



32004SE9005 2.2332 SKEAD

010

Report on Geochemical Survey

Northern part of Skead Township, Ontario

Introduction

Soil sampling on previously cut lines was carried out through the summer and fall of 1976 on a block of claims in lots 1 to 10 Concessions 5 and 6 and lots 8 and 9 Concession 4 Skead Township. The samples were analysed for copper, nickel, zinc and silver or total heavy metals.

Location Access and Ownership

The property is located in the north part of Skead Township, Larder Lake Mining Division, District of Temiskaming Ontario. The soil sampling covers all or parts of 63 claims beneficially owned by R.A. MacGregor, 134 Palace Drive, Sault Ste. Marie, Ontario. The claims are: L341838-341840; 374771-374779; 342531; 396263-396264⁴; 396274-396287; 400700-400708; 400711-400713; 400715; 401395-401397; 415026-415027; 442037-442038; 442040⁴; 442045-442053; 442055-442058; 442060-442061; 447537; 447542; 476671-476672; 476684-476685; all inclusive. (Some are recorded in the name of L. Lacasse, Larder Lake, Ontario. Highway 624 passes through the claims about 8 miles south of Larder Lake, Ontario. Old logging roads and trails lead to most parts of the claims from the highway.

Previous Exploration

Gold was discovered during or before the 1920's and exploration carried out at that time. There are on the property a number of shafts; one to 500 feet with some lateral develop-

ment, one to 100 feet and at least 3 to 25 feet, as well as many old surface pits and trenches. Very little work appears to have been carried out since the late 1920's.

Geology

The property is underlain by an assemblage of volcanic rocks ranging in composition from felsic (rhyolites) to ultramafic (serpentinized) and intruded by small stocks ranging in composition from quartz porphyry to coarse hornblendite. Carbonatization is common along a north-west trending zone previously named the Lincoln-Nipissing Shear Zone. The carbonatization ranges from faintly carbonated rocks, retaining their original structure to typical green carbonate with quartz veining identical to that seen along the 'Larder Lake Break'.

Sampling Procedure

Samples were taken from the 'B' horizon at 100 feet intervals along lines cut at a spacing of 400 feet. Samples were obtained by an auger at a depth of 12"-18". The samples were placed in plastic bags and numbered in the field. The samples were later dried, examined and placed in paper envelopes. Some were screened before shipment, while some were screened by the analytical laboratory.

Analysis

One lot of samples were screened to -80 mesh, decomposed by hot aqua regia and analysed for copper, nickel, zinc, and some for silver by atomic adsorption at Assayers Ltd.

Rouyn Quebec.

The balance of the samples were screened to -80 mesh, and checked colorimetrically with dithizone and ammonium citrate as a buffer for total heavy metals by Oyltjec Laboratories, Toronto, Ontario.

Results

The results of analysis in p.p.m are shown on the enclosed maps. In selecting threshold values the results of a geochemical survey by the Ministry of Natural Resources in Haldiday and Midlothian townships was used as a guide for samples analysed by atomic adsorption. This survey covers an area with very similar if not identical geology and while the number of samples taken were much fewer than in this survey, the M.N.R. survey covered a much larger area and would therefore be less likely to be affected by a large number of samples from mineralized areas.

Copper

Using the M.N.R. survey as a guide 26 p.p.m was selected as the threshold and values of 26 to 50 p.p.m are considered weakly anomalous; 51 to 100 p.p.m as moderately anomalous and over 100 p.p.m as strongly anomalous. Highest value obtained was 710 p.p.m near known sulphides. For comparison the highest value obtained in the M.N.R. survey was 46 p.p.m also near a known sulphide showing. Weakly anomalous samples comprised 14.5% of the samples, moderately anomalous - 3% and strongly anomalous 0.9% of the 1548 samples analysed.

Nickel

Using the M.N.R. survey as a rough guide 76 p.p.m was selected as the threshold and values of 76-150 p.p.m are considered weakly anomalous; 151-300 p.p.m are moderately anomalous and over 300 p.p.m as strongly anomalous. It had been expected that the highest nickel values would be along or down ice from the serpentinites, but this has not proved to be the case. Highest value obtained was 938 p.p.m. in an area of felsic volcanics with no known sulphide showings nearby. For comparison the highest value obtained in the MNR survey was 960 p.p.m. and lies down ice from serpentinites. Weakly anomalous samples comprise 10.9% of the samples; moderately anomalous 2.3% and strongly anomalous 1.1% of the 1548 samples analysed.

Zinc

Using the M.N.R. survey as a guide 51 p.p.m. was selected as the threshold and values of 51-100 p.p.m. are considered weakly anomalous; 101-200 p.p.m. as moderately anomalous and over 200 p.p.m. as strongly anomalous. Highest value obtained was 4300 p.p.m, which is on a geophysical anomaly. For comparison the highest value obtained in the M.N.R. survey was 183 p.p.m. near a sulphide showing. Weakly anomalous samples comprise 21.5% of the samples, moderately anomalous 2.5% and strongly anomalous 1.4%. If the threshold was changed to 61 p.p.m. the weakly anomalous samples would comprise 13% of the samples. This may indicate a higher zinc background in Northern Skead township compared to Halliday and Midlothian townships.

