

2836

GEOCHEMICAL REPORT ON 20 FOR CLAIMS

PLUS 2 FORGE FRACTIONS

(50°30'N 121°00'W) 4 Miles SW of Tunkwa Lake

FOR 1-18	Nos. 75838-75855	18
21 & 22	75858-75859	2
FORGE #1 Fr & 2 Fr	89521-89522	<u>2</u>
		22

by Jules P. LaPrairie, P. Eng.
for Leitch Mines Limited, Vancouver
for Work Done May 23, 1970 -
June 18, 1970.

January 28, 1971

Vancouver, B. C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2836 MAP.....

TABLE OF CONTENTS

Page

~~#~~ 1 LOCATION MAP 1

WORK PERFORMED DURING 1970 2

GEOLOGY 2

DESCRIPTION OF GEOCHEM SURVEY 3

STATEMENT OF QUALIFICATION 5

APPENDIX

Cost Statement

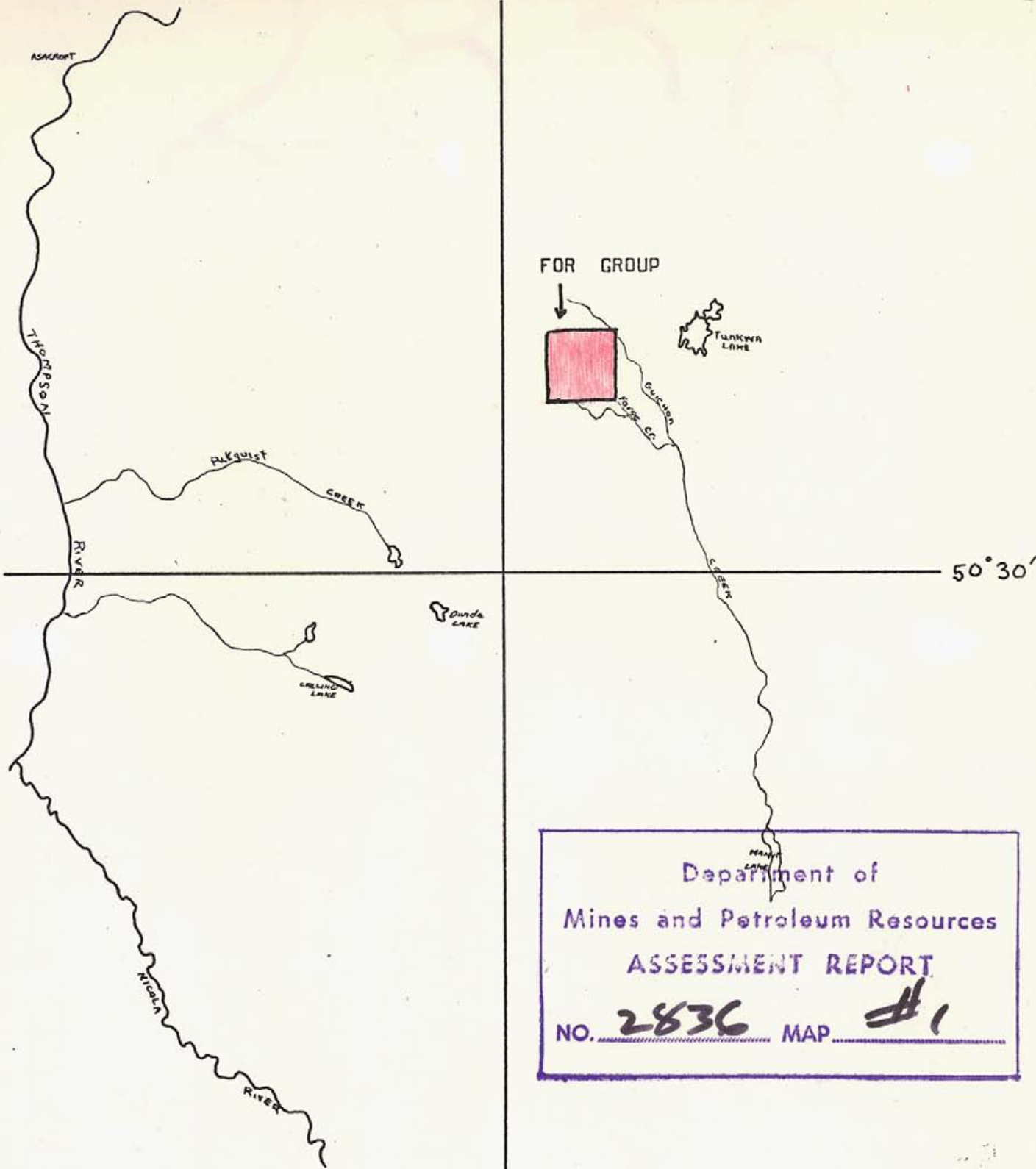
Invoices: Barringer Research, May 31, 1970

