EXPLORATION

WESTERN DISTRICT

N.T.S. 94 G/12

# SOIL GEOCHEMICAL SURVEY ON THE CAY CLAIMS

LIARD M.D.

February 14, 1973

N.L. Szabo

PERIOD OF WORK

AUGUST 1ST TO JANUARY 31ST, 1973

Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO 4201

MAP

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## SOIL GEOCHEMICAL SURVEY ON THE CAY CLAIMS

#### SUMMARY

A survey consisting of soil sampling was carried out on the Cay group. 980 samples were collected and a concurrent lead zinc anomaly was outlined.

#### INTRODUCTION

The Cay group, consisting of 52 claims and two fractions, is located between the Prophet and Muskwa Rivers, approximately 140 miles north of Mackenzie, British Columbia. Access was by fixed wing from Mackenzie to Redfern Lake (115 miles) and from Redfern to the Cay group by helicopter (approximately 25 miles). No previous development was done on the property.

## GEOLOGY

The Cay group is underlain by the Besa River, Dunedin and Stone formations of Devonian age. The Besa River Formation consists of non-calcarious black shales. Conformably underlying the Besa River is the Dunedin Formation. This formation consists of very finely crystalline limestone, dark gray to black, well bedded in one to two foot beds, and brecciated in places. The Stone Formation conformably underlies the Dunedin Formation. This formation on the property is a finely to densely crystalline, light gray to medium gray, well bedded dolomite. On the property this sequence is folded into an anticline plunging steeply to the west. Low grade mineralization with occasional high grade pods has been noted in the Dunedin Formation.

### GEOCHEMISTRY

#### Method

The survey was conducted by L. Sostad and assistants under the supervision of the writer. Baselines were put in by chain and compass and the lines were by pace and compass. Lines were spaced at 400' intervals and the sample spacing along the lines were at 200' intervals. Samples were collected from the  $B_1$  horizon.

#### Sample Preparation and Analysis

All samples were first dried then sieved. The -80 mesh fraction was then analyzed for hxPb, hxZn, hxAg and hxMn by atomic absorption, using a hot nitric acid attack. Statistical analysis of the data gave the following thresholds (X + 2S):  $Pb_t = 49$  ppm,  $Zn_t = 205$  ppm, and  $Ag_t = 0.9$  ppm. No threshold was derived for Mn.

## DATA PRESENTATION

| Plate 1 | -        | Location Map, Cay Claims | 1" approx. = 82 Miles  |
|---------|----------|--------------------------|------------------------|
| Plate 2 | -        | Lead Geochemistry        | 1'' = 500'             |
| Plate 3 | -        | Zinc Geochemistry        | $1^{11} = 500^{\circ}$ |
| Plate 4 | -        | Silver Geochemistry      | 1'' = 500'             |
| Plate 5 | <b>-</b> | Manganese Geochemistry   | $1^{11} = 500^{\circ}$ |

#### Results

Anomalous results in both lead and zinc were found to extend for five claim lengths. The lead and zinc anomalies showed fairly good correlation whereas the silver anomalies turned out to be small and scattered and showed only a very rough correlation with the other anomalies. None of the metals showed correlation with the manganese content of the samples.

#### CONCLUSIONS

Coincident lead zinc anomalies were located on the property, however, without a more detailed knowledge of the geology on the property the significance of these anomalies is not known.

Submitted by N.L. Szabo

Endorsed for

Release by

W.T. Irvine, P. Eng.

Manager,

Western District,

Exploration

#### ATTACHMENTS

l" approx. = 82 Miles Plate 1 - Location Map, Cay Claims

Plate 2 - Lead Geochemistry 1" = 500

1'' = 500'Plate 3 - Zinc Geochemistry Plate 4 - Silver Geochemistry 1" = 500'

1" = 500Plate 5 - Manganese Geochemistry

Exhibit "A"

February 14, 1973

NLS/mjw

## DISTRIBUTION

Administration (1) Western District (1)

Mining Recorder (2)

#### DOMINION OF CANADA:

STATUTORY DECLARATION RELATING PROVINCE OF BRITISH COLUMBIA. In the Matter of SURVEY ON THE CAY CLAIMS, LIARD MINING DISTRICT.

