

4689

N.T.S. 92-P-8

GEOCHEMICAL REPORT

on the

'DUM' CLAIM GROUP

LITTLE FORT AREA, B.C.

D.B. Peterson

92P/8W

October, 1973

A.G. Troup

CLAIMS:

Names

Record Numbers

DUM 1 - 24 inclusive

122804 to 122827 inclusive

LOCATION:

Little Fort area, British Columbia

N.T.S. 92-P-8

120° 19' W

51° 26' N

Kamloops Mining Division

DATES:

July 19, 1973 to July 24, 1973

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4689 MAP



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(i)

GEOCHEMICAL REPORT
on the
'DUM' CLAIM GROUP
LITTLE FORT AREA, B.C.
N.T.S. 92-P-8

SUMMARY:

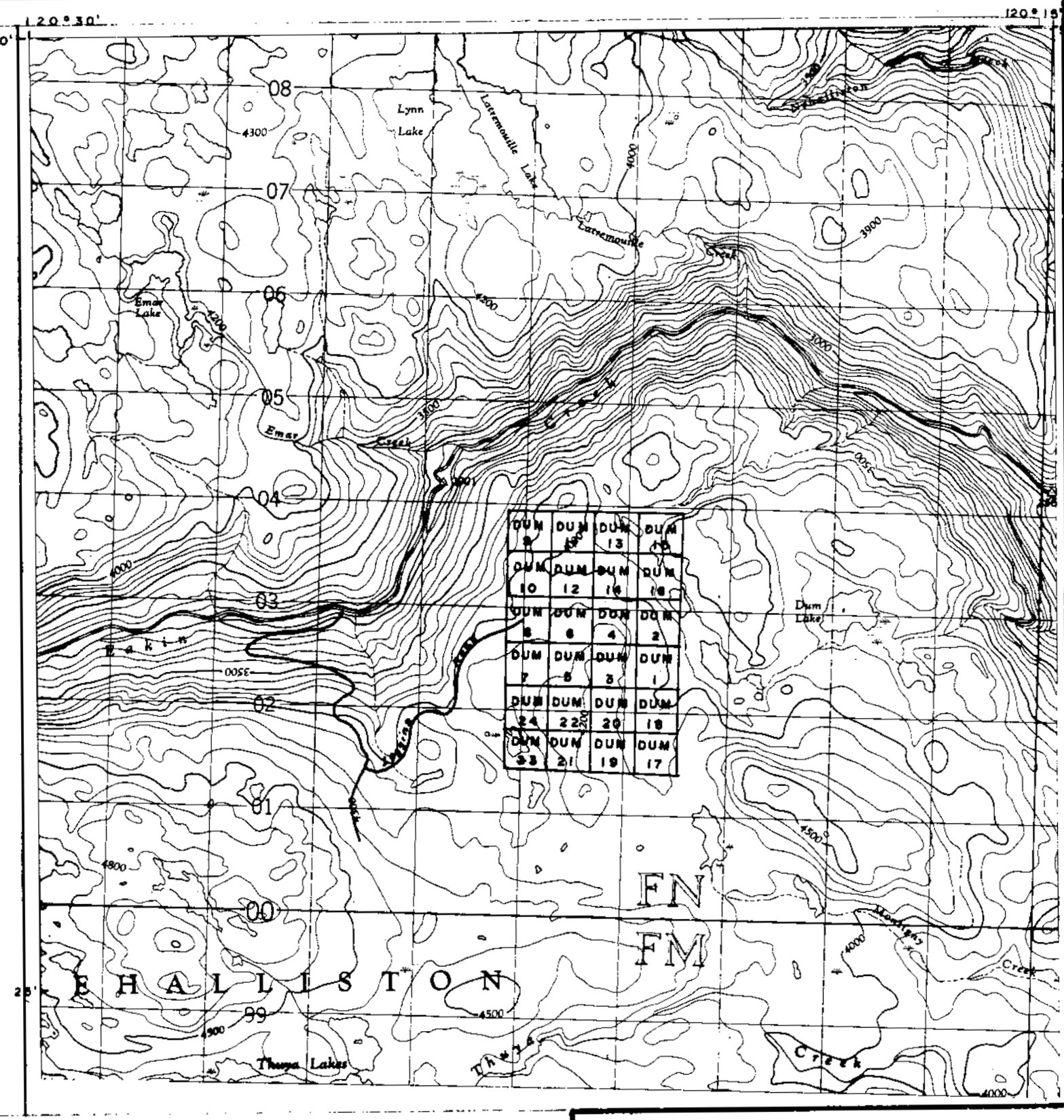
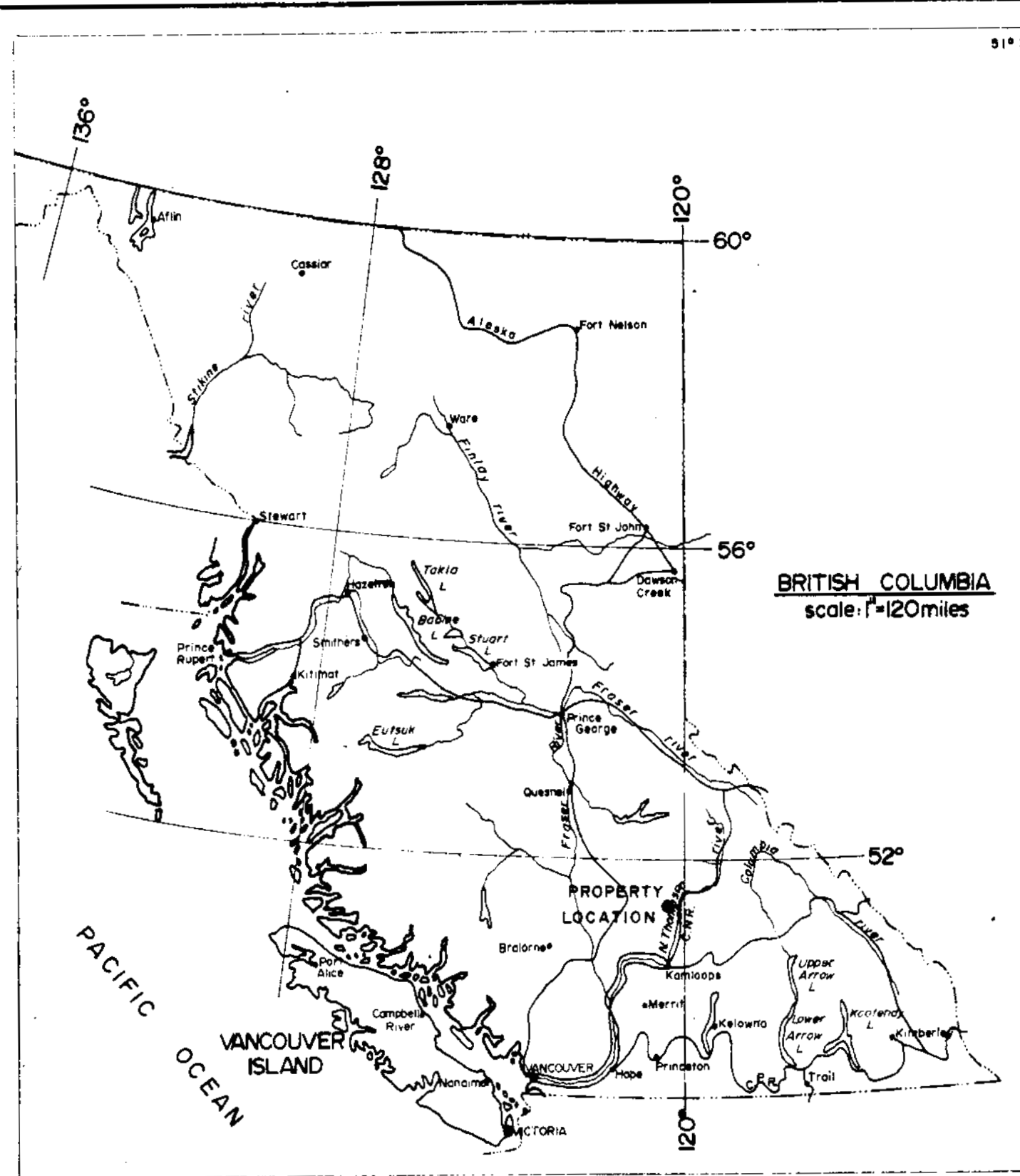
During the 1973 Field Season a detailed soil sampling programme was carried out over a block of 24 claims held by Rio Tinto Canadian Exploration Limited in the Little Fort area of British Columbia. Results of that survey reveal there to be no economically significant soil anomaly for any of the elements Cu, Mo, Ni, Pb or Zn within the survey area. Therefore, no further exploration activity is recommended for the property.