" " July 31, 1970

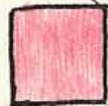
Seymour Laboratory Ltd. , July 14, 1970

MAP ENVELOPE

- ~~#~~ 2 DWG No. 4-128-2 Copper Assays
- ~~#~~ 3 No. 4-128-3 Molybdenum Assays
- ~~#~~ 4 No. 4-128-4 Zinc Assays
- ~~#~~ 5 Geology of FOR Group



FOR GROUP



TUNKWA LAKE

50°30'

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 2836 MAP #1

To accompany geochemical report by
 J. P. LaPrairie, P.Eng., on the FOR
 Group, Tunkwa Lake, Kamloops Mining
 Division. Jan. 28, 1971

SCALE: 1" - 4 1/2 Miles
 121°00'

GEOCHEMICAL REPORT ON 20 FOR CLAIMS

PLUS 2 FORGE FRACTIONS

LOCATION

Four miles S. W. of Tunkwa Lake in N. E. portion of Highland Valley.
50°30'N 121°00'W.

WORK PERFORMED DURING 1970

The work done on the FOR group of claims was under the supervision of J. LaPrairie, P. Eng. The property was geologically mapped during the period June 2 - 8, 1970, and surveyed geochemically from May 30 - June 18, 1970.

The geological mapping was done by Wm. Meyer of Western Geological Services Ltd. The geochem survey was done by B. W. Smee of Barringer Research Limited.

The "Geology of FOR Group" map is included in the report to show the location of the control grid.

GEOLOGY

The group is underlain largely by the "Hybrid" phase of the Guichon Batholith. The "Hybrid" phase grades locally to the uncontaminated Guichon variety, but this unit is irregular and inconsistent. Both units are intruded by dykes of "Witches Brook" phase. On the north end of the claims, the batholith intrudes intermediate flows and tuffs of the Nicola group.

Traces of chalcopryrite were found on the west side of Forge Creek near the south end of the group, but these occurances do not appear to be of any significance. A small showing consisting of chalcopryrite in a rusty quartz vein was found in a creek bottom on the west-central part of the group. The vein, which pinches and swells over an exposed distance of 50 feet along an E-W/60° dipping fault, has been trenched previously. Judging from the moss and shrubs growing on the dump, the age of the previous work is estimated to be in the order of thirty or more years. An 18" chip sample was taken across the width of the vein which could not be completely

exposed with the hand tools available. This small occurrence in itself does not appear to be significant and any future work in the area should be contingent on the results of the geochemical survey.

(From Progress Report - FOR Group - June 2-8, 1970 - Wm. Meyer)

DESCRIPTION OF GEOCHEM SURVEY

The FOR Group lies in a topographic low. The centre of the property is interspersed with beaver ponds and swamps, with meandering streams prevalent. Outcrop is scarce. In general, the FOR Group is bounded on the east by the Kamloops volcanics, on the west by the Hybrid variety of the Guichon Batholith, and on the south by the Skeena variety of the batholith. A quartz vein with minor chalcopyrite was found on the property. The soils are a poorly developed, well drained gray regosol on the gentle slopes. They become progressively more humitic as they approach the many swamps and ponds in the area. Sampling depth was 8 to 10 inches in the regosol and deeper in the humitic soils.