#### ł. NICHOLAS LOUIS SZABO

City of Vancouver

in the Province of British Columbia, do solemnly declare that

- (1) Copies of a report regarding a geochemical survey on certain claims situated in the Liard Mining Division are being filed with the Mining Recorder in Vancouver.
- (2) Attached hereto, and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a Statement of Expenditures incurred in connection with the geochemical survey of the said claims showing in addition the period during which those making the said survey performed their work.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 20th Michigan & Szabo day of February 1973, A.D.

February day of

lissioner for taking Affidavits within British Columbia or y Public in and for the Province of British Columbia.

#### COMINCO LTD.

## EXPLORATION

## WESTERN DISTRICT

## EXHIBIT "A"

## COST PER GEOCHEMICAL SAMPLE

CAY CLAIMS

## LIARD MINING DISTRICT

 $\frac{\text{N.T.S.} - 94 \text{ G/12}}{123^{\circ} 55' \text{ W, } 57^{\circ} 43' \text{ N}}$ 

| Wages for N.L. Szabo, Project Geologist 5 man days at \$80/day |         | \$ 400.00  |
|--|---------|------------|
| 5 man days at 4007 day   |         | Ψ +00.00   |
| Wages for L. Sostad and D. Pighin 14 man days at \$57/day      |         | \$ 798.00  |
| 14 man days at \$377 day                                       |         | \$ 790.00  |
| Wages for R. Beaty and M. Rickenbak                            |         | 4 (00 00   |
| 10 man days at \$42/day  |         | \$ 420.00  |
| Drafting, 3 man days at \$45/day                               |         | \$ 135.00  |
| Transportation, fixed wing and helicopter                      |         | \$ 950.00  |
| Domicile   |         | \$ 400.00  |
| Report Writing   |         | \$ 100.00  |
| Analythical Costs - 933 Samples at \$2.15                      |         | \$2,005.95 |
| - 47 Samples at \$1.90   |         | \$ 89.30   |
|  | TOTAL - | \$5,298.25 |
|  |         |            |