GEOCHEMICAL REPORT
on the
'DUM' CLAIM GROUP
LITTLE FORT AREA, B.C.
N.T.S. 92-P-8

INTRODUCTION:

Attention was drawn to the Dum Lake area in the Fall of 1972 by results of a regional geochemical survey carried out during the 1972 field season. Results of that survey indicated drainage channelways, draining a small hill located approximately one and one-half miles due west of Dum Lake, to contain up to 300ppm Cu. It was thought that these results could be indicative of porphyry copper type mineralization. Therefore, in October 1972 a group of 24 claims was staked in order to protect the anomaly.

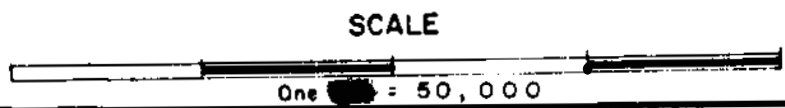
During the month of July 1973 a detailed soil sampling programme was carried out over the claims. The programme was co-ordinated by Mr. A. Troup and Mr. L. Haynes. The results of that survey are discussed in the following report.



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ALICE SHEET REPORT
NO. **4689** MAP # **1**

NTS
92-P-8 W

RIO TINTO CANADIAN EXPLORATION LTD
DUM LAKE
LOCATION MAP
OCT 73 AT /rh DWG. L-6164



LOCATION AND ACCESS:

The 'DUM' Claim group is located approximately 5 3/4 air miles on a bearing of 285° from the community of Little Fort, B.C. Good access is provided to the west edge of the property by a recent logging road which intersects Highway 24 approximately 11 1/2 miles west of Little Fort.

GEOLOGICAL SETTING:

The Dum Lake area is situated on a tree covered, plateau like area near the north-east end of the Thompson Plateau. The claims are situated at a mean elevation of 4,000 feet and a maximum of 400 feet of relief exists on the property. Immediately north of the property Eakin Creek occupies a deep "V" shaped valley 1,200 feet below the plateau.

The area has been mapped by the Geological Survey of Canada at a scale of 1 inch = 4 miles (G.S.C. Memoir 363, R.B. Campbell and H.W. Tipper). This work shows the claim block to be located on the north-east margin of the Thuya Batholith. The Thuya Batholith of Late Triassic or Early Jurassic age, is shown to be in contact with Triassic age volcanics and sediments of the Nicola group, approximately 1 mile east of the property. However, during the course of the soil sampling programme a considerable quantity of ultrabasic float was observed in the north-east quarter of the property, suggesting that the geology may be much more complex than indicated by the G.S.C. work.

SAMPLING, SAMPLE PREPARATION AND ANALYTICAL PROCEDURE:

The soil sampling programme was carried out by a four man crew working from the Aurora Lakes Fishing Lodge situated approximately 3 1/2 air miles north of the property. The work was completed over a one week period and involved the taking of 337 soil samples.

Samples were collected at 200 foot intervals along 700 foot spaced east-west trending lines. Wherever possible samples were taken from the 'B' soil horizon. Where 'B' horizon material could not be obtained the 'AH' horizon was sampled and the samples were recorded as such. Due to the extremely rocky nature of the soils in this area, the occasional development of an abnormally thick leached zone of up to 6 inches or more in thickness, and in some locations a very thick humus cover, mattocks were used in taking the soil samples.

All samples were placed in Kraft paper envelopes and shipped to the Rio Tinto Laboratory in North Vancouver. Here the samples were oven dried at approximately 60°C. The dried samples were sieved through 80-mesh bolting cloth and the oversized material discarded. Analysis was carried out on the minus 80-mesh fraction by atomic absorption spectrometer after digestion with hot concentrated nitric acid-perchloric acid. The Cu, Mo, Ni, Pb, Zn concentrations in ppm were obtained by the company analyst, Mr. E. Paski, Jr.

PRESENTATION OF RESULTS:

The results of the sampling programme are shown on six accompanying drawings all at a scale of 1 inch to 800 feet. The sample locations are shown on drawing L-7189. The values in ppm obtained for the elements Cu, Mo, Ni, Pb and Zn respectively are shown on drawings G.C. 7190 to G.C. 7194 inclusive.

Threshold and anomalous levels for each of the metals of interest have been derived for 'B' horizon and 'AH' horizon soils and are shown in Tables I and II. The 'B' horizon statistics were carried out on approximately 300 samples collected over the 'DUM' claim group. Due to there being an insufficient number of 'AH' horizon samples taken from the 'DUM' property for meaningful statistical computations, the threshold and anomalous levels for this horizon were derived from 81 'AH' horizon samples collected over several claim groups held by Rio Tinto in the vicinity of the 'DUM' claims. Previous work in this part of B.C. has shown all of the elements of interest to display a log normal distribution in the two

sample media. Therefore, statistical manipulations were carried out on the logs of the values. Threshold and anomalous levels were taken at the mean plus two standard deviations and the mean plus three standard deviations respectively for each of the metals investigated.

Histogram plots for the 'B' horizon samples have been made for each of the elements of interest and are shown in Figures I to V. With the exception of molybdenum, for which most of the values are below or very close to the detection limit, a log normal distribution is exhibited by each of the metals.

TABLE I

Threshold and Anomalous Metal Values in 'B'
Horizon Soils - 'DUM' Claim Group.

<u>METAL</u>	<u>THRESHOLD VALUE</u>	<u>ANOMALOUS VALUE</u>
Cu	76 ppm	174 ppm
Mo	1 ppm	2 ppm
Ni	39 ppm	73 ppm
Pb	28 ppm	43 ppm
Zn	108 ppm	182 ppm

(Data on the minus 80-mesh fraction; analysis on the A.A. after digestion with hot concentrated nitric acid/perchloric acid).