The sample collection using grub hoes was performed by R. Ficek and L. Rasminsky, of Toronto. A total of 689 samples were collected, of which 687 were soil samples and 2 were stream sediments. They were placed in high wet strength Kraft 3½" x 6" envelopes identified with co-ordinates. The samples were taken on a 400 x 100 foot grid; the base line was laid out by the crew prior to sample collection. All samples were sent to Seymour Laboratory Limited of Vancouver, where the analysis of total copper, molybdenum and zinc was performed by J. Chatten.

(From Barringer Report - November, 1970)

Sample Preparation -

(a) Geochemical soil and silt samples were received in the laboratory in paper bags.

(b) The wet samples were dried in an oven at 110°C.

(c) The dried soil and silt samples were sifted, using 80-mesh sieve.

The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis.

Method of Analysis -

- (a) 0.5 gm of the -80 mesh samples were weighed out into test tubes.
 - (b) 2 ml of perchloric nitric acid mixture (85% HClO_4 + 15% HNO_3), were added to the samples in test tubes.
 - (c) The samples with acid mixture were digested on sand bath at about 160°C for three hours (perchloric starts fuming).
 - (d) At the end of the digestion period test tubes were removed from sand bath and cooled for fifteen minutes.
 - (e) Volume in each test tube was made up to 10 ml with demineralized water. When there was molybdenum to be done 1 ml of 1000 ppm aluminum chloride was added in each test tube before adding demineralized water.
 - (f) The mixture in test tube was capped and shaken vigorously, and then allowed to settle.
 - (g) Samples aspirated in A.A. with proper parameters. The concentration of each element was determined by comparing with set of known standards.
- (From Seymour Laboratory Ltd. 's letter of Jan. 22, 1971)

Results

The median, standard deviation, threshold and anomalous values for copper, molybdenum and zinc are as follows:

	Copper (ppm)	Molybdenum (ppm)	Zinc (ppm)
Median	22	5	57
Standard Deviation	24.5	2.5	16.5
Background	0-70	0-10	0-90
Threshold	70	10	90
3rd Order Anomalous	71-140	11-20	91-180
2nd Order Anomalous	141-210	21-30	181-270
1st Order Anomalous	> 210	> 30	> 270

1. Copper (DWG. No. 4-128-2)

The median and threshold values for copper are about average for Highland Valley type soil. When the soil copper map is superimposed over the geology map, it is evident that most of the anomalies present occur in the immediate proximity to swamp or outcrop. The anomalies in or near swamps are caused by the natural

accumulation of soluble metals at the ground water-soil interface and in the heavily organic swamps themselves. The anomalies are in all cases weak in nature. The only anomaly which cannot be explained by outcrops or swamps occurs on line 33N at 66W, and contains 200 ppm. As such, it is the highest value on the property. Because it is only a single value high, a low priority must be assigned to it. The observed quartz vein with chalcopyrite did not give an anomalous reading, so one must assume that this vein is one of a kind and of no economic importance.

2. Molybdenum (DWG. No. 4-128-3)

As stated before, the molybdenum analysis must be considered suspect. It will be noticed that samples from lines 1N to 25N are generally higher than samples from lines 29N to 53N. This line divides the sample batches as received from Seymour Laboratory. The first batch received was given in even parts per million. The second batch was given in 0.1 ppm, indicating that the second batch was 10 times more accurate than the first.

There is only one sample which is anomalous in molybdenum on the FOR Group. There is neither a copper nor a zinc anomaly associated with this sample, so a low priority must be given this sample.