Silver

Some 137 samples were analysed for silver as a possible indicator for gold. All the samples analysed gave only background values. Analysing a much larger group of samples might give some indication of a trend, but this was not considered worth the cost. A check of carbonate type gold deposits indicates that these deposits have very high gold-silver ratios which would diminish the chance of silver being an indicator in this area.

Total Heavy Metals

Some 880 samples were cold tested colorimetrically for total heavy metals. This test was used as a possible method of screening out samples with non anomalous values without the expense of analysis by atomic adsorption. Several samples have been tested by both methods as a check; and it is intended to check all samples which give high values for total heavy metals by atomic adsorption for copper, nickel and zinc at a later date.

Checks on Analysis and Sampling

As a check on analysis two samples were submitted on different occasions to be analysed for copper and nickel. The results tabulated below show the analysis was duplicated in both cases.

Sample no	Cu p.p.m.		Ni p.p.m.	
	1st	2nd	1st	2nd
397	9	6	30	29
487	51	42	130	114

As a check on sampling depth, samples were taken 50 ft.

South of the tie line on line 36 E from B.L. 'A' at 6", 12"-18" and over 2 foot depths, to correspond approximately to the 'A', 'B' and 'C' Horizons.

Sample No	Horizon	Cu p.p.m.	Ni p.p.m.	Zn p.p.m.	Ag p.p.m.
S-1	'C'	19	630	37	0.3
S-2	'B'	73	698	26	0.3
S-3	'A'	56	890	96	0.5

In this instance, nickel and zinc are enriched in the 'A' horizon and copper in the 'B'. The nickel appears to decrease gradually with depth, while zinc drops sharply from the 'A' and copper even more sharply from the 'B'. The silver is at background in all samples.

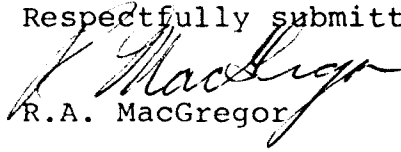
Conclusions

Because of the glaciated terrain, poor drainage in many places and rapid changes in both soil type and development it is difficult or impossible to obtain soil anomalies which will contour into drilling targets. The results do however give an indication of general areas in which to direct attention and help to assess geophysical anomalies. One area in particular stands out. This is the area stretching from the boundary between claims L 476672-396263 south - easterly to the boundary of claims L 442050-442051. This area contains many strongly and moderately anomalous samples of copper, nickel and zinc with the zinc values occurring more to the north-westerly end. It is particularly interesting for the nickel anomalies as it lies at least 1000 feet north of (up ice) and outside the drainage area of the serpentinites. The underlying rocks are felsic to

mafic volcanics, intruded by felsic and mafic porphyrys. Within this area one zinc anomaly on lines 24E and 28E north from B.L. 'A' with up to 1220 p.p.m. Zn appears to coincide almost exactly with a VLF-EM anomaly. There are a number of other scattered or single strong to moderate anomalies which may prove of interest when the area is checked geophysically.

February 16, 1977.