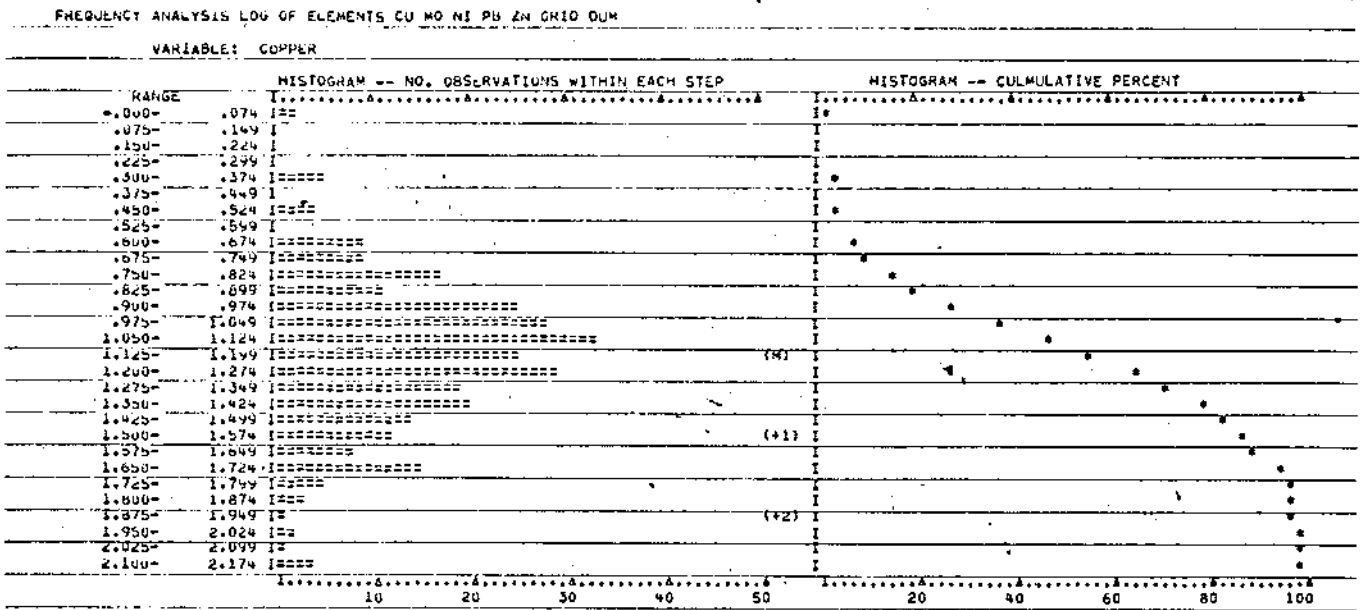
TABLE II

Threshold and Anomalous Metal Values in 'AH'
Horizon Soils - Dum Lake Area.

<u>METAL</u>	<u>THRESHOLD VALUE</u>	<u>ANOMALOUS VALUE</u>
Cu	440 ppm	1060 ppm
Mo	40 ppm	117 ppm
Ni	54 ppm	154 ppm
Pb	17 ppm	27 ppm
Zn	70 ppm	172 ppm

(Data on the minus 80 mesh fraction; analysis on the A.A. after digestion with hot concentrated nitric acid/perchloric acid).

FIGURE I



FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

FREQUENCY ANALYSIS FOR VARIABLE* COPPER

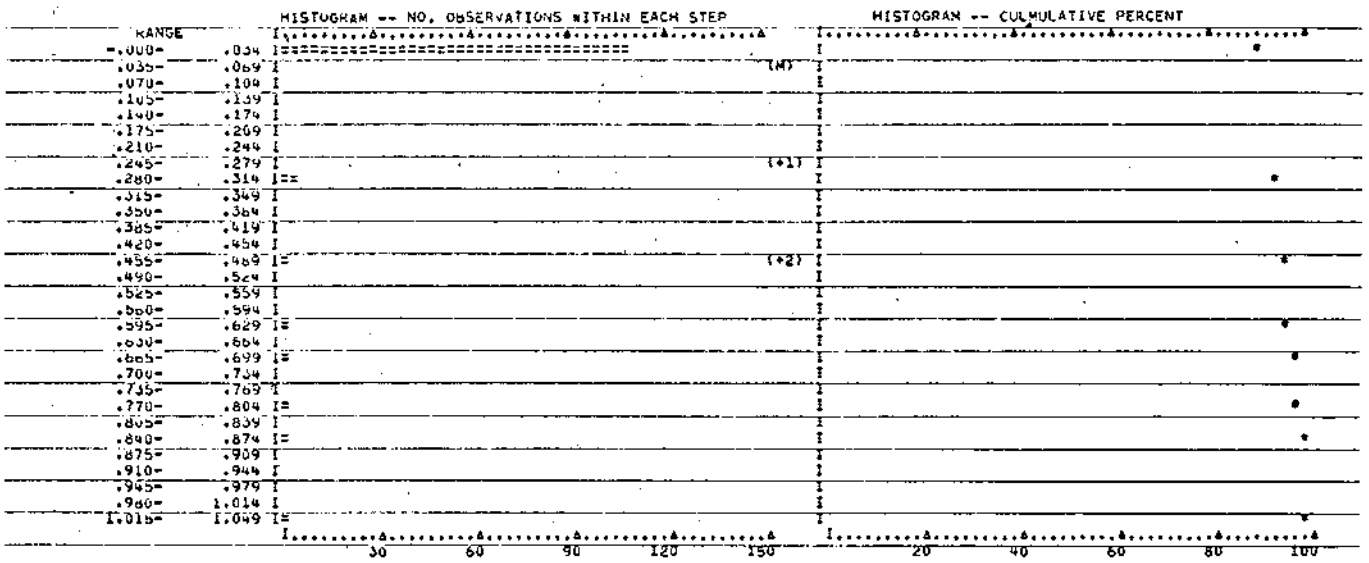
TOTAL POPULATION	
NO. OF VALUES:	301
MAXIMUM VALUE:	2.161
MINIMUM VALUE:	.000
MEAN:	1.1617394
ST. DEVIATION:	.35935023
ST. ERROR:	.30932046

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FIGURE II

FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

VARIABLE: MOLY



FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

FREQUENCY ANALYSIS FOR VARIABLE: MOLY

TOTAL POPULATION
 NO. OF VALUES: 122
 MAXIMUM VALUE: 1.041
 MINIMUM VALUE: .000

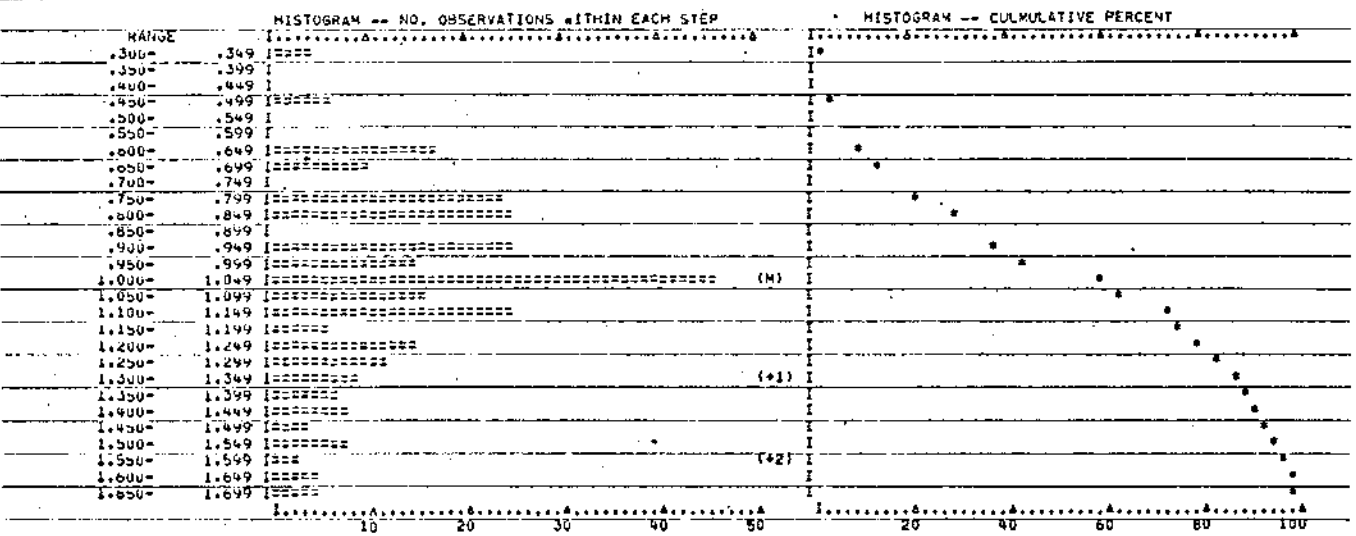
MEAN: .64526410-01
 ST.DEVIATION: .19776287
 ST.ERROR: 3.0648360