3. Zinc (DWG. No. 4-128-4)

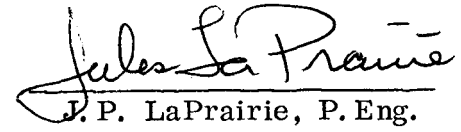
The median and threshold values for zinc are average for the Highland Valley. The zinc is an excellent indicator of swamp and outcrop conditions, and when used in conjunction with copper, falsely anomalous copper values can be picked out easily. There does not appear to be any zinc mineralization on the property. However, there is no obvious explanation for the anomaly extending from 24N to 37N at 43W, other than outcrop that is close to the surface.

(Barringer report)

STATEMENT OF QUALIFICATIONS

I, Jules Pierre LaPrairie, am a graduate of the University of Toronto, 1949, in Mining Engineering, with a BA. Sc. degree. I have been employed in the Minerals industry continuously since 1949 in management, engineering and exploration.

I am a member in good standing of the Professional Engineers
Association of B. C.


J. P. LaPrairie, P. Eng.

January 28, 1971
Vancouver, B. C.

APPENDIX

Cost Statement

Field -

J. LaPrairie - May 28-29	2 days @ \$100/day	\$ 200.00
B. W. Smee - May 23-June 18	21 days @ \$ 75/day	1,575.00
R. Ficek	21 days @ \$ 75/day	1,575.00
L. Rasminsky	12 days @ \$ 75/day	900.00

Consulting and Administration -

J. LaPrairie - June 8, 1970	1 day @ \$100/day	100.00
- Jan. 26, 1971	1 day @ \$100/day	100.00
B. W. Smee - July 15, 1970	1 day @ \$125/day	
- subsistence	\$17.20	142.20

Laboratory -

(See following invoices)

504.26

TOTAL

\$ 5,096.46

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *28*
day of *January, 1971*, A.D.

Jules La Prairie

L. Jeanotte
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

SUB-MINING RECORDER

JUN 19 1970



BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: May 31, 1970

PROJECT: 128.34

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT:

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

• Tech-Highland Bell
• 999 West Pender Street,
• Vancouver, B.C.

TERMS: NET

AUTHORITY:

TO: Geochemical Sampling at Highland Valley, B.C.

May 23 to May 31 9 crew days @ \$150.00 per day

1,350.00

FOR GROUP.

03/0

INVOICE Nº 6804

NOV 27 1970



BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES

DATE: November 19, 1970

PROJECT: 128.34

• Teck-Highland Bell
999 West Pender Street,
• Vancouver, B. C.

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT:

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

TERMS: NET

AUTHORITY: Letter contract of May 4, 1970

to: Geochemical Sampling

"FOR" Group

June 1 - June 18 - 19 crew days; 38 man days @ \$75.00/day 2,850.00 + 150.00

TCE Property

June 19 - July 20, -32 crew days; 96 man days @ \$75.00/day 7,200.00 + 225.00
375.00 dib
10,050.00

Total

To: Consulting by our Mr. B. Smee

"FOR" Group

July 15 - 1 day @ \$125.00 per day 125.00
Subsistence 17.20

Total

142.20

TCE Property

July 7 - July 9 - 3 days @ \$125.00 per day 375.00
Transportation 157.67
Subsistence 12.46

Total

545.13

D.R. Exploration

"FOR" job 150.00

W.C.E. job 225.00

*Aut. Rec: King
T.C.E. 225.00*

866

Total this invoice

10,737.33

INVOICE N^o 8010

J-R

SEYMOUR LABORATOI LTD.

147 RIVERSIDE DRIVE,
NORTH VANCOUVER, B.C.

TELEPHONE 929-2228

INVOICE/FILE No. 1984 / 1022

PLEASE PAY FROM THIS INVOICE

Direct to 700 - 1177 West Hastings Street, Vancouver 1, B.C.
Monthly statements will not be issued except where necessary to confirm balance.
TERMS NET 15th of Month Following.