SAMPLING AND ANALYSIS WERE DONE BETWEEN AUGUST 1st, 1972 TO JANUARY 31st, 1973

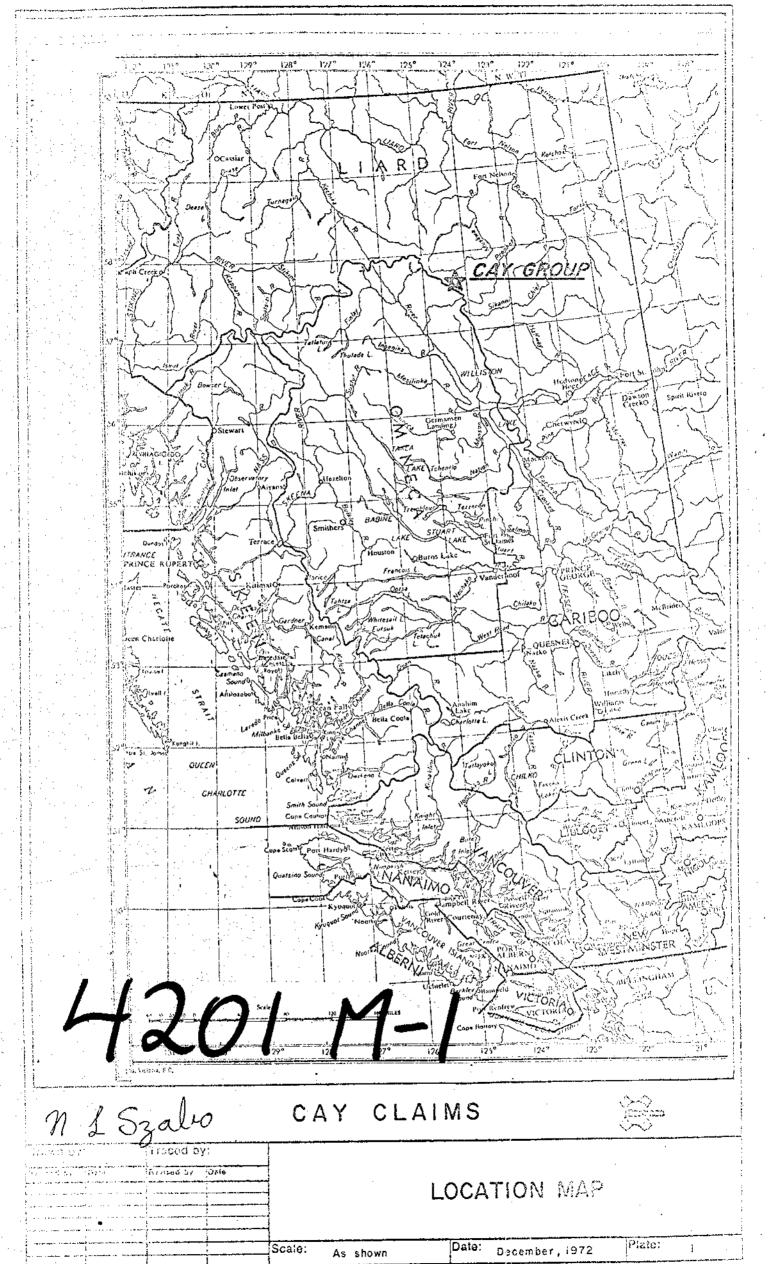
Signed: Michelas 1 Szabo, N. L. Szabo,

Geochemist

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF NICHOLAS L. SZABO

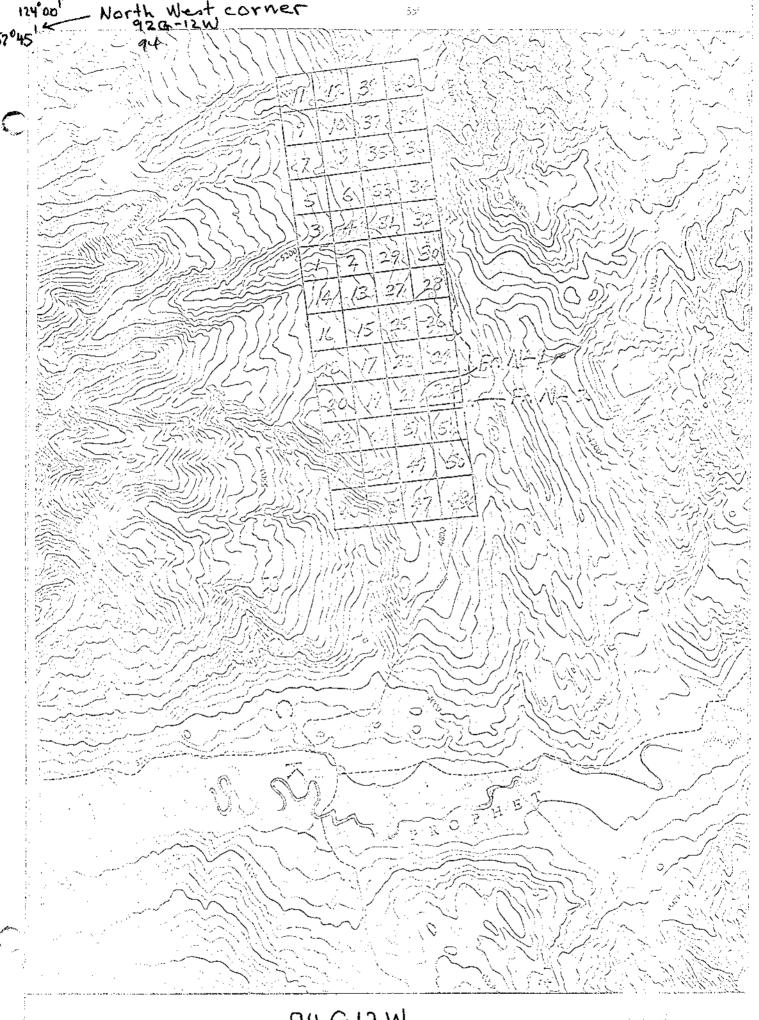
DECLARED BEFORE ME THIS 20 DAY OF February 1973.