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FIGURE III

FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

VARIABLE: NICKEL



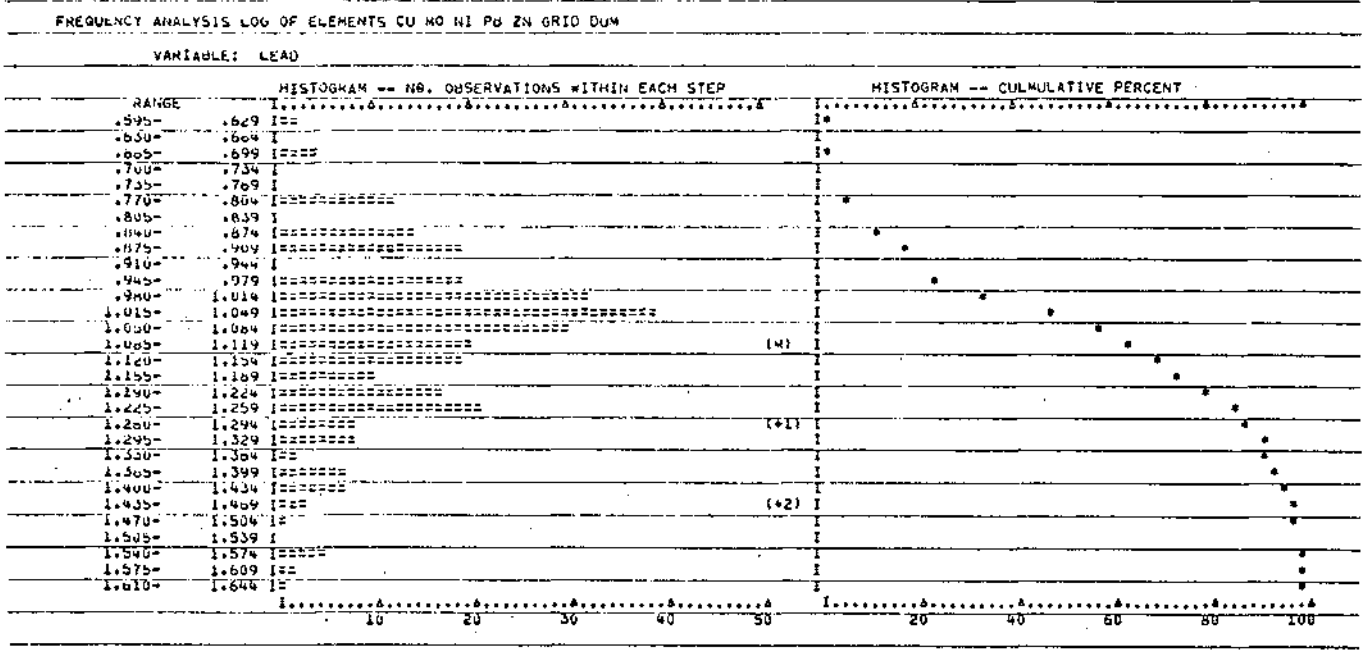
FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

FREQUENCY ANALYSIS FOR VARIABLE: NICKEL

TOTAL POPULATION
 NO. OF VALUES: 295
 MAXIMUM VALUE: 1.681
 MINIMUM VALUE: .301
 MEAN: 1.0268335
 ST. DEVIATION: .27972379
 ST. ERROR: .27241396

COMPTONER SCIENCES CANADA, LTD.

FIGURE IV



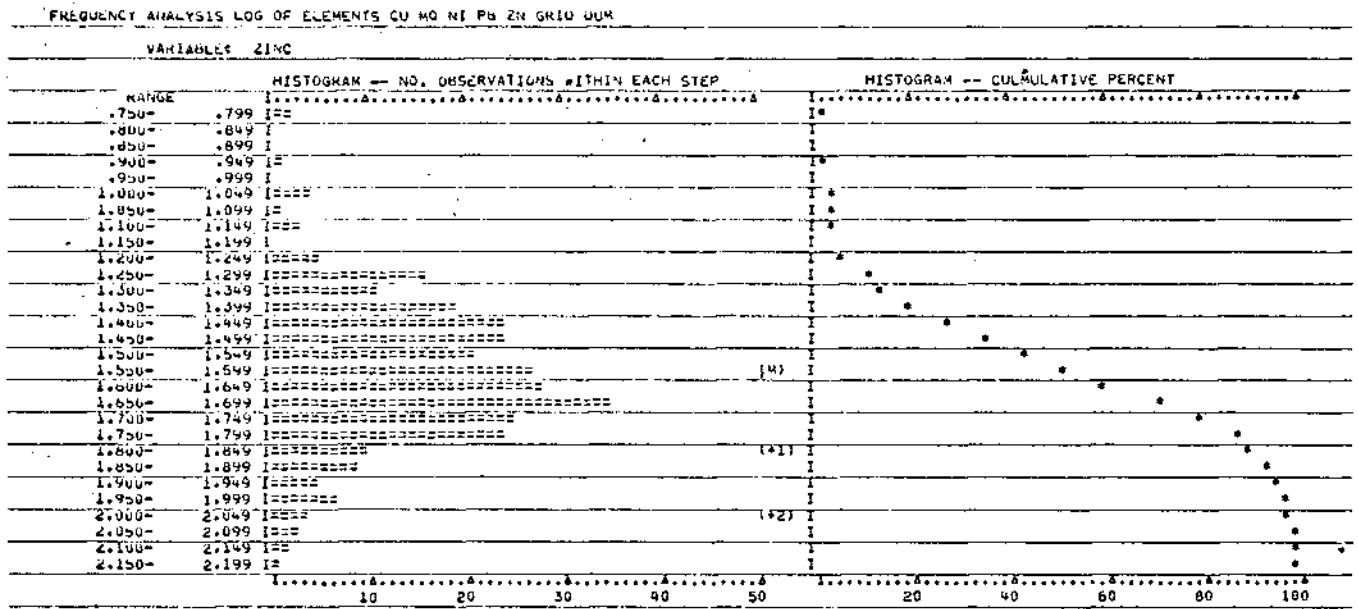
FREQUENCY ANALYSIS LOG OF ELEMENTS CU NO NI PB ZN GRID DUM

FREQUENCY ANALYSIS FOR VARIABLE* LEAD

TOTAL POPULATION	
NO. OF VALUES:	302
MAXIMUM VALUE:	1.613
MINIMUM VALUE:	.602
MEAN:	1.0897050
ST. DEVIATION:	.18093444
ST. ERROR:	.16603968

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FIGURE V



FREQUENCY ANALYSIS LOG OF ELEMENTS CU MO NI PB ZN GRID DUM

FREQUENCY ANALYSIS FOR VARIABLE= ZINC

TOTAL POPULATION	
NO. OF VALUES:	311
MAXIMUM VALUE:	2.193
MINIMUM VALUE:	.778
MEAN:	1.5603265
ST.DEVIATION:	.22683056
ST.ERROR:	.14353964

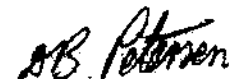
CANADIAN SCIENTIFIC SERVICES CANADA, LTD.