- TECK CORPN.
- 7th Floor - 1177 West Hastings St.
- Vancouver 1, B. C.
- RE: " BARRINGER RESEARCH "

DATE: July 14, 1970

	GEO - CHEM TESTING	AMOUNT
275	Determinations for Copper at \$1.00 Each	\$275.00
275	Determinations for Molybdenum at \$.45 Each	123.75
275	Determinations for Zinc at \$.40 Each	110.00
59	Determinations for P.H. at \$.50 Each	29.50
275	Sample Preparations at \$.20 Each	55.00
		593.25
	LESS 15 %	88.99
	TOTAL -----	\$504.26

FER GP.

(Amendment of Invoice # 1937)
not received



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2836 MAP #2

2836 M-2

To Accompany Geochemical Report By
Jules La Prairie, P. Eng., on the For Group
Tunkwa Lake, Kamloops Mining Division
Jan. 27/71



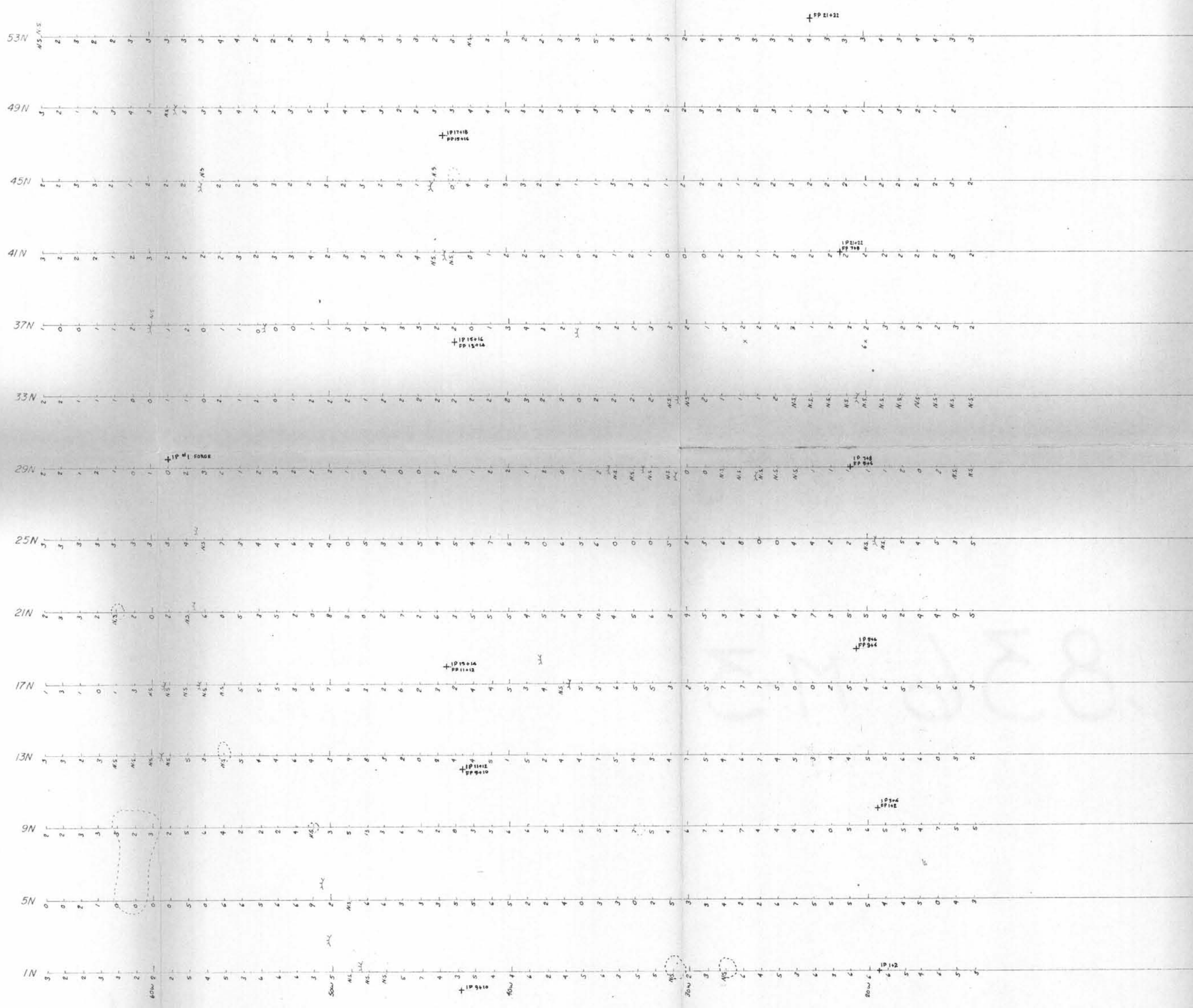
LEGEND

Sample location and analysis for Cu in p.p.m.	
Background	0 - 70 p.p.m.
Threshold	70 "
3rd order anomalous	71 - 140 "
2nd " "	141 - 210 "
1st " "	> 210 "

BW Lane

Work undertaken by
BARRINGER RESEARCH LTD., Toronto, Canada.

TECK CORPORATION LIMITED			
FOR GROUP OF CLAIMS, HIGHLAND VALLEY, B.C.			
GEOCHEMICAL SOIL SURVEY COPPER			
NOV 1970	Scale	1"=400'	DWG. 4-128-2



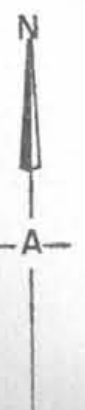
30 W-4

2836 M-3

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2836 MAP #3

To Accompany Geochemical Report By
Jules La Prairie, P. Eng., on the For
Group, Tunkwa Lake, Kamloops Mining
Division, Jan 27/71

BW Linn



LEGEND

+	Sample location and analysis for Mo in p.p.m.
Background	0 - 10 p.p.m.
Threshold	10 "
