100/38

71/505/175

72/315/202

170/570/785

35/120/48

39/205/120

83/79/27

51/105/48

I.M.S. FROG GROUP

PDY GROUP

STAR GROUP (LAPSED)

WING GROUP (LAPSED)

GEOLOGICAL LEGEND

TERTIARY

13 Quartz porphyry, granite porphyry, rhyolite.
- a) Feldspar granite porphyry
- b) Fine grained granite
- c) Monzonites

JURASSIC or LATER

10 Granite, granodiorite, and allied rock types

7 Mt. Nansen volcanics
Basalt, andesite and dacite flows, breccias and tuffs

TRIASSIC or OLDER

1 Yukon Group
Sediments, metasediments, schists and gneisses

PHELPS DODGE CORP. OF CANADA LTD.

PROJECT 100

GEOCHEM SAMPLE & GEOLOGY MAP

SHEETS: 115-I-5, 115-I-12, 115-J-8, 115-J-9

DATE: JUNE 15/71 | SCALE: 1" = 1/2 mi

132+00W 130+00W 128+00W 124+00W 120+00W 116+00W 112+00W 108+00W 104+00W 100+00W 96+00W 92+00W 88+00W 84+00W 80+00W 76+00W 72+00W 68+00W 64+00W 60+00W 56+00W 52+00W 48+00W 44+00W 40+00W 36+00W 32+00W 28+00W 24+00W 20+00W 16+00W 12+00W 8+00W 4+00W 0+00

60+00N
56+00N
52+00N
48+00N
44+00N
40+00N
36+00N
32+00N
28+00N
24+00N
20+00N
16+00N
12+00N
8+00N
4+00N
0+00
4+00S
8+00S
12+00S
16+00S
20+00S
24+00S
28+00S
32+00S
36+00S
40+00S

P.D.Y. 32
P.D.Y. 30
P.D.Y. 28
P.D.Y. 26
P.D.Y. 24
P.D.Y. 22
P.D.Y. 20
P.D.Y. 18
P.D.Y. 17
P.D.Y. 2
P.D.Y. 19
P.D.Y. 4
P.D.Y. 21
P.D.Y. 6
P.D.Y. 23
P.D.Y. 8
P.D.Y. 25
P.D.Y. 10
P.D.Y. 27
P.D.Y. 29
P.D.Y. 31
P.D.Y. 1
P.D.Y. 3
P.D.Y. 5
P.D.Y. 7
P.D.Y. 9
P.D.Y. 12
P.D.Y. 11
P.D.Y. 14
P.D.Y. 13
P.D.Y. 16
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P.D.Y. 41
P.D.Y. 44
P.D.Y. 43
P.D.Y. 46
P.D.Y. 45
P.D.Y. 48
P.D.Y. 47