DISCUSSION OF RESULTS:

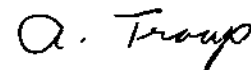
Examination of the results of the soil survey indicate there to be no significant soil anomaly for any of the elements of interest. Although small erratic zones of anomalous copper values and/or anomalous lead values occur throughout the survey area, none of these zones is of sufficient size or magnitude to suggest the presence of economic quantities of these metals. Two relatively large zones of higher nickel values occur in the north-east quarter of the sample area. These zones coincide with an area of considerable ultrabasic float and therefore are believed to represent a higher nickel background developed over a body of ultrabasic material.

CONCLUSIONS AND RECOMMENDATIONS:

The results of this survey have given no indication of there existing an important deposit of any of the metals of interest, within the survey area. Therefore, no further exploration activity is recommended for this property.



D.B. Petersen



A.G. Troup

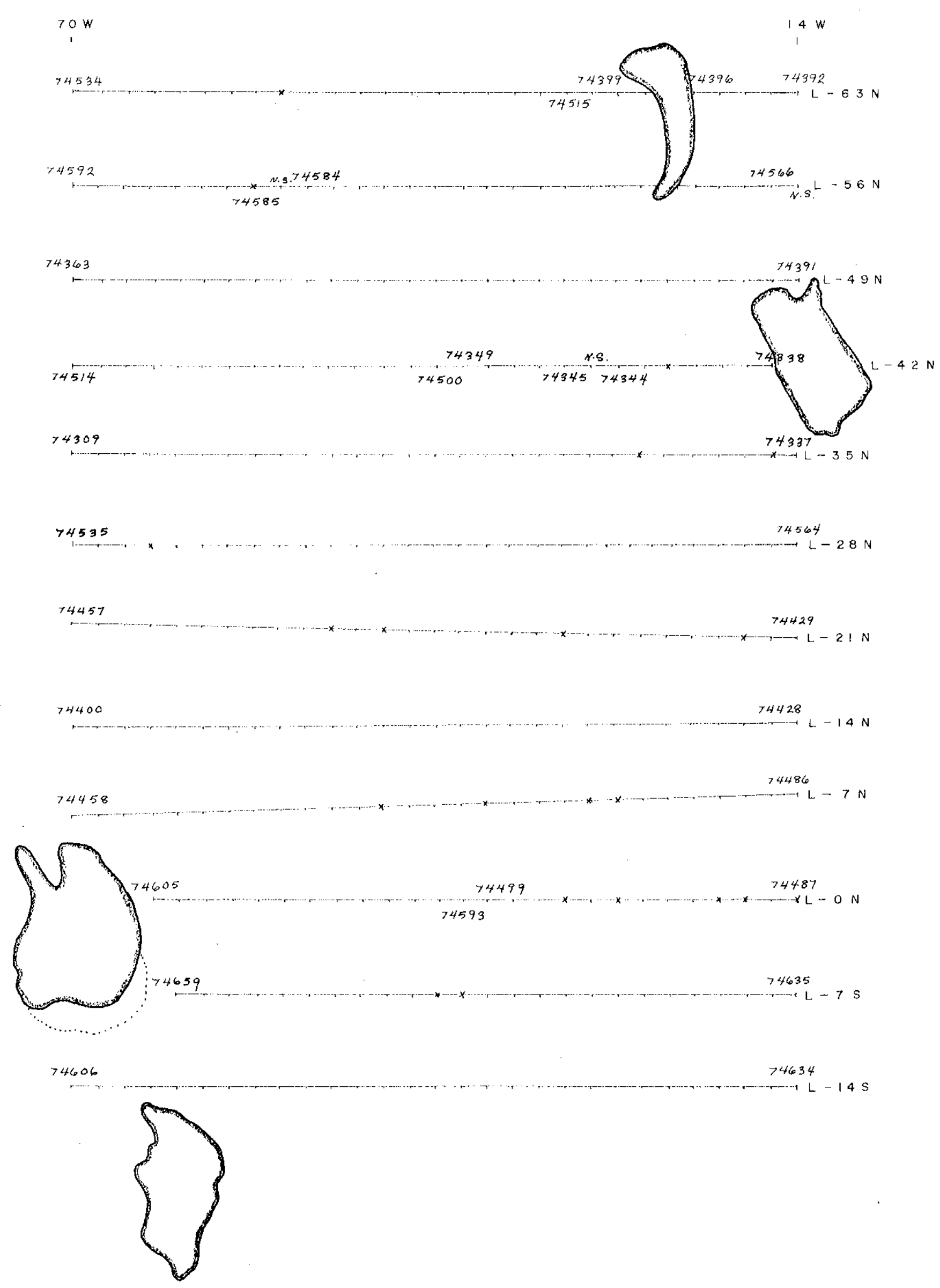
:aw
October / 1973

QUALIFICATIONS - A. TroupAcademic

1967 Bsc. Honours Geology: McMaster University, Ontario
1969 Msc. Geochemistry: McMaster University, Ontario

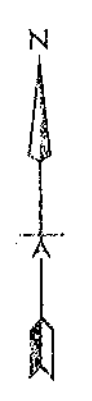
Practical

1964-1966 Geological Mapping and
Geochemical Exploration: Student Vacation Work
1967-1973 Geologist-Geochemist: Placer Development and
Rio Tinto Canadian
Exploration Limited.



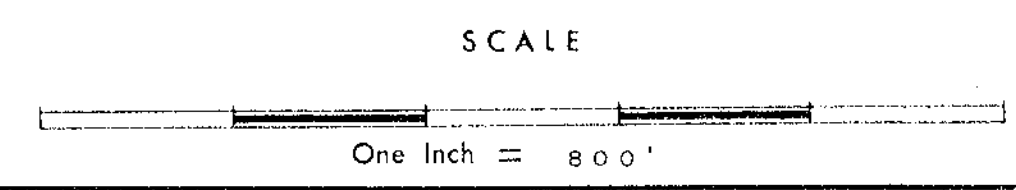
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4689 MAP #2