A COMMISSIONER FOR TAKING
AFFIDAVITS FOR BRITISH COLUMBIA



THAT THAT I STEEL AND

210 0010



94 G 12W

CAY CLAIMS

CAY 1-52 CAY FRACT. 122

## COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

I have reviewed N.L. Szabo's report "Soil Geochemical Survey on the Cay Claims, Liard Mining District", and concur with the interpretation and conclusions.

D.W. Heddle, P. Eng. Chief Geologist

Western District, Exploration

Department of Mines and Petroleum Resources

ASSESSMENT REPORT

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

#### STATEMENT OF QUALIFICATIONS

N. L. Szabo was responsible for conducting the geochemical survey described herein. Mr. Szabo has received his M.Sc. from the University of Connecticut and expects to receive his Ph.D. in the coming academic year from the University of New Brunswick. He has worked with the New Brunswick Mines Branch and the Geological Survey of Canada, and I consider him a competent and experienced geochemist.

Signed:

J. Richardson, P. Eng.

Department of

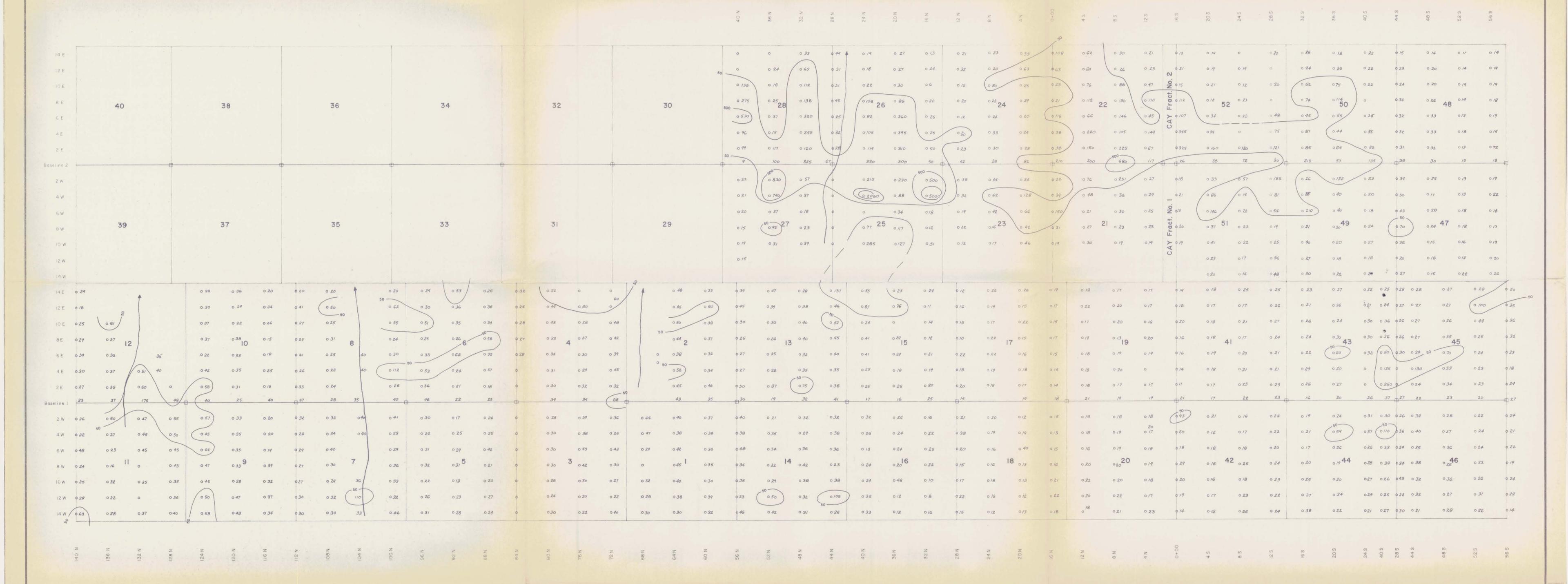
Mines and Petroleum Resources

A SESSMENT REPORT

NO 4201

MAP





4201 M-2

IOCH on

— 1000 p.p.m. — 500 p.p.m. — 50 p.p.m. (threshold)

NOTE:

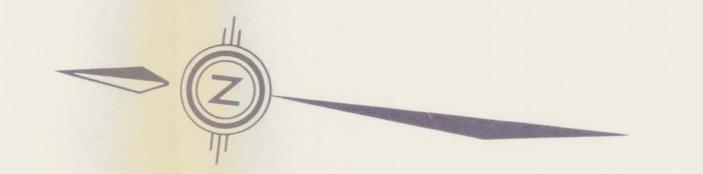
To accompany a report by N L Szabo. ML Szabo