POST # 1
P.D.Y. 39,40

1
2
2a
2b

GEOLOGICAL LEGEND

TERTIARY

2 GRANITIC INTRUSIVE
a) Feldspar granite porphyry
b) Fine grained granite

JURASSIC or LATER

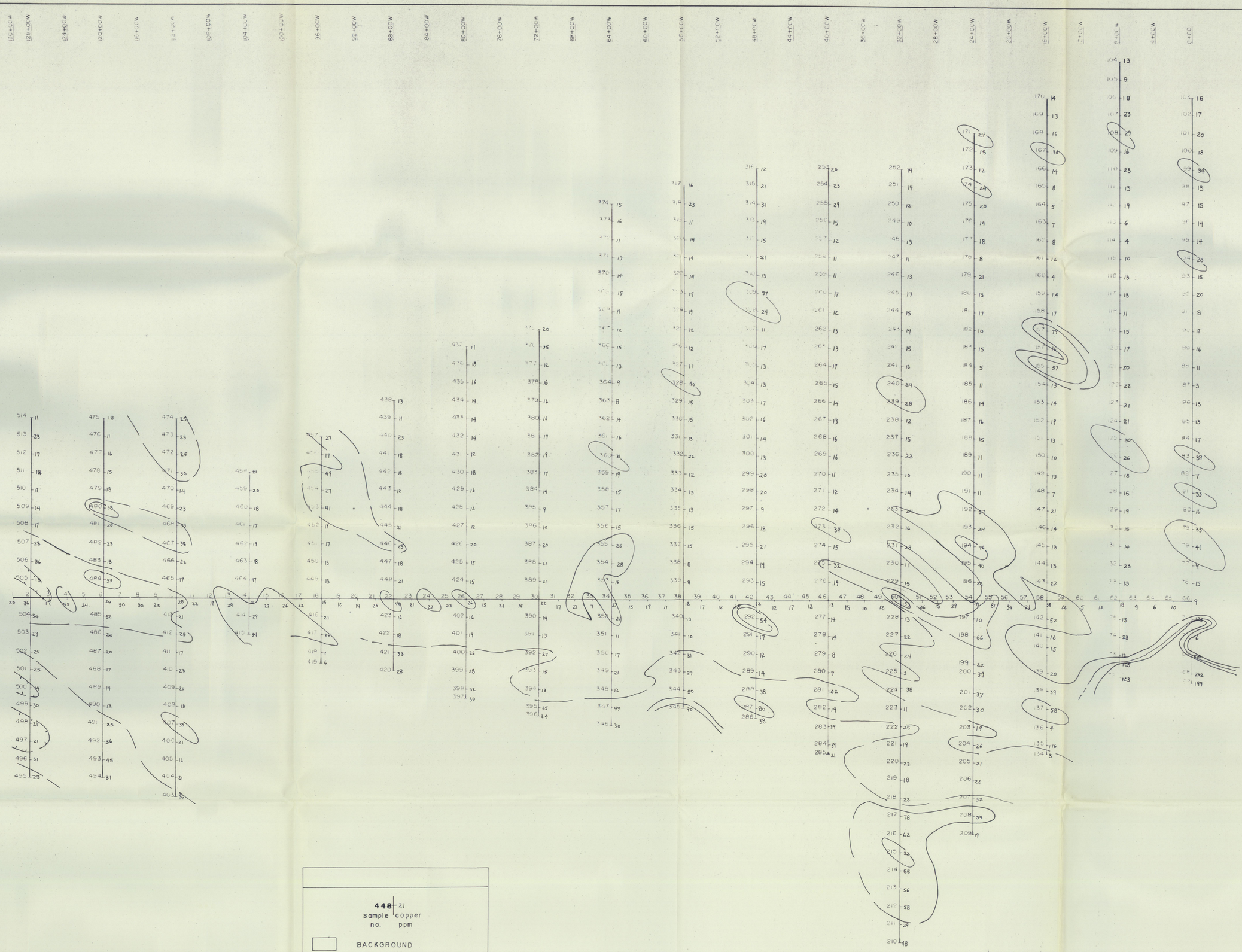
1 HAZELTON VOLCANICS
Basalt, andesite and dacite flows, breccias and tuffs

PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

HAYES CREEK CLAIM GROUP
GEOLOGY & CLAIM MAP

N.T.S. 115-I-5

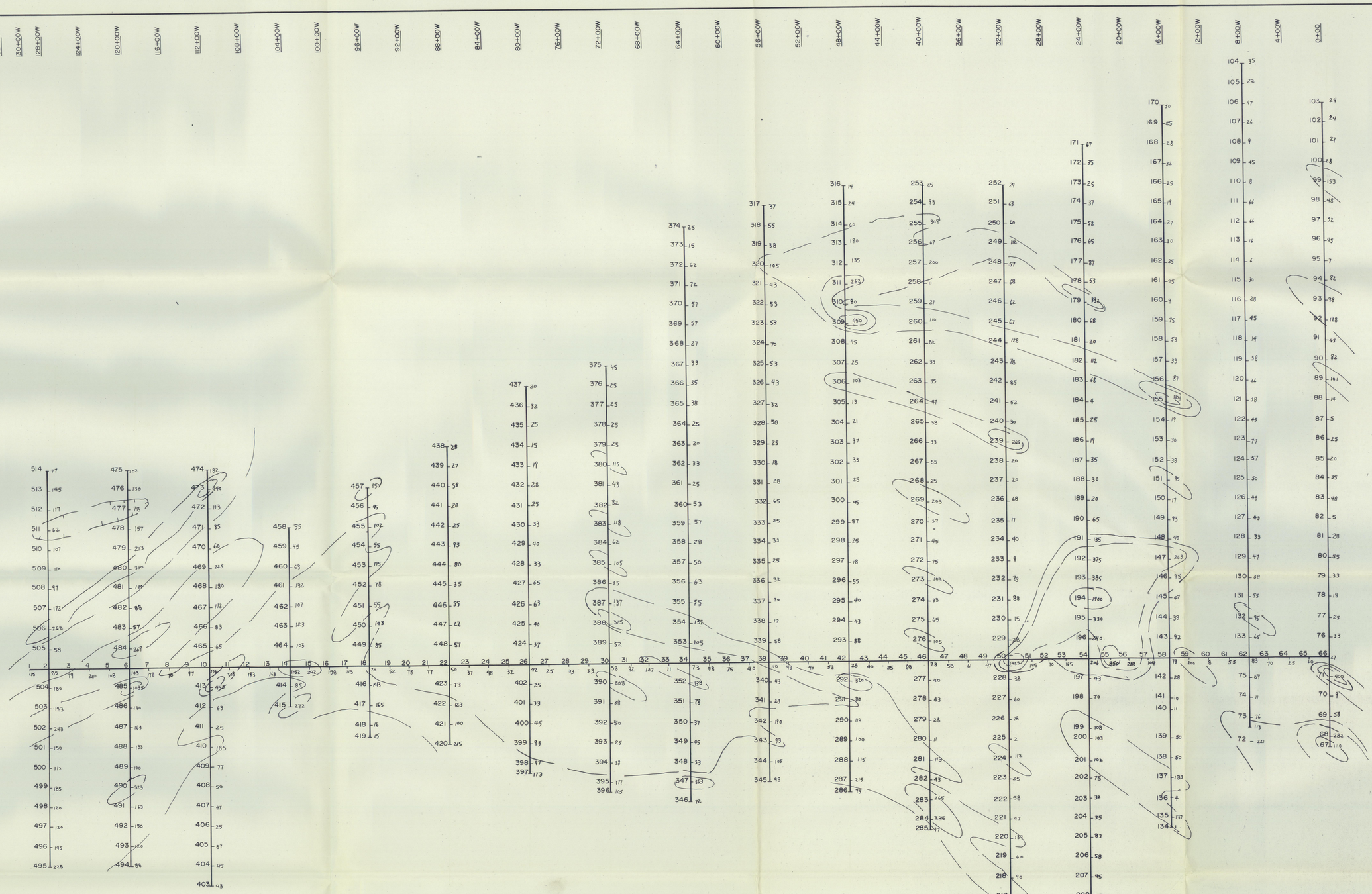
SCALE	DATE	SURVEYED BY	DRAWN BY
400' = 1"	JULY 1970	B.J.V.	L.W. & M.L.M.



PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

HAYES CREEK CLAIM GROUP
COPPER GEOCHEMISTRY

SCALE	DATE	SURVEYED BY	DRAWN BY
400=1"	JULY 1971	B.M.V.	M.L.M.



LEGEND

448 | 57
sample no. | ppm lead

- BACKGROUND
- THRESHOLD
- POSSIBLY ANOMALOUS
- ANOMALOUS

PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

HAYES CREEK CLAIM GROUP
LEAD GEOCHEMISTRY

SCALE:	DATE:	SURVEYED BY:	DRAWN BY:
400' = 1"	JULY 1971	B.J.V.	M.L.M.

132+00W 130+00W 128+00W 124+00W 120+00W 116+00W 112+00W 108+00W 104+00W 100+00W 96+00W 92+00W 88+00W 84+00W 80+00W 76+00W 72+00W 68+00W 64+00W 60+00W 56+00W 52+00W 48+00W 44+00W 40+00W 36+00W 32+00W 28+00W 24+00W 20+00W 16+00W 12+00W 8+00W 4+00W 0+00

60+00N
56+00N
52+00N
48+00N
44+00N
40+00N
36+00N
32+00N
28+00N
24+00N
20+00N
16+00N
12+00N
8+00N
4+00N
0+00
4+00S
8+00S
12+00S
16+00S
20+00S
24+00S
28+00S
32+00S
36+00S
40+00S

LEGEND

448 | 96
sample no. | ppm zinc

- Background
- Threshold
- Possibly Anomalous
- Anomalous

PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

HAYES CREEK CLAIM GROUP
ZINC GEOCHEMISTRY

SCALE:	DATE:	SURVEYED BY:	DRAWN BY:
400'=1"	JULY 1971	B.J.V.	M.L.M.