A Geological and Geochemical Report on the

Peso (1-32) claims

Bonnet Plume River Area

Yukon

Claim Sheet: 106-C-7

Coordiantes: 64° 26' N. Lat., 132° 50' W. Long.

by: T. L. Sadlier-Brown
& Chuck Ikona P. Eng

August 15th - August 21st, 1974

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

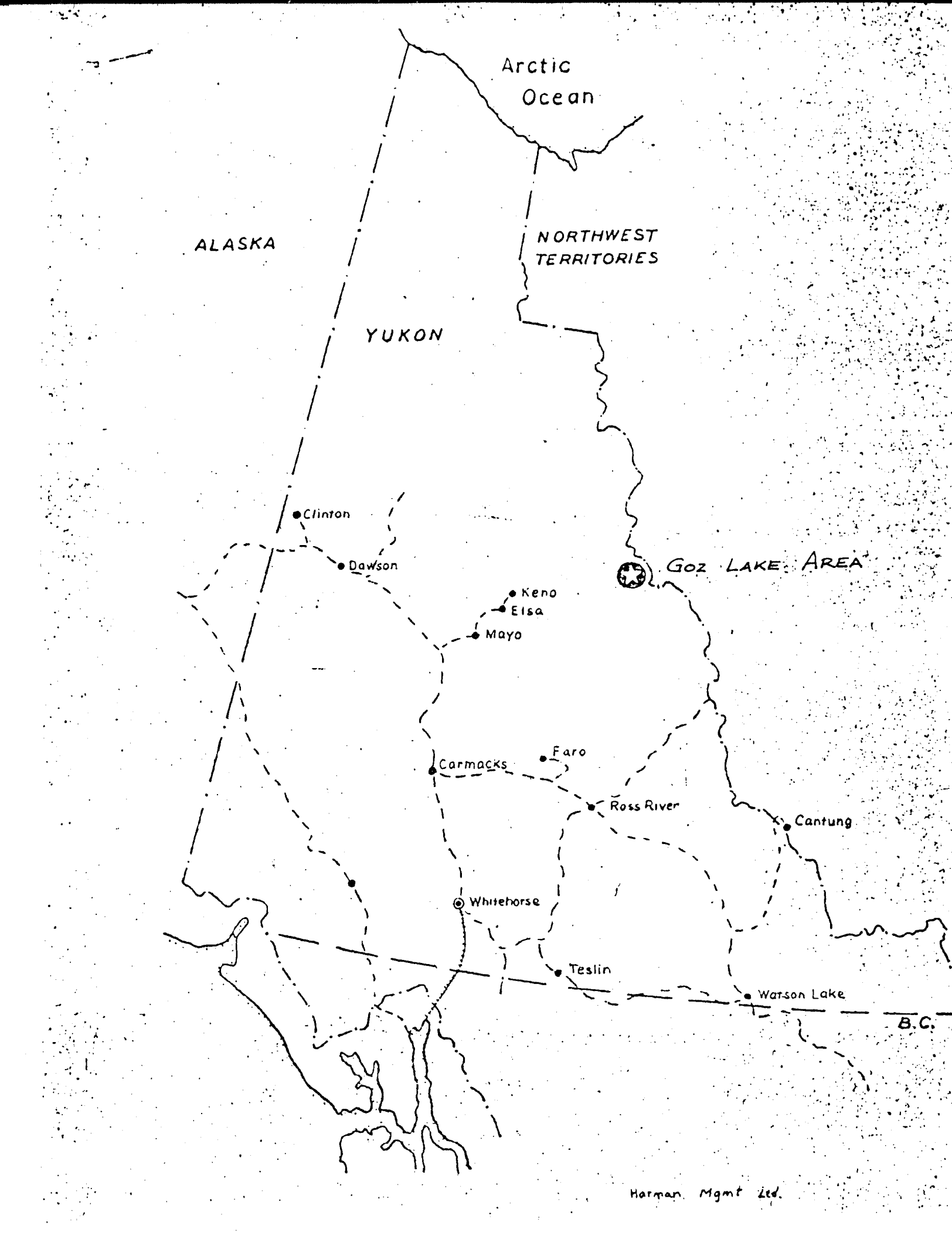
$ 6400.00

D. B. Craig

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

Commissioner of Yukon Territory

6400 00


Arctic
Ocean
ALASKA
NORTHWEST
TERRITORIES
YUKON
Clinton
Dawson
GOZ LAKE AREA
Keno
Elsa
Mayo
Carmacks
Faro
Ross River
Cantung
Whitehorse
Teslin
Watson Lake
B.C.
Harman Mgmt Ltd.