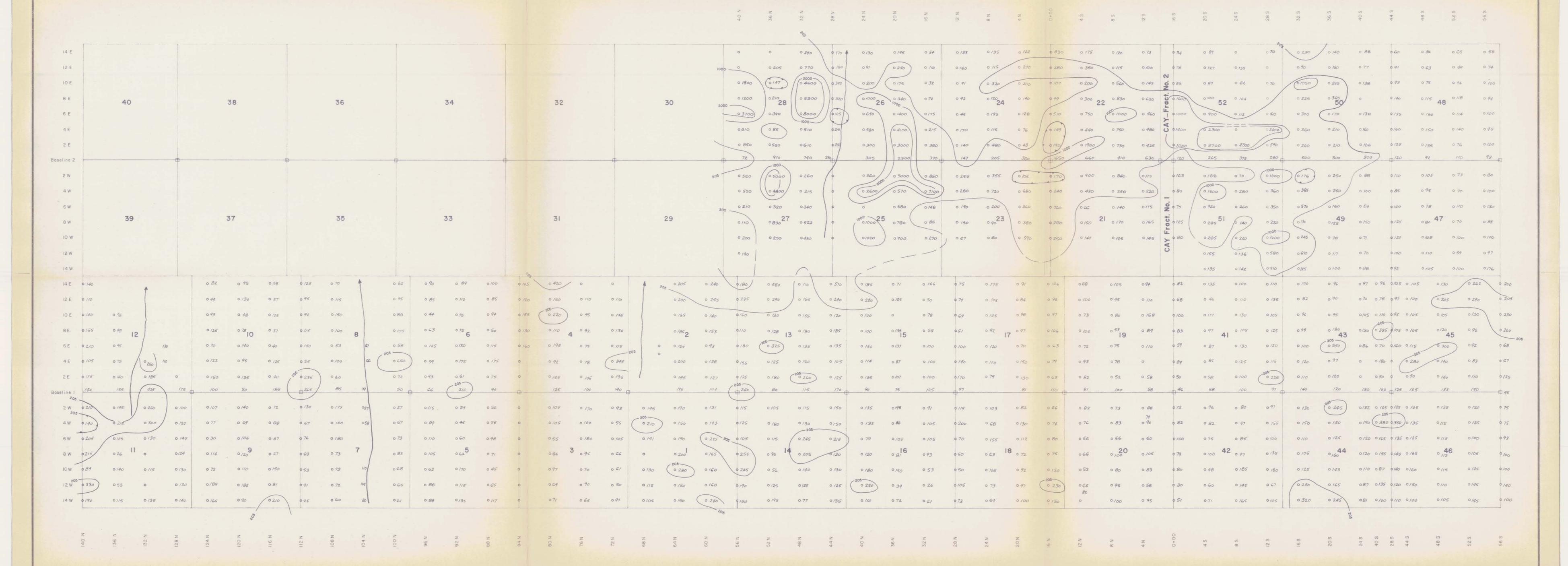
Values are in parts per million

Comince

CAY GROUP

SOIL GEOCHEMISTRY (Pb. Scale: | " = 500" Date: November , 1972





4201 M-3

—— 2000 р.р.т. —— 1000 р.р.т. —— 205 р.р.т. (threshold)

NOTE:

To accompany a report by N.L. Szabo N.L. Szabe

Values are in parts per million

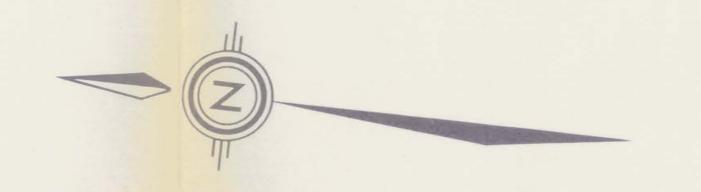
Comince

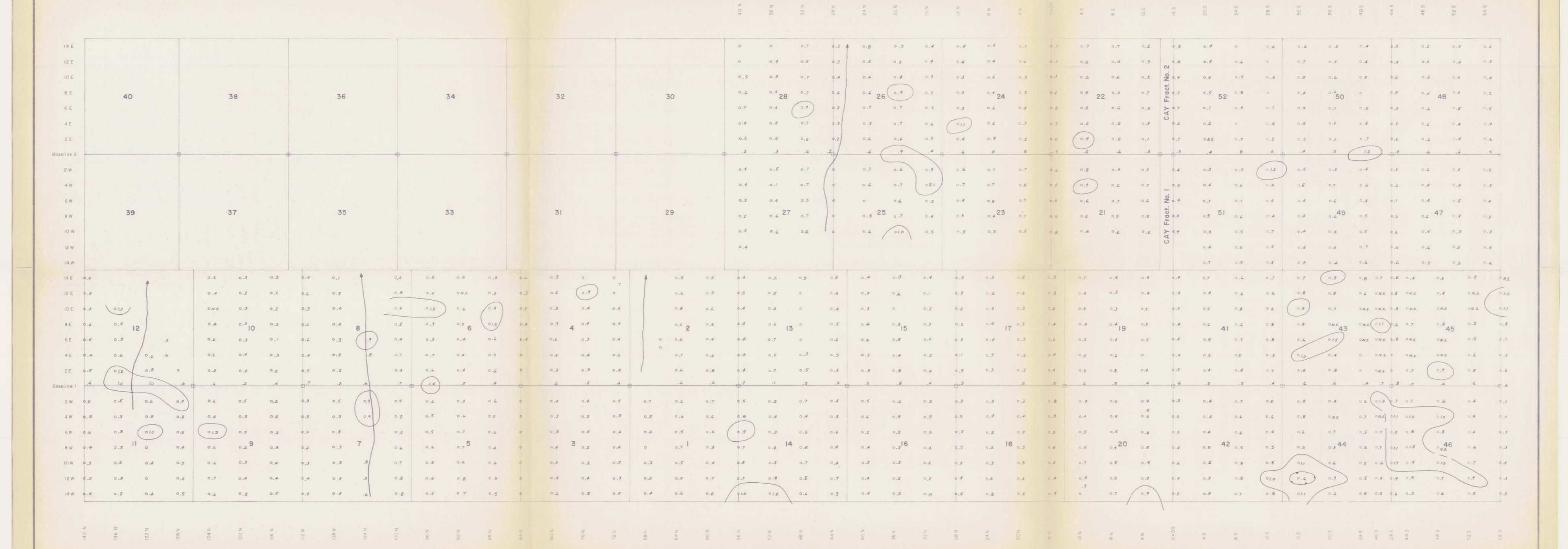
Drawn by: R.J.B. Traced by: T.Bjorgan
Revised by Date Revised by Date