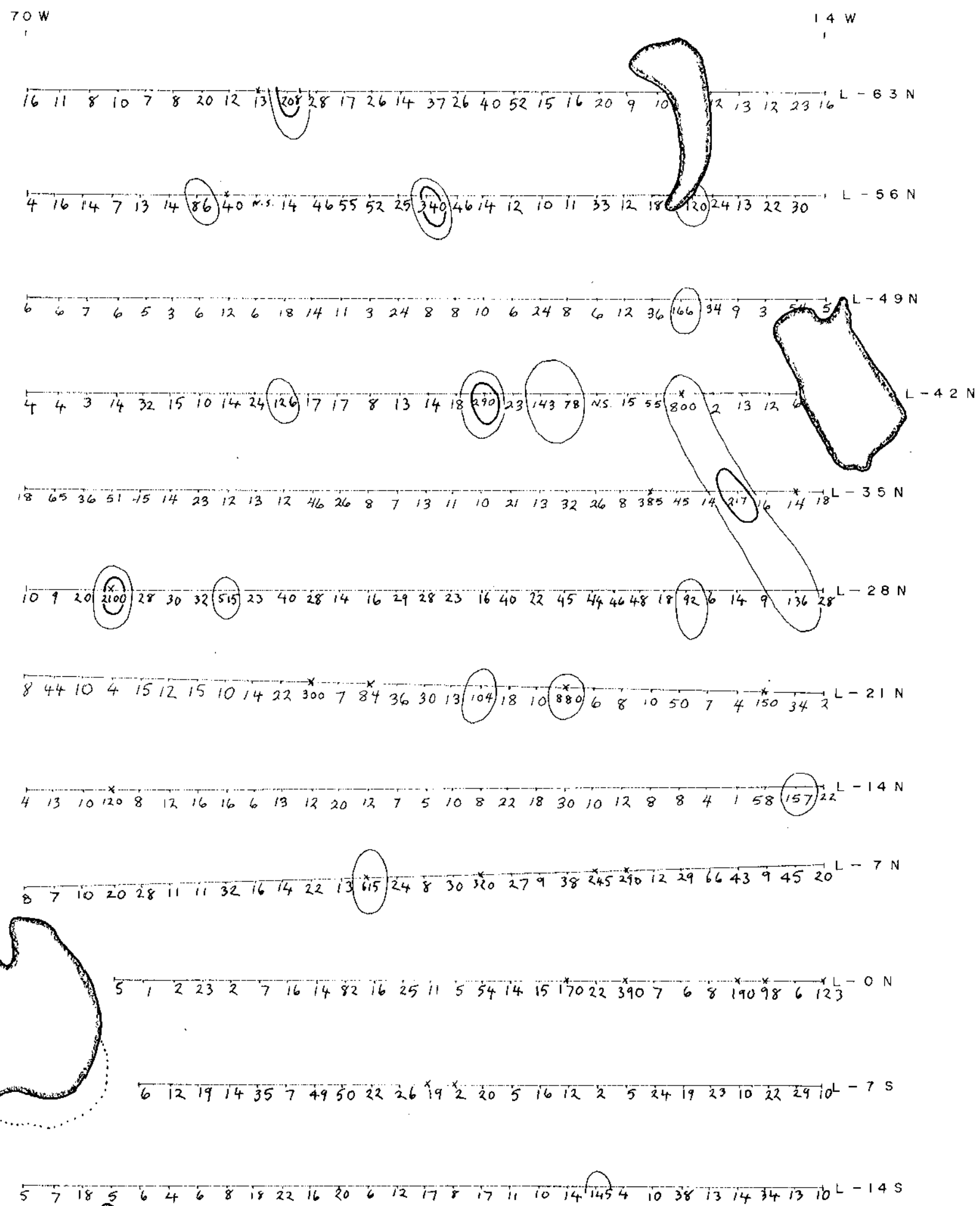


N.T.S.
92 - P - 8 W

S.B. Peterson



RIO TINTO CANADIAN EXPLORATION LIMITED		
DUM LAKE		
SOIL SAMPLE LOCATION MAP		
AUG. 73	LH/rh	DWG. L-7189



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M3

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NO. 4689 MAP #3

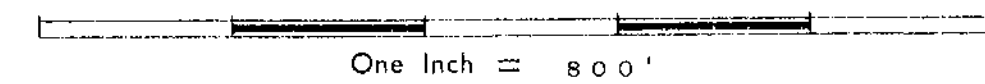
LEGEND

- ppm Cu contour 76 ppm Cu in 'B' Soil horizon
440 ppm Cu in 'AH' Soil horizon
- ppm Cu contour 174 ppm Cu in 'B' Soil horizon
1060 ppm Cu in 'AH' Soil horizon
- x Denotes 'AH' Soil horizon Sample

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92 - P - 8 W

SCALE



BB. Peterson

RIO TINTO CANADIAN EXPLORATION LIMITED

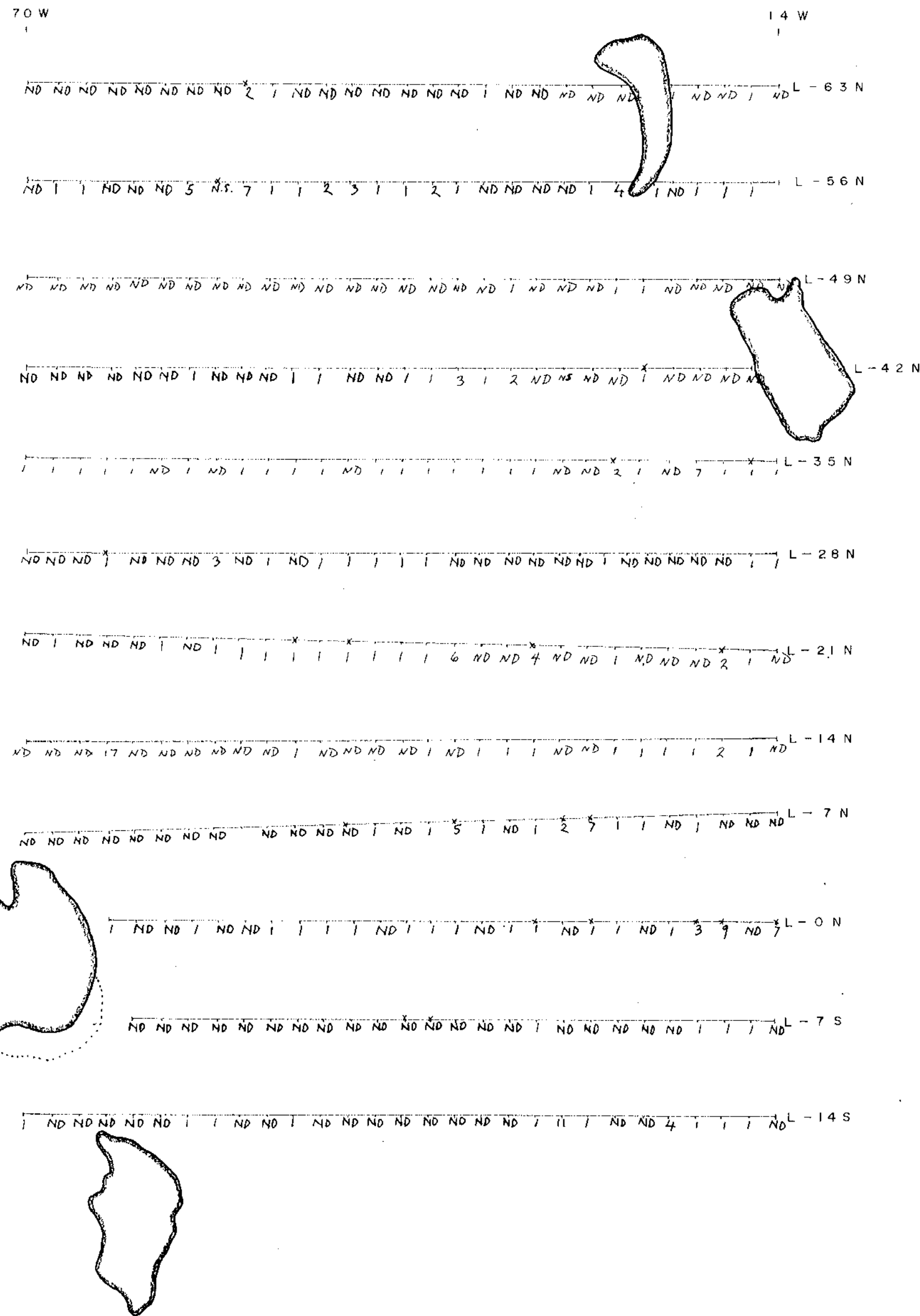
DUM LAKE

GEOCHEMICAL
SOIL SAMPLE RESULTS
Cu in ppm

AUG 73

LH / FH

DWG. GC-7190



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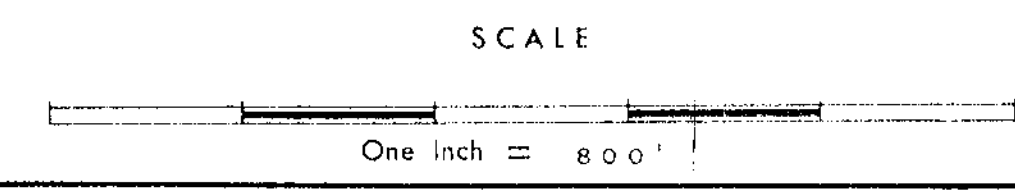
Map of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4689 MAP #4