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MAP: Rear Pocket

1 Introduction

1.1 Property Description and Terms of Reference

The Peso Group consists of 32 contiguous claims owned by Nicola Copper Mines Ltd., of 101-535 Thurlow St., Vancouver, B.C. Claim names, numbers, grant numbers, and expiry dates are as follows:

Peso	1-16	Y88484 - Y88499	May 16, 1975
Peso	17-32	Y86590 - Y86605	Feb 15, 1975

The work described in this report was undertaken by Harman Explorations Ltd. on behalf of Nicola Copper Mines Ltd. and consists of a geological assessment and geochemical survey.

1.2 Location and Access

The claim group is situated on the west side of Harrison Creek about three miles above its confluence with the Bonnet Plume River and some 110 miles east northeast of Mayo, Yukon which is the nearest town. Claim locationsare plotted on claim sheet 106-C-7.

Access for the present survey was by Helicopter from a base at Goz Lakes 17 miles to the northeast. Another lake suitable for float aircraft is located 5 miles southeast of the property near the junction of Goz Creek and the Bonnet Plume River.

1.3 Topography and Physiography

The terrain covered by the Peso claims consists of the east slope of a mountain, part of the Bonnet Plume Range, and the benchland and Valley bottoms in the Harrison Creek Valley. Elevations are from 3,100 feet to 5,000 feet above sea level and the higher areas are rugged and devoid of vegetation except for a few alpine plants.

Between about the 4,500 foot contours and Harrison Creek outcrop is absent as the lower slopes are talus covered and the valley is mantled by glacial drift. Outcrop is, however, present on the ridges and in the creek valleys in amounts sufficient for an adequate, though incomplete geological interpretation.

The gently sloping lower ground, below say 3,400 feet, is poorly drained muskeg with a few open swamps. These drain through small intermitted streams and two major ones easterly to Harrison Creek thence southerly to the Bonnet Plume.

Vegetation is minimal above about 4,500 feet and tree line is at about 4,000 feet. The lower slope area is forested with spruce, alder and backbrush.

1.4 Survey Method

Geological mapping was done at a scale of 1 inch to 1,000 feet using pace and compass and 1 : 50,000 scale topographical maps for control. A flagged chain and compass grid was put in as control for the soil sampling survey.

Stratigraphic information was obtained from GSC Open File maps 205 and 206 which cover the general area at scales of 1:250,000 and 1:50,000 respectivley.

2 Geology

2.1 General Statement

The Peso property is underlain by upper proterozoic sedimentary and low grade metamorphic rocks, primarily dolomites, limestones, shales, and slates which were deposited in a broad sedimentary basin located in the Yukon - Northwest Territories border area. Known as the Selwyn basin it was active from proteroaoic through Devonian time and has recently been recognized as an important zinc rich environment. A number of Zn occurrences have been discovered in dolomites and limestones ranging in age from Hadrynian through Silurian-Devonian.

2.2 Previous Work

To the best of the writers knowledge no previous work other than large scale government mapping (Open File 205 and 206 G.S.C. 1974) have been done in the area covered by the Peso claims.

2.3 Stratigraphy and Structure

The Peso area is both stratigraphically and structurally complex. This, coupled with the absence of outcrop on much of the claim group makes a complete geological interpretation impossible. Essentially, however, the claims are underlain by northeasterly dipping sedimentary rocks (dolomite, limestone, shale) and their low grade metamorphic equivalents (slates and phyllites). The stratigraphic sequence is shown in the following table:

Stratigraphic Section

Palaeozoic

Devonian - Mississippian

DMs Besa River Formation: Black Shale.

Lower Palaeozoic - Proterozoic

Hadrynian - Cambrian

HEs Sheepbed Formation: Dark grey to black slate, limestone and quartzite.

Proterozoic

Hadrynian

Hs Grit Unit: Grey slate, limey slate, and limestone.

Hdl Buff weathering grey limestone and minor dolomite

Hd Massive buff weathering dolomite, minor limestone

Low grade regional metamorphism has obliterated bedding and structural details in the Cambrian and older rocks. These are now represented mainly by light grey slates usually exhibiting some relict bedding. Carbonate strata tend to retain this better than do the argillites or other "grit" members.