Scale:

CAY GROUP SOIL GEOCHEMISTRY (Zn.)

ale: | " = 500' Date: November, 1972 Plate:





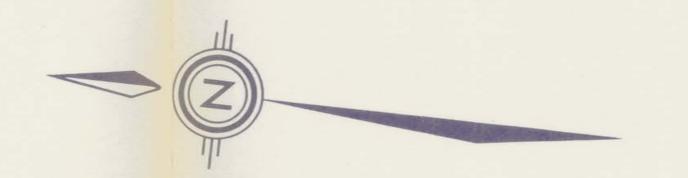
O 9 p.p.m. — threshold

NOTE
To accompany a report by NL Stabo ML Stabo Values are in parts per million

Orawn by R.J.B. Traced by T. Bjorgan
Revised by Date Revised by Oate CAY GROUP

SOIL GEOCHEMISTRY (Ag.)

1" = 500' Date: November, 1972 Plate: 4



| 14 E       |                |   |   | 0 0 0 300 0 120 0 0 100 0  |
|------------|----------------|---|---|--|
| 12 E       |                |   |   | 0 0170 010 050 0100 090 0200 050 0310 090 0100 080 0150 0 0190 080 0140 0130 050 090 060   |
| 10 E       |                |   |   | 0 500 0/20 0 250 0/80 0 100 0    |
| 8 E        | 40             | 38 36                                     | 34 32   | 30 ° 1/00   |
| 6 E        |                |   |   | 0600 0230 0/70 060 0250 0250 050 0160 040 0/60 0260 > 0/10 0/90 060 0/50 0320 0/50 080 0/30 0/70 070 070   |
| 4 E        |                |   |   | 0270 056 0370 0180 040 040 040 040 040 040 040 040 040 0   |
| 2 E        |                |   |   | 0 270 0 100 0 440 0 60 0 150 0 80 0 140 0 260 0 300 0 35 0 300 0 320 0 210 0 60 0 460 0 10.5, 0 130 0 200 0 240 0 120 0 250 0 250 0 260 0 190  |
| Baseline 2 |                |   |   | 35 250 260 /30 / /80 240 260 370 330 //0 310 320 150 /80 160 220 140 150 210 130 86  |
| 2 W        |                |   |   | 0/10 0 240 0 280 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   |
| 4 W        |                |   |   | 0 260 0 240 0 210 0 0 740 0 310 0 170 0 180 0 450 0 110 0 17   |
| 6 W        | 30             | 37 35                                     | 33 31   | 29 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28  |
| 8 W        | 35             | 37  |   | 5/20 5/80 5/80 5/80 5/80 5/80 5/80 5/80 5/8  |
| 10 W       |                |   |   | 0 60 0 190 0 100 0 0 80 0 70 0 220 0 390 0 140 0 240 0 240 0 150 0 370 0 140 0 190 0 170 0 130 0 130 0 70 0 80   |
| 12 W       |                |   |   | 0 90 0/20 0-300 0/80 0/50 0/10 0/90 0 210 0 80 0 80<br>0/70 0 80 0/40 0/50 0/40 0700 0 220 0/40 0 370 0 700  |
| 14 W       |                |   |   | 0 10 030 020 0430 0250 0120 0350 0100 0200 020 020 020 020 020 020 020   |
| 14 E       | <b>†</b>       |   | 0/50 0 550 0 440 0 520 0 /60 0 1400 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 800  |
|            | 0 420 0 190    |   | 0240 0500 0650 0520 \$200 0360 07                                   |  |
|            | 0 190 0 340 12 |   | 0/70 0/00 0250 0250 0 /60 0 250 0 2                                 |  |
| TO THE R.  | 12             | 10  | 0170 0170 0410 0230 0350 0420 02                                    | 10   |