Respectfully submitted


R.A. MacGregor

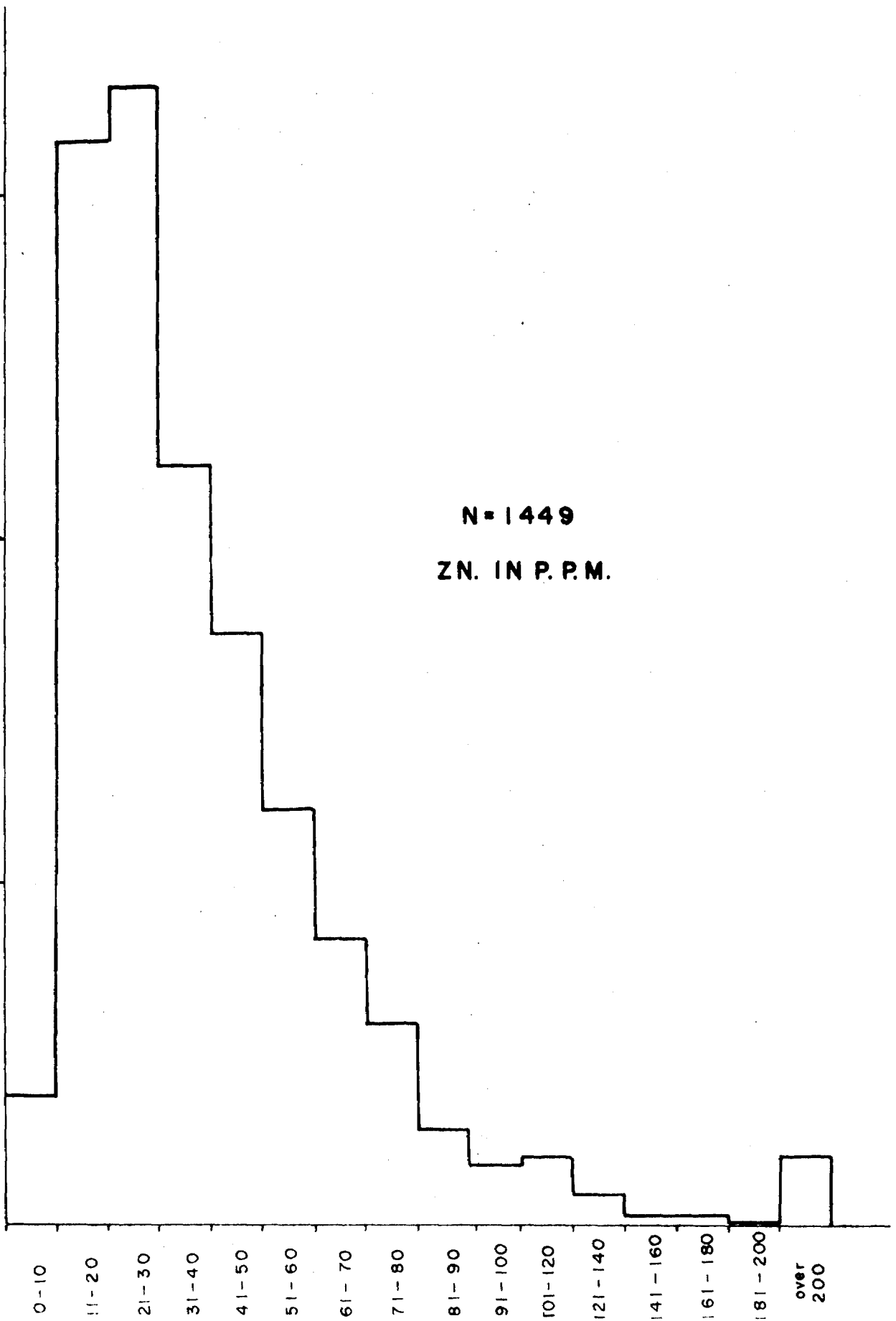
Number of samples

300