The area is traversed by at least two southeasterly trending faults. The southernmost is a reverse fault which has brought Cambrian and proterozoic strata to the north up into contact with the Devonian represented by the Besa River Formation (DMs).

Movement on the northern fault has not been determined but it appears to be normal with the north side down dropped. The bulk of the rocks underlying the Peso claims, including the Hadrynian carbonates, lie between the two faults in a horst-like structure. East of the claims in Harrison Creek valley both Hadrynian and Cambrian (sheepbed) rocks are folded and faulted and the relationship between them and the rocks in the ridge to the best could not be determined. There is evidence of a break of some kind paralleling the valley beneath the overburden west of the creek.

2.4 Economic Geology

Geological mapping, conventional prospecting, and a geochemical survey were carried out on the property but no sulphide mineralization was found. The dolomite observed in the creek (Hd) and to some extent that on the ridge (Hdl) has undergone some brecciation or "preparation" and could act as a host as it appears to elsewhere in the region. The carbonate-shale contact at the bone of the Besa River formation is considered an important area for Zn mineralization elsewhere in the Selwyn Mountain Area. This contact is inferred in the southwest corner of the property but no mineralization was observed there. Above background soil Zn values are present on and near the Peso #5 claim but they are neither sufficiently high nor abundant to be considered economically important.

(See following chapter).

3 Geochemistry

3.1 General Statement

A soil sampling survey was carried out over the eastern part of the claim group on a pace and compass grid. The samples were taken at 400 foot intervals on seven lines 500 feet apart from holes 6 to 10 inches deep. An effort was made to obtain "B" horizon material but because of the irregular nature of the overburden this was not always possible. The samples were placed in paper envelopes and sent to Vangeochem Lab Ltd. in North Vancouver B.C. for analyses. Both lead and zinc were tested for, by atomic absorption methods in a 1 gm. sample of - 80 mesh material dissolved in hot acid. Results in parts per million Pb and Zn were plotted at a scale of 1 inch to 1,000 feet on the maps on the following pages.

3.2 Observation

Lead:

Background lead values were found to be to the order of 25 PPM with the highest value obtained being 37 PPM. This is not felt to be high enough to be anomalous. There is, however, a grouping of these "threshold" values (say 35 to 37 PPM) in the southeastern part of the property. Although there is presently no firm explanation for this it seems likely that the Besa River Shales and adjacent carbonates which are believed to subcrop in the area may be the source.

Zinc:

Background Zn values are about 95 PPM. Contour values were chosen at 100 and 200 PPM and the highest value in 670 PPM. While this is anomalous in this area it is still not considered suffieient to be of economic significance. It appears to be part of a small anomalous area on the Peso #5 claim. It is underlain by palaeozoic carbonates and

the shales of the Besa River formation (DMs) at the south limit of an elongate area of high background which is attributed to the proximity of the outcrop area. Another set of slightly above background Zn values occurs in the southeastern part of the claims coinciding with the Pb animally described above and probably derived from the same source.

4 Discussion

4.1 Observation and Conclusion

The Peso claims are underlain by a sequence of proterozoic and palaeozoic carbonate and clastic sedimentary rocks which resemble zinc bearing strata elsewhere in the Bonnet Plume River area. Conventional prospecting, and a geochemical survey were carried out in conjunction with geological mapping but no sulphide mineralization was observed or strongly indicated on the claims. The geochemical survey has outlined several areas of slightly above background Zn and Pb values in the soils. None of these are presently considered important although the possibliity is always present that the masking effect of heavy overburden could be lowering the ion concentration.