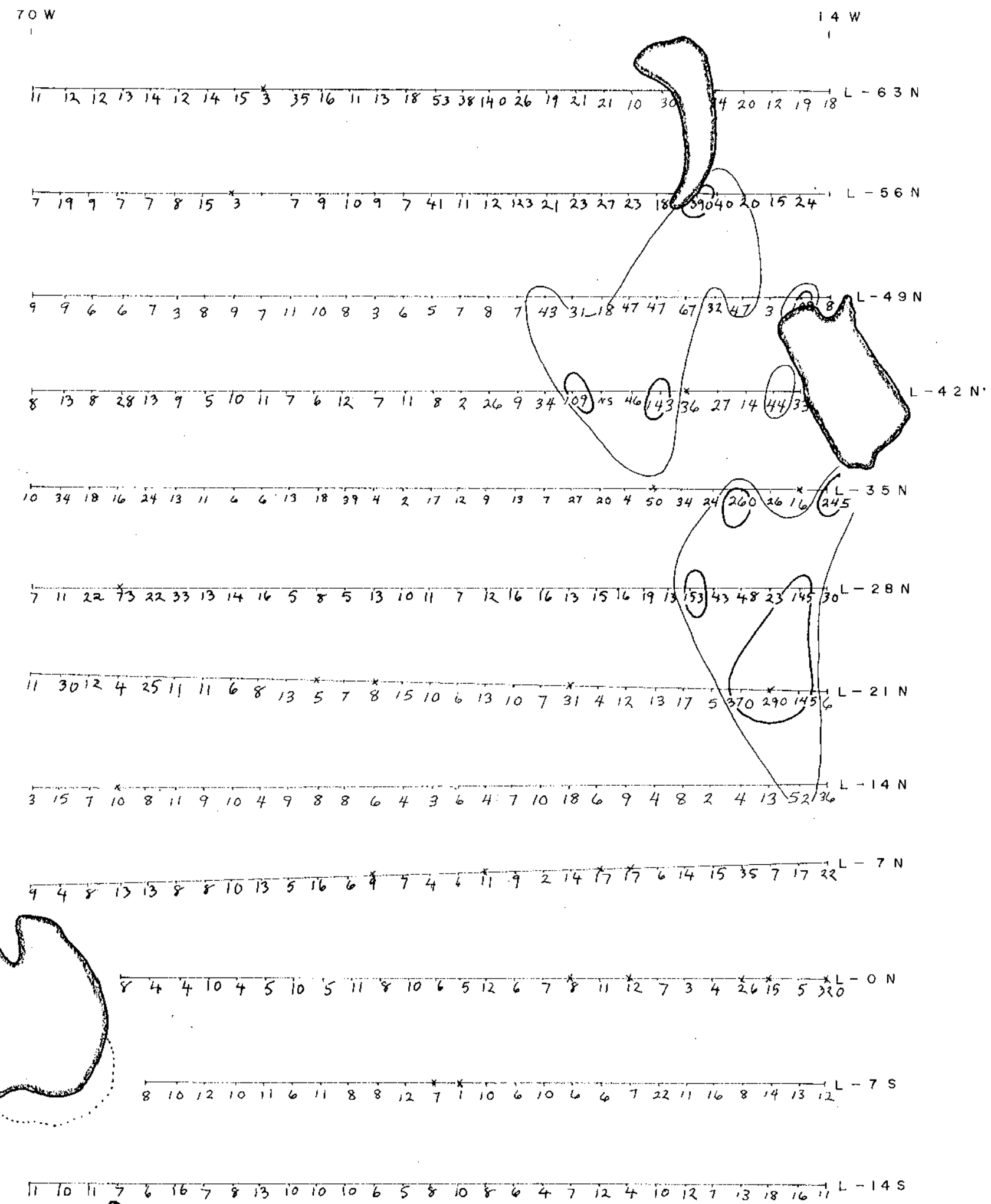
LEGEND
 x Denotes 'AH' Soil horizon Sample

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 92 - P - 8 W

S.B. Peterson



RIO TINTO CANADIAN EXPLORATION LIMITED		
DUM LAKE		
GEOCHEMICAL		
SOIL SAMPLE RESULTS		
Mo in ppm		
AUG 73	LH/rh	DWG. GC-7191



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M5

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NO. **4689** MAP #5

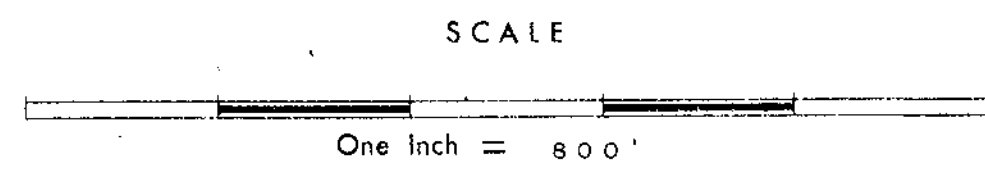


LEGEND

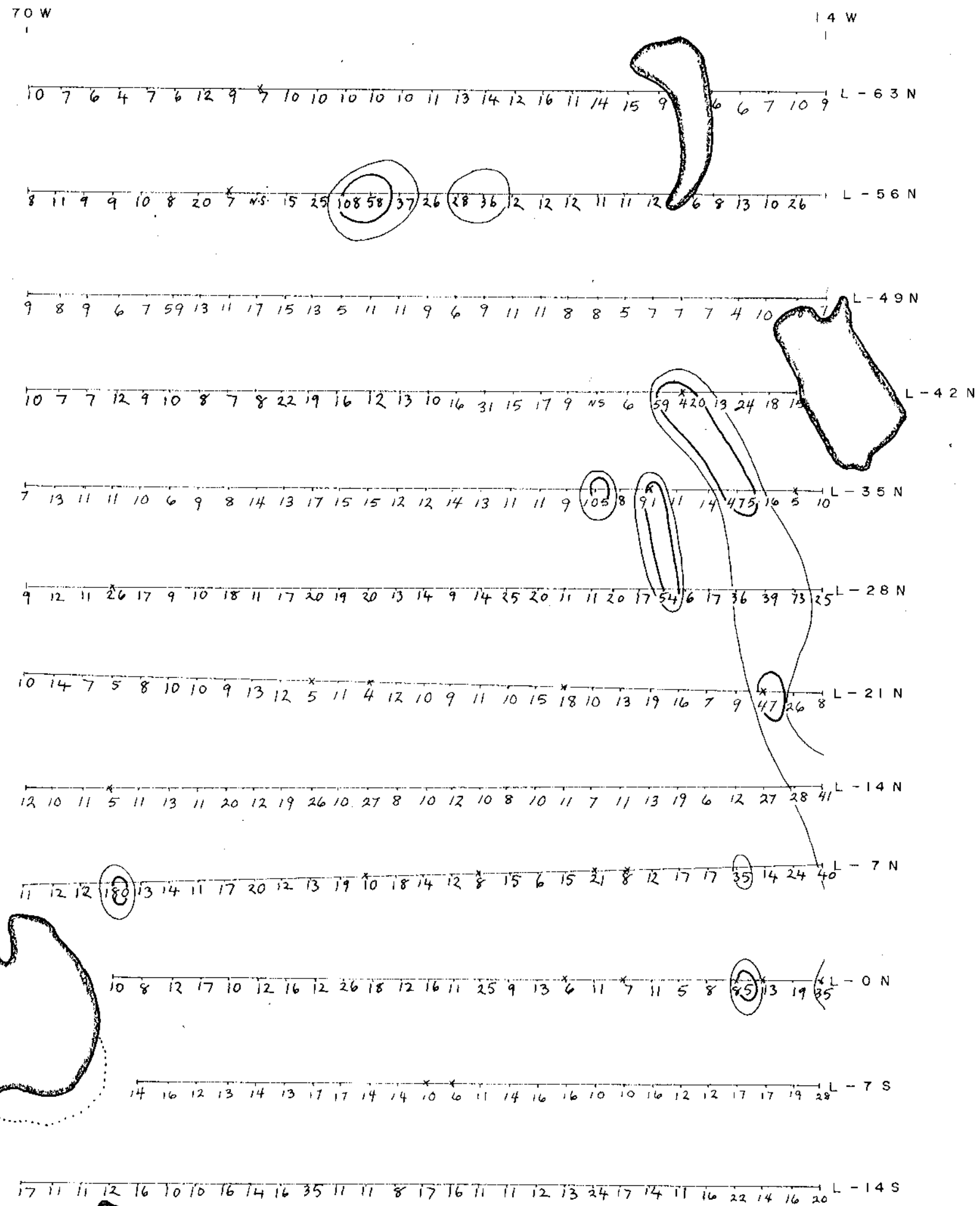
- ppm Ni contour 39 ppm Ni in 'B' Soil horizon
54 ppm Ni in 'AH' Soil horizon
- ppm Ni contour 73 ppm Ni in 'B' Soil horizon
154 ppm Ni in 'AH' Soil horizon
- x Denotes 'AH' Soil horizon Sample