|            | 950 0650 0 150 |   |   | 0 0 400 0 460 0 300 0 120 0 300 0 140 0 75 0 60 0 40 0 130 0 450 0 90 0 140 0 90 0 90 0 90 0 90 0 90 0   |
|            | 240            |   |   | 0 270 0 350 0 290 0 430 0 480 0 290 0 80 0 170 0 180 0   |
|            |                |   |   | 200 B 320 230 200 50 200 120 B 60 80 160 B 150 B 250 280 220 B 130 160 210 B 90 110 170 60 640 290 1100 B  |
| 2 W        | 0/40 0360 0/50 | 0 240 0 340 0 380 0 100 0 90 0 630 1400   | 0.350 0.250 0.310 0.300 0 0.140 0.2                                 | 0 0600 0100 0350 0200 0230 095 0210 0190 0100 0230 070 0450 0300 0350 0450 0300 0350 0450 0300 0350 0450 0300 0350 0450 0300 0350 0450 0300 0350 0450 0300 0350  |
| 4 W        | 070 0130 0210  | 0 270 0 320 0 230 0 50 0 80 0 140 0       | 0220 0350 0480 0450 0 02/0 02                                       | 250<br>0 0 1200 0 200 0 330 0 360 0 260 0 430 0 110 0 180 0 130 0 230 0 240 0 170 0 90 0 320 0 160 0 250 |
| 6 W        | 260 0/50 0/50  | 0350 0220 0120 0300 0120 0440             | 0200 02000 0950 0550 0 0200 0                                       | 0 0 300 0 330 0 400 0 380 0 290 0 320 0 350 0 400 0 170 0 100 0 450  |
| 8 W        | 250 0 410 11 0 | 0 250 0 250 0 160 9 0 200 0 0 220 0 160 7 | 0 460 0 310 0 520 0 350 0 0 150 <b>3</b> 0                          | 0 0 380 0 0 320 0 150 0    |
| 10 W       | 230 0 220 0 50 | 0 2500 0 220 0 80 0 340 0 270 0 150 170   | 0 400 0/60 0 450 0 600 0 0 750 0                                    | 0 0 250 0 190 0 330 0 110 0 230 0 190  |
| 12 W       | 1750 0 110 0   | 0300 0280 0320 0350 0250 0190 370         | 0220 0600 0280 01100 0 0380 0                                       | 0 0 410 0 250 0 360 0 290 0 220 0 370 0 110 0 220 0 350 0 20 0 150   |
| 14 W       | 520 0230 0260  | 0 250 0 276 0 /30 0 450 0 480 0 350 400   | 0 200 0 420 0 530 0 350 0 0 850 0 /                                 | , 0300 0270 0/00 090 0/60 0/80 0/00 080 0330 0/30 0/00 080 0300 0/30 0/00 080 0300 0/30 0/00 080 0/30 0/00 080 0/30 0/00 0/0   |
|            |                |   |   |  |

NOTE:
To accompany a report by N.L. Szabo M.L. Szabo
Values are in parts per million

|                  |                       | Cominco                                     |
|------------------|-----------------------|---|
| Drawn by: R.J.B. | Traced by: T. Bjorgan |   |
| Revised by Date  | Revised by Date       | CAY GROUP                                   |
|                  |                       | SOIL GEOCHEMISTRY (Mn.)                     |
|                  | Scale                 | " = 500"   Date: November   1972   Plate: 5 |