4.2 Recommendations

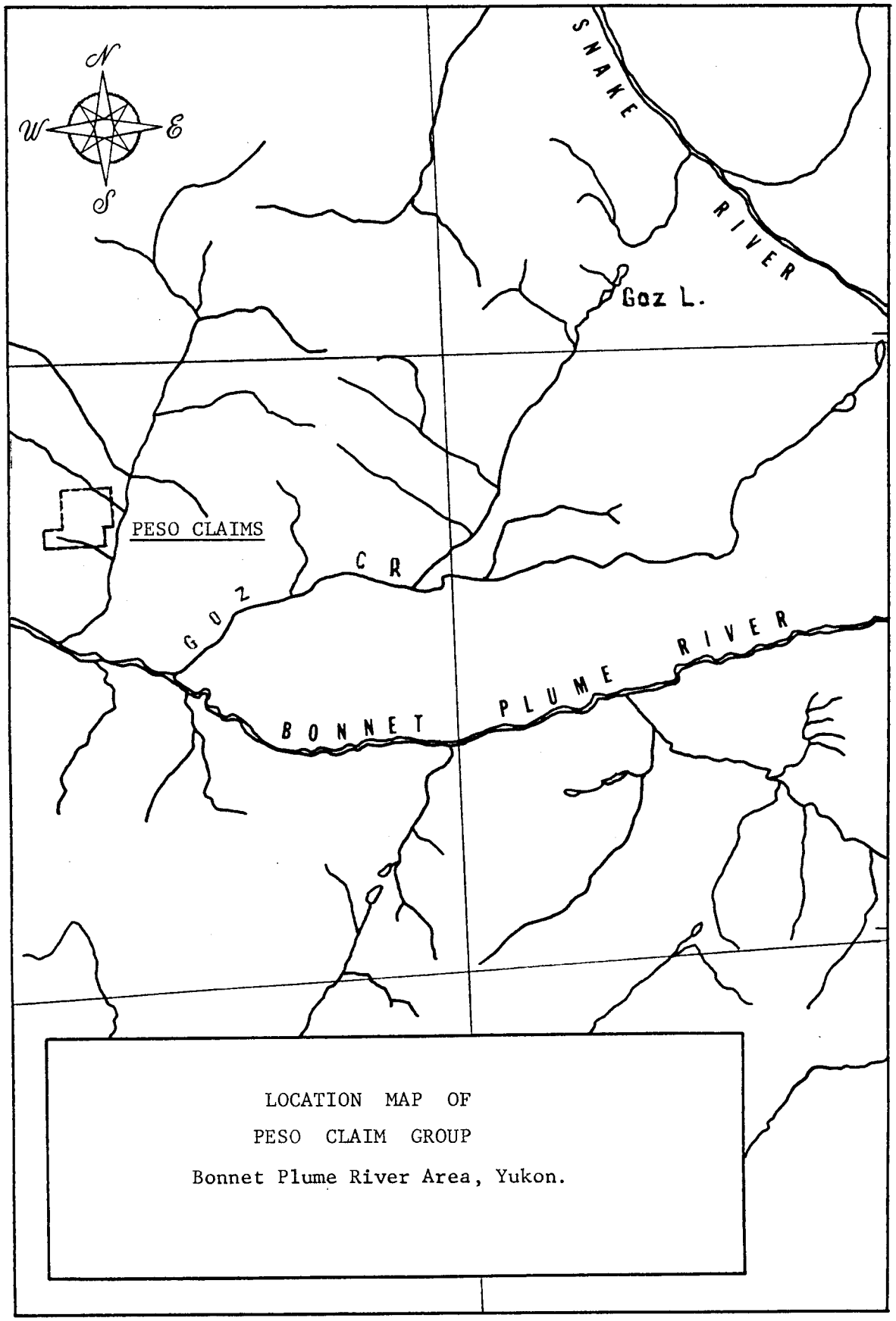
Only a small amount of additional prospecting is felt to be warranted on the Peso claims. This should be done in two areas:
1/ the dolomite unit (Hd) which outcrop on Harrison Creek and
2/ in the vicinity of the base of the Besa River Formation (DMs) in the southwest part of the property.