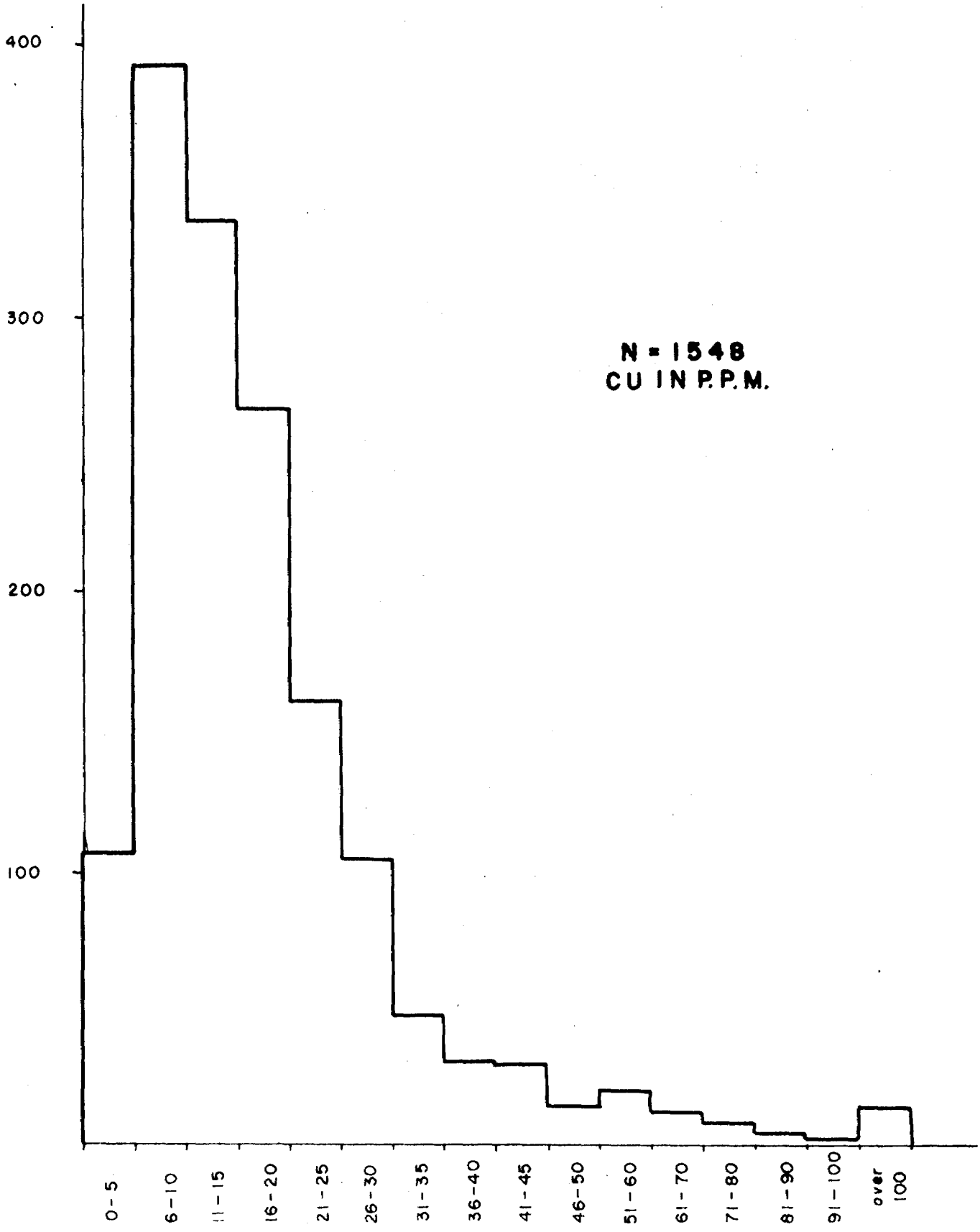
200

100

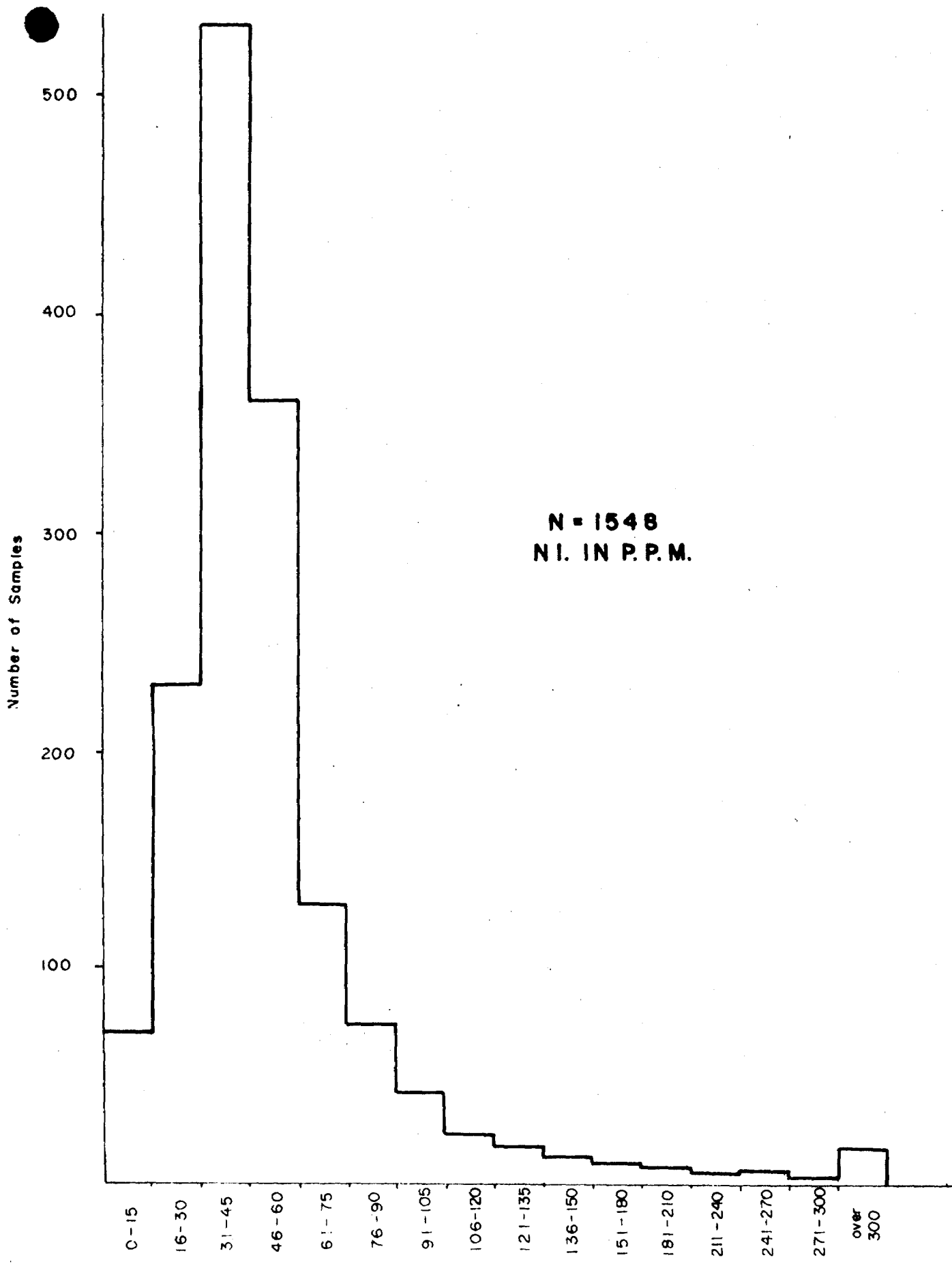
N = 1449
ZN. IN P.P.M.