N.T.S.
92 - P - 8 W

B.B. Petersen



RIO TINTO CANADIAN EXPLORATION LIMITED		
DUM LAKE		
GEOCHEMICAL SOIL SAMPLE RESULTS Ni in ppm		
AUG 73	LH / rh	DWG. GC - 7192



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LEGEND

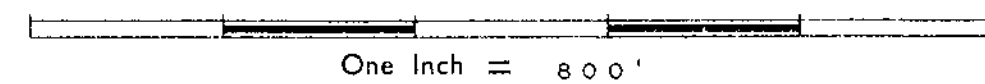
- ppm Pb contour 28 ppm Pb in 'B' Soil horizon
 17 ppm Pb in 'AH' Soil horizon
- ppm Pb contour 43 ppm Pb in 'B' Soil horizon
 27 ppm Pb in 'AH' Soil horizon
- X Denotes 'AH' Soil horizon Sample

N.T.S.

92 - P - 8 W

J.B. Peterson

SCALE



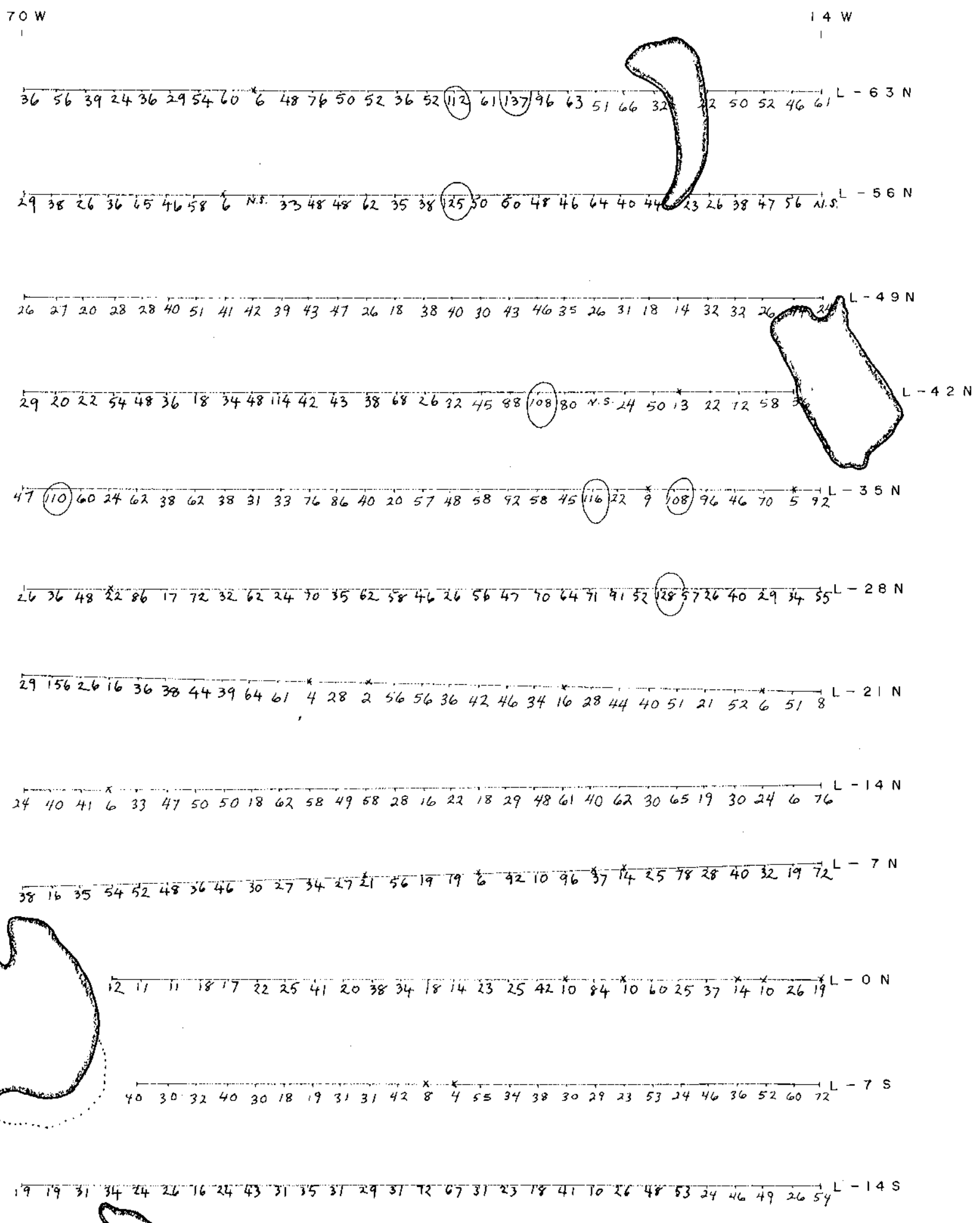
One Inch = 800'

RIO TINTO CANADIAN EXPLORATION LIMITED

DUM LAKE

GEOCHEMICAL
 SOIL SAMPLE RESULTS
 Pb in ppm

AUG. 73 LH/rh DWG. GC-7193



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M7

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NO. **4689** MAP #7

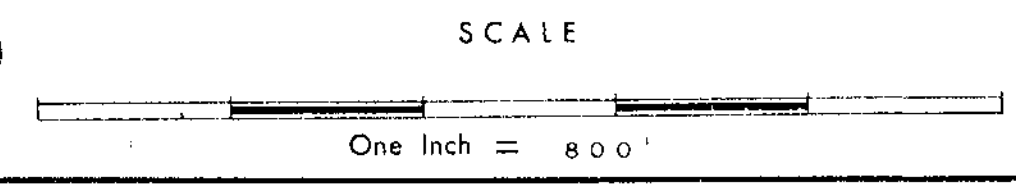


LEGEND

- ppm Zn contour 108 ppm Zn in 'B' Soil horizon
70 ppm Zn in 'AH' Soil horizon
- ◌ ppm Zn contour 182 ppm Zn in 'B' Soil horizon
172 ppm Zn in 'AH' Soil horizon
- X Denotes 'AH' Soil horizon Sample

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RIO TINTO CANADIAN EXPLORATION LIMITED		
DUM LAKE		
GEOCHEMICAL		
SOIL SAMPLE RESULTS		
Zn in ppm		
AUG. 73	LH/rh	DWG. GC - 7194