3rd order anomalous	11 - 20 "
2nd " " "	21 - 30 "
1st " " "	> 30 "

Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada.

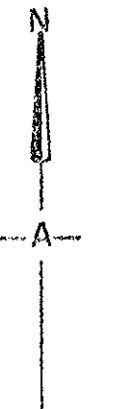
TECK CORPORATION LIMITED			
FOR GROUP OF CLAIMS, HIGHLAND VALLEY, B.C.			
GEOCHEMICAL SOIL SURVEY MOLYBDENUM			
NOV	1970	Scale 1"=400'	DWG. 4-128-3



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2836 MAP #4

2836 M-4

To Accompany Geochemical Report By
Jules La Prairie, P.Eng., on the For Group
Tunkwa Lake, Kamloop Mining Division
Jan. 27/71



LEGEND

Sample location and analysis for Zn in ppm.	
Background	0 - 90 ppm.
Threshold	90 "
3rd order anomalous	91 - 180 "
2nd " "	181 - 270 "
1st " "	> 270 "

BW Lane

Work undertaken by
BARRINGER RESEARCH LTD Toronto, Canada.

TECK CORPORATION LIMITED			
FOR GROUP OF CLAIMS, HIGHLAND VALLEY, B.C.			
GEOCHEMICAL SOIL SURVEY ZINC			
NOV 1970	Scale	1"=400'	DWG.4-128-4

M-5
2836



- LEGEND**
- Kamloops Volcanics
 - Witches Brook Variety
 - Guichon Phase
 - Hybrid Phase
 - Nicola Volcanics
- SYMBOLS**
- claim post(s)
 - road
 - swamp
 - / shear zone
 - / shear; strike/dip
 - / joint attitudes
 - pond
 - / unit contact
 - / picket line
 - / Cu mineralization
 - / camp

M-5
2836

To Accompany Geochemical Report By Jules La Prairie, P.Eng., on the For Group, Tunkwa Lake, Kamloops Mining Division, Jan. 27/71

LEITCH MINES LTD. Tunkwa Lake, B.C.
GEOLOGY of FOR GROUP
Western Geological Service June 9, 1970

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 No. 2836 M.P.
 #5