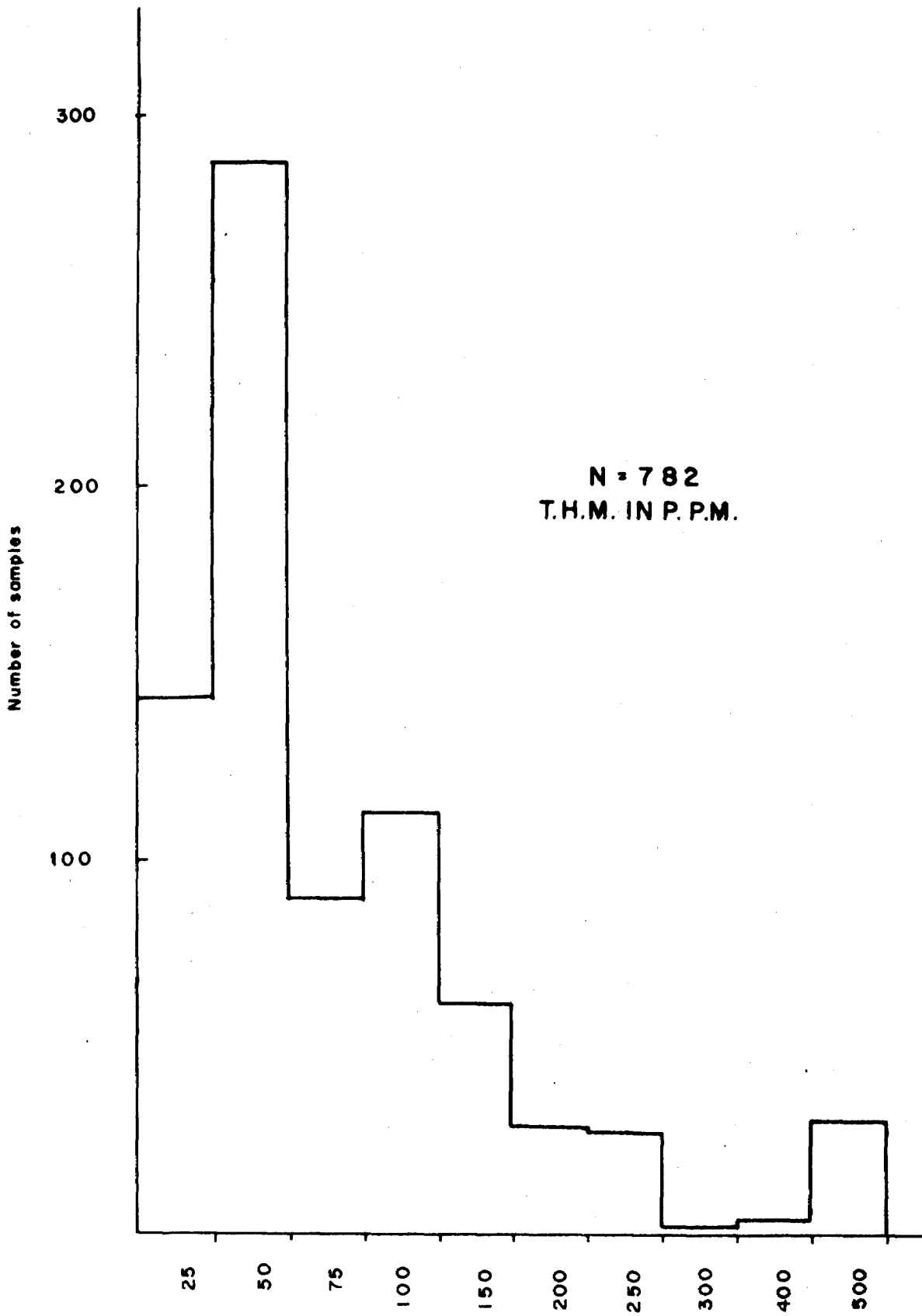
Number of Samples



N = 1548
CU IN P.P.M.



N = 1548
NI. IN P.P.M.



N = 782
T.H.M. IN P.P.M.



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPEN
FACTS SHOWN HERE NEED NC
TECHNICAL REPORT MUST CONTAIN IN



32D04SE9005 2.2332 SKEAD

900

Type of Survey(s) Geochemical
Township or Area Skead
Claim Holder(s) R. A. MacGregor
L. Lacasse
Survey Company _____
Author of Report R. A. MacGregor
Address of Author 134 Palace Drive, Sault Ste. Marie, Ont.
Covering Dates of Survey May 1976-Feb. 1977
(linecutting to office)
Total Miles of Line Cut -

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST
(prefix) (number)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

ENTER 40 days (includes
line cutting) for first
survey.

ENTER 20 days for each
additional survey using
same grid.

Geophysical
-Electromagnetic _____
-Magnetometer _____
-Radiometric _____
-Other _____
Geological _____
Geochemical 20

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Feb 6/77 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications 2.1102 & also on this file -

Previous Surveys LAD,

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 72

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

Instrument _____
Accuracy – Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

ELECTROMAGNETIC

Instrument _____
Coil configuration _____
Coil separation _____
Accuracy _____
Method: Fixed transmitter Shoot back In line Parallel line
Frequency _____
(specify V.B.F. station)
Parameters measured _____

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION
RESISTIVITY

Instrument _____
Method Time Domain Frequency Domain
Parameters – On time _____ Frequency _____
– Off time _____ Range _____
– Delay time _____
– Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

<u>Claim No.</u>	<u>Days</u>	<u>Claim No.</u>	<u>Days</u>	<u>Claim No</u>	<u>Days</u>
L 341838 ^{1/4} <i>not covered</i>	20	L 341839	20	L 341840	20
L 374771 ^{1/4}	20	L 374772 ^{1/3}	20	L 374773 ^{1/4}	20
L 374774	20	L 374775 ^{1/3}	20	L 374776	20
L 374777	20	L 374778	20	L 374779 ^{1/4}	20
L 342531	20	L 396263	20	L 396264	20
L 396274	20	L 396275	20	L 396276	20
L 396277	20	L 396278	20	L 396279 ^{2/3}	20
L 396280	20	L 396281 ^{2/3}	20	L 396282	20
L 396283	20	L 396284	20	L 396285	20
L 396286	20	L 396287	20	L 400700 ^{1/4}	20
L 400701 ^{1/4}	20	L 400702	20	L 400703 ^{1/3}	20
L 400704 ^{1/4}	20	L 400705 ^{1/3}	20	L 400706	20
L 400707	20	L 400708 ^{2/3}	20	L 400711	20
L 400712	20	<u>L 400713</u>	20	<u>L 400715</u>	20
L 401395	20	L 401396 ^{1/3}	20	L 401397	20
L 415026	20	L 415027 ^{3/4}	20	L 442037 ^{1/3}	20
L 442038 ^{1/3}	20	L 442040	20	L 442045 ^{1/4}	20
L 442046	20	L 442047	20	L 442048	20
L 442049	20	L 442050	20	L 442051	20
L 442052	20	L 442053	20	L 442055	20
L 442056 ^{2/3}	20	L 442057	20	L 442058 ^{3/4}	20
L 442060 ^{1/3}	20	L 442061	20	L 447535 ^{2/3}	20
L 447537 ^{3/4}	20	L 447542 ^{3/4}	20	<u>L 476671</u>	20
L 476672 ^{1/3}	20	L 476684	20	L 476685	20

24

24

24
L.476686

Circled missing claims (3) Not covered / No Credits

Area of claims not covered = $11 \frac{1}{3}$

$$70 \times 20 = 1400 \div (70 + 11)$$

$$= \underline{17.3 \text{ days per claim}}$$

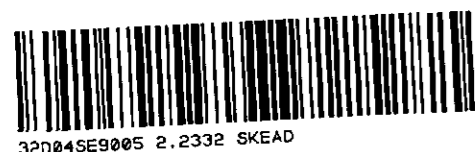
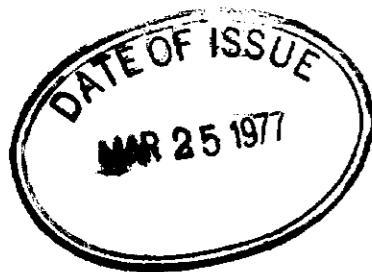
NOTES

400' surface rights reservation along the shores of all lakes and rivers.

All unpatented mining claims accepted subject to survey, Section 118 of the Mining Act (R.S.O. 1970).

SAND and GRAVEL

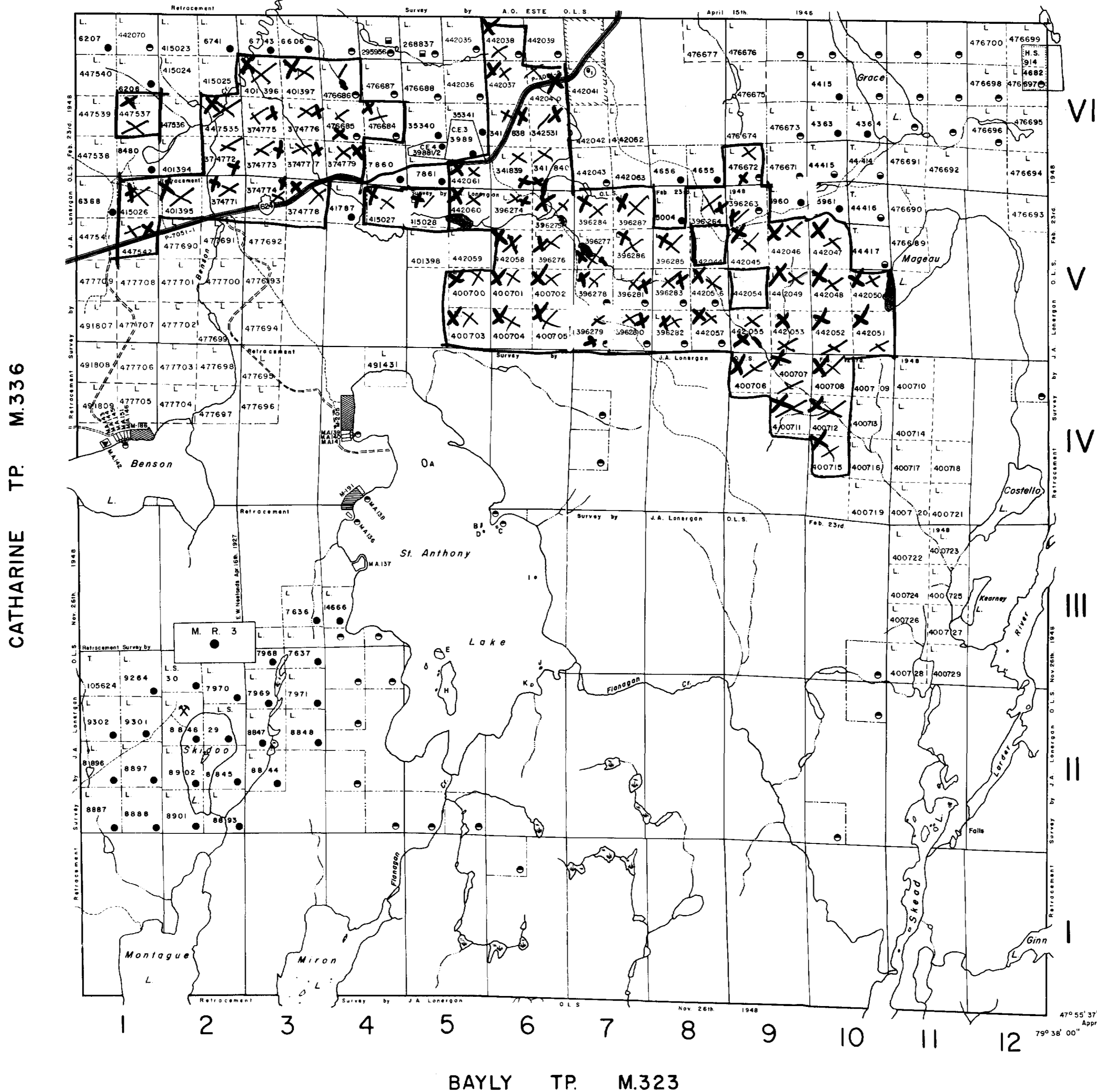
M.T.C. PIT No. 1230



200

A.T.V.

HEARST TP. M.354



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
CROWN LAND SALE	C.S.
ORDER-IN-COUNCIL	OC
RESERVATION	
CANCELLED	
SAND & GRAVEL	

SCALE: 1 INCH = 40 CHAINS



ACRES	HECTARES
40	16

TOWNSHIP 2.2332

SKEAD

DISTRICT
TIMISKAMING
MINING DIVISION
LARDER LAKE

Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date 10/4/74

Plan No.

Whitney Block
Queen's Park, Toronto

M.387

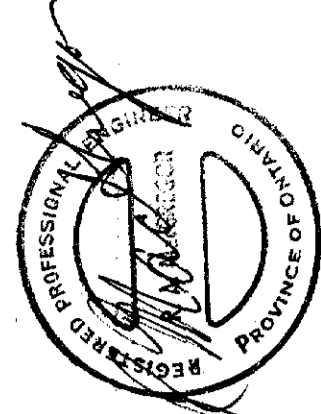
LINCOLN - NIPISSING PROJECT
GEOCHEMICAL SURVEY

EAST SHEET
SCALE: 1" = 400'

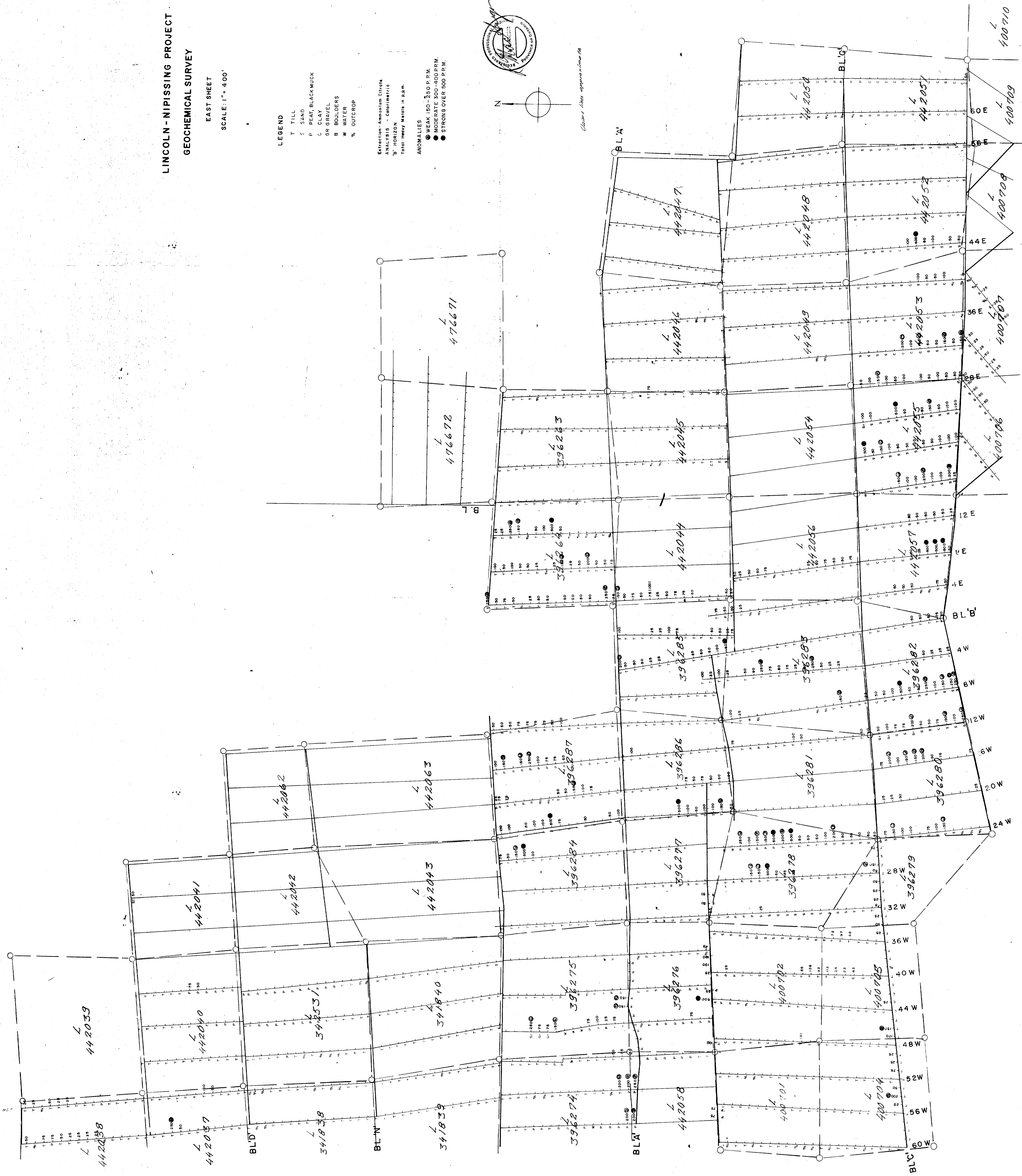
- LEGEND
- T TILL
 - S SAND
 - P PEAT, BLACKMUCK
 - C CLAY
 - GR GRAVEL
 - B BOULDERS
 - W WATER
 - % OUTCROP

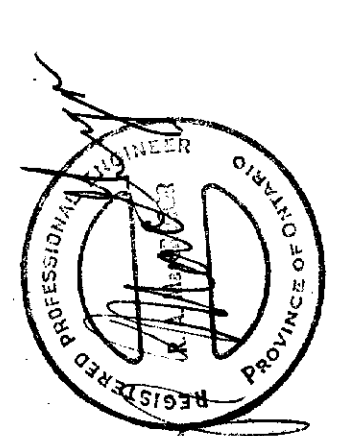
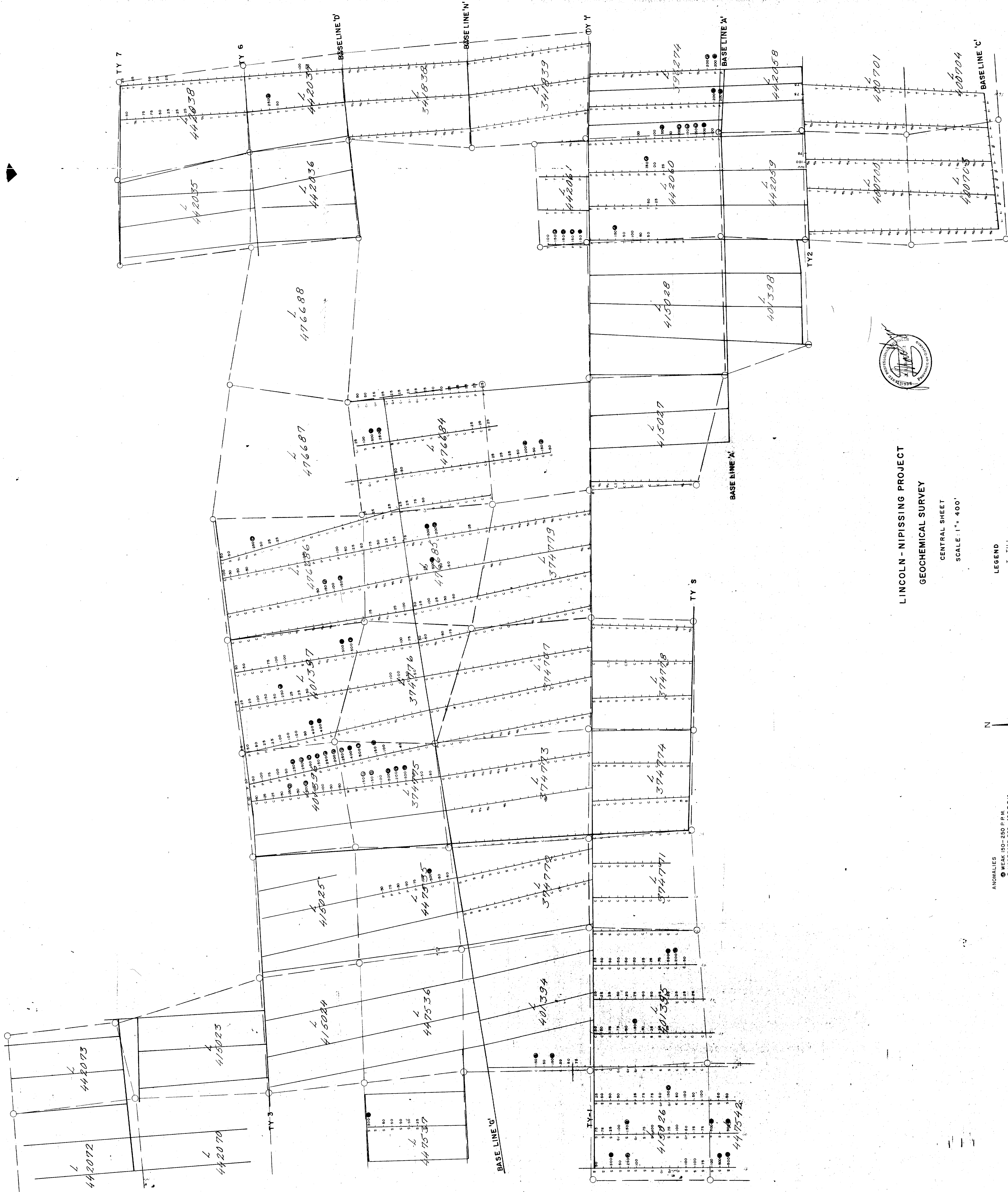
Extraction - Ammonium Citrate
ANALYSIS - CHROMIUM

- ANOMALIES
- WEAK 150-250 P.P.M.
 - MODERATE 300-400 P.P.M.
 - STRONG OVER 500 P.P.M.



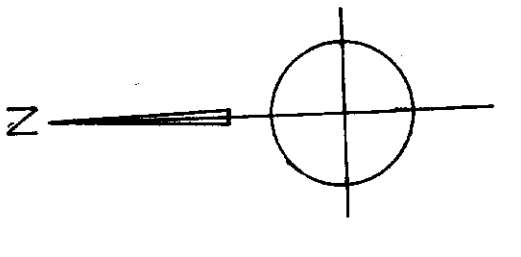
Clayton, Ohio approximately 1/2





LINCOLN - NIPISSING PROJECT
GEOCHEMICAL SURVEY