Respectfully submitted,

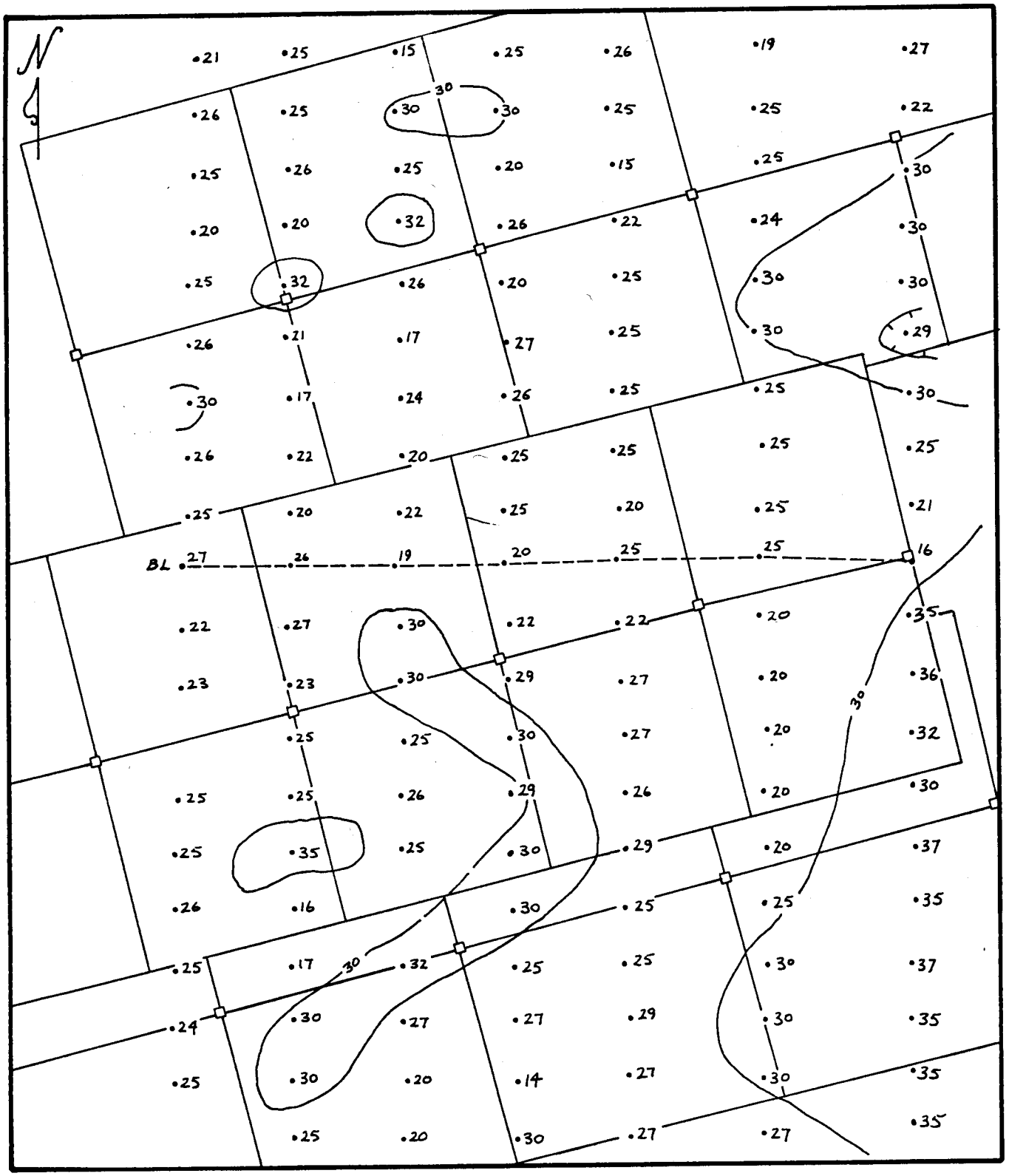
T. L. Sadlier-Brown (Geologist)

C. Ikona (P. Eng.)

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
CHARLES K. IKONA

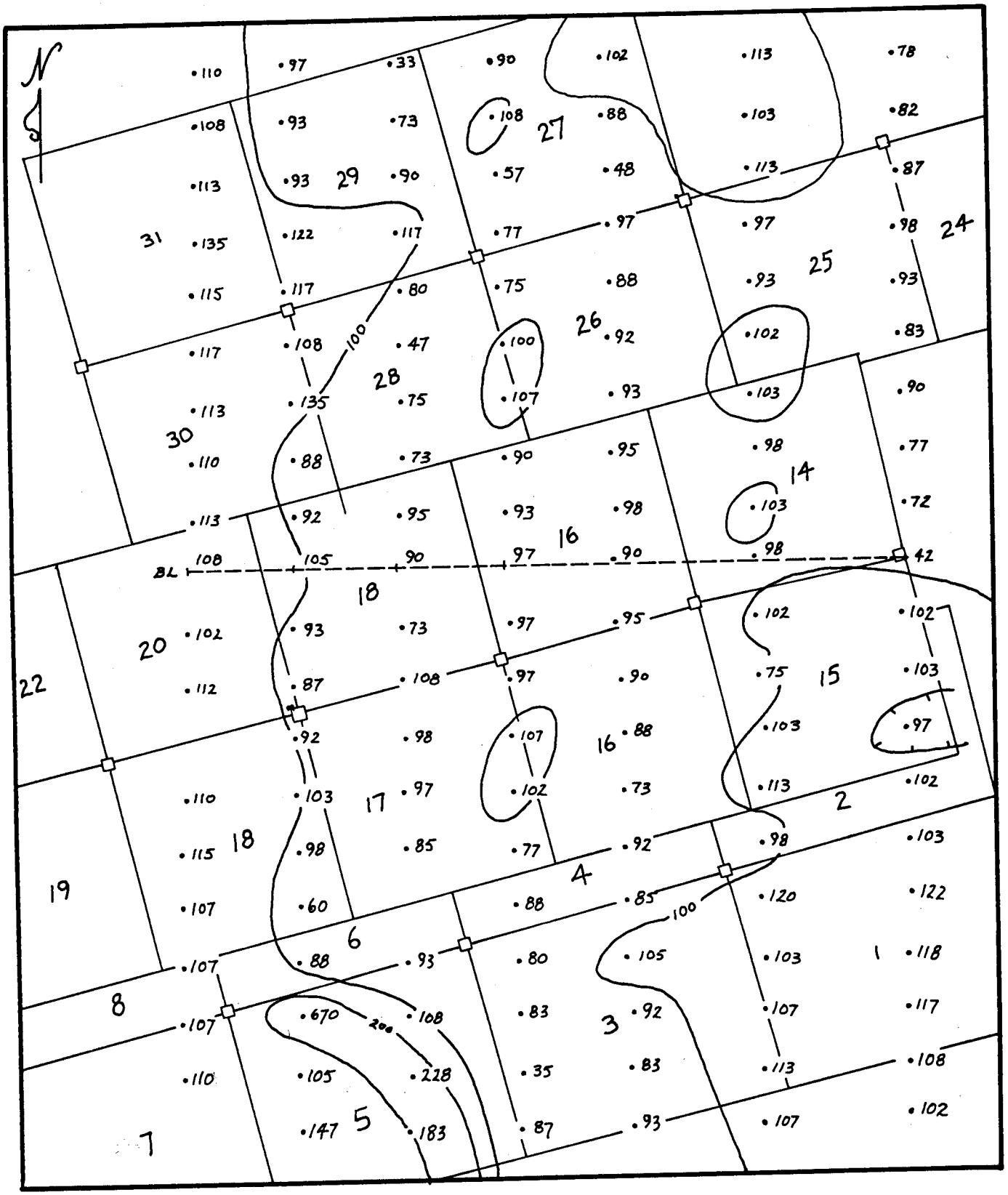


LOCATION MAP OF
PESO CLAIM GROUP
Bonnet Plume River Area, Yukon.



PESO CLAIMS: LEAD GEOCHEMISTRY

scale: 1" to 1000'
values in ppm Pb



PESO CLAIMS : ZINC GEOCHEMISTRY

scale : 1" to 1000'

values in ppm Zn

Direct Cost Invoices

Helicopter and geochemical support data

PESO MINERAL CLAIM GROUP

Statement of Expenditures to

September 22,1974.

DIRECT COSTS:

wages	15 man days	$ 750.00
tagging posts	$ 8.00/man-day	256.00
geologic fees	5 man-days	650.00
helicopter support	$ 199/hour	1,094.50
geochemical supplies		274.00
field equip expense	($6.00/man/day)	120.00
camp cost expense	($10.00/man/day)	200.00
		3,394.50

Pro Rata General expense: (.063)

equip supply	204.72
contract and rentals	20.02
wages (mob & demob)	532.35
food	per diem
fuels	per hour
helicopter (general)	605.17
fixed wing (general)	530.09
travel & accommodation	41.19
sundry and administration	365.99
geochem supplies	23.35
expiditing invoices	188.52
air travel and air freight	82.27
	2,593.67

Sub Total	5,988.17
H.M.L. Fee	821.33
Total Expenditures to Date	6,760.00

Charles K. Ikona

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
CHARLES K. IKONA

VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 988-2172
AREA CODE: 604

• *Specialising in Trace Elements Analyses* •

Certificate of Geochemical Analyses

—IN ACCOUNT WITH—

Harman Management Ltd.,
821 - 602 West Hastings Street,
Vancouver, B. C.
Attention:

Report No: 74 - 45 - 004 Page 1 of 5
Samples Arrived: August 26, 1974
Report Completed: September 4, 1974
For Project:
Analyst: E. Tang, F. Lo
Invoice # 3079

Sample Marking	Pb ppm	Zn ppm				
K - 1	30	153				
2	64	2950				
3	79	320				
4	105	47				
5	49	43				
6	47	57				
7	45	57				
8	55	85				
9	50	47				
10	54	28				
11	55	203				
12	39	23				
13	40	22				
14	45	23				
15	55	37				
16	70	67				
17	40	37				
18	48	30				
19	45	48				
20	35	33				
21	51	73				
22	45	48				
23	42	63				
24	75	47				
25	50	48				
26	60	63				
K - 27	75	23				
PESOL.OW.0N	16	42				
1N	21	72				
2	25	77				
3	30	90				
4	29	83				
5	30	93				
6	30	98				
7	30	87				
8	22	82				
9N	27	78				
1S	35	102				
PESOL.OW.2S	36	103				

REMARKS: 2 copies to T. L. Sadlier-Brown,
1 copy plus invoice to Harman Management Ltd.

Signed:

% Mo x 1.6683 = % MoS_2 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

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Attention:

Report No: 74-45-004 Page 2 of 5
Samples Arrived:
Report Completed:
For Project:
Analyst:

Sample Marking	Pb ppm	Zn ppm				
Peso L OW 3S	32	97				
4	30	102				
5	37	103				
6	35	122				
7	37	118				
8	35	117				
9S	35	108				
Peso L OW10S	35	102				
Peso L 5W ON	25	98				
1	25	103				
2	25	98				
3	25	103				
4	30	102				
5	30	93				
6	24	97				
7	25	113				
8	25	103				
9N	19	113				
1S	20	102				
2S	20	75				
3S	20	103				
4	20	113				
5	20	98				
6	25	120				
7	30	103				
8	30	107				
9	30	113				
Peso L 5W10S	27	107				
Peso L10W ON/S	25	90				
1N	20	98				
2	25	95				
3	25	93				
4	25	92				
5	25	88				
6	22	97				
7	15	48				
8	25	88				
9N	26	102				
Peso L10W 1S	22	95				

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Report No: 74-45-004 Page 3 of 5
Samples Arrived:
Report Completed:
For Project:
Analyst:

Attention:

Sample Marking	Pb ppm	Zn ppm				
Peso L10W 2S	27	90				
3	27	88				
4	26	73				
5	29	92				
6	25	85				
7	25	105				
8	29	92				
9	27	83				
Peso L10W 10S	27	93				
Peso L15W 0N/S	20	97				
1N	25	93				
2	25	90				
3	26	107				
4	27	100				
5	20	75				
6	26	77				
7	20	57				
8	30	108				
9N	25	90				
1S	22	97				
2S	29	97				
3	30	107				
4	29	102				
5	30	77				
6	30	88				
7	25	80				
8	27	83				
9	14	35				
Peso L15W 10S	30	87				
Peso L20W 1N	22	95				
2	20	73				
3	24	75				
4	17	47				
5	26	80				
6	32	117				
7	25	90				
8	30	73				
9N	15	33				
Peso L20W 0N+S	19	90				

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Report No: 74-45-004 Page 4 of 5
Samples Arrived:
Report Completed:
For Project:
Analyst:

Sample Marking	Pb ppm	Zn ppm				
Peso L20W 1S	30	73				
2	30	108				
3	25	98				
4	26	97				
5	25	85				
7	32	93				
8	27	108				
9	20	228				
Peso L20W 10S	20	183				
Peso L25W 1N	20	105				
2	22	92				
3	17	88				
4	21	135				
5	32	108				
6	20	117				
7	26	122				
8	25	93				
9N	25	93				
ON 4S	26	97				
1S	27	93				
2S	23	87				
3	25	92				
4	25	103				
5	35	98				
6	16	60				
7	17	88				
8	30	670				
9	30	105				
Peso L25W 10S	25	147				
Peso 30W N 0	27	108				
N 1	25	113				
N 2	26	110				
N 3	30	113				
N 4	26	117				
N 5	25	115				
N 6	20	135				
N 7	25	113				
N 8	26	108				
Peso 30W N 9	21	110				

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Attention:

Report No: 74-45-004 Page 5 of 5
Samples Arrived:
Report Completed:
For Project:
Analyst:

Sample Marking	Pb ppm	Zn ppm				
Peso 30W S 1	22	102				
S 2	23	112				
S 4	25	110				
S 5	25	115				
S 6	26	107				
S 7	25	107				
S 8	24	107				
Peso 30W S 9	25	110				

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Personnel:

Tim Sadlier-Brown 1307 Harwood St. Van.	August 15 - 17 Sept. 16, 17
Graham Baird 74 Withrow Ave. Ottawa	August 16 - 21
John Toporowski 812 Seafair Place, Richmond	August 16 - 21
W. Cain General Delivery, Whitehorse	August 16 - 21

ENGINEERS CERTIFICATE

I, CHARLES K. IKONA of 2614 St. John's St., Port Moody, in the Province of British Columbia do hereby certify that:

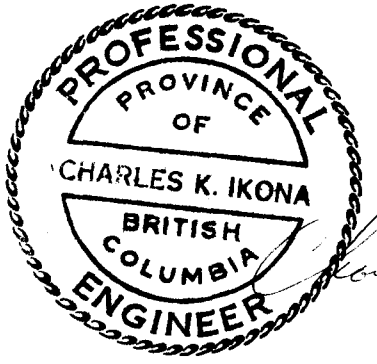
1. I am a consulting mining engineer with offices at 609-850 W. Hastings St., Vancouver, B.C.

2. I am a graduate at the University of British Columbia with a degree in Mining Engineering.

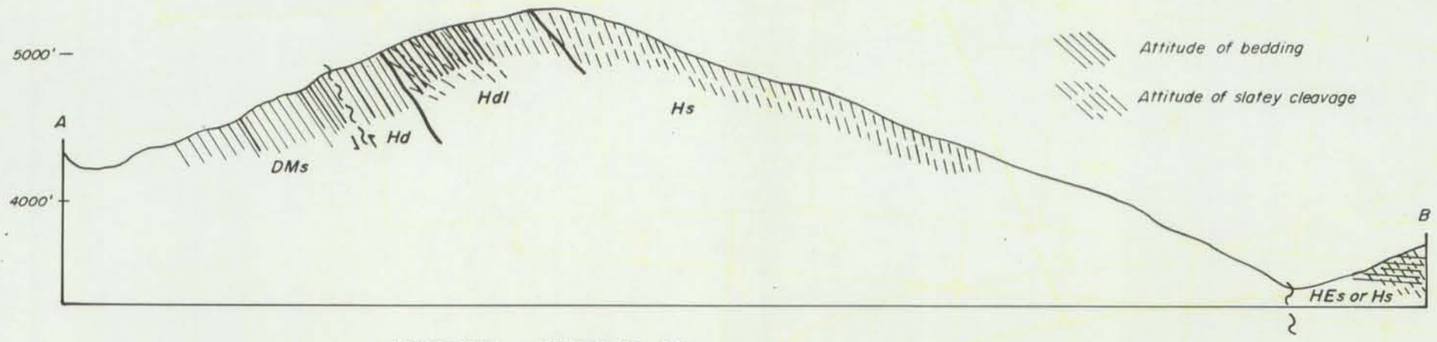
3. I am a member in good standing at the Association of Professional Engineers of the Province of British Columbia.

4. The work described in the accompanying report on the PESO 1-32. Claim Group was performed under my personal supervision.

Datedthis 30th day of August 1974 at Vancouver, B.C.



Charles K. Ikona, P. Eng.



VERTICAL SECTION AB

TABLE OF FORMATIONS

Palaeozoic
Devonian Mississippian

DMs — Besa River Formation: Black shale

Lower Palaeozoic — Proterozoic
Hadrynian - Cambrian

HEs — Sheepbed Formation: Dark grey to black slate, limestone and quartzite

Proterozic
Hadrynian

Hs — Grit Unit: Grey slate, limey slate, and limestone

Hdl — Buff weathering grey limestone and minor dolomite

Hd — Massive buff weathering dolomite, minor limestone.

LEGEND

- Geological boundary — defined
- " " — approximate
- Strike and dip of bedding
- " " " " slatey cleavage
- Fault — defined
- " — approximate
- Limit of outcrop
- Claim post — defined
- " " — approximate
- Stream

NICOLA COPPER MINES LTD.

BONNET PLUME RIVER AREA, YUKON

GEOLOGICAL MAP OF THE PESO CLAIMS

1000 0 1000 2000 feet

Scale

By - T.L. Sadlier - Brown — August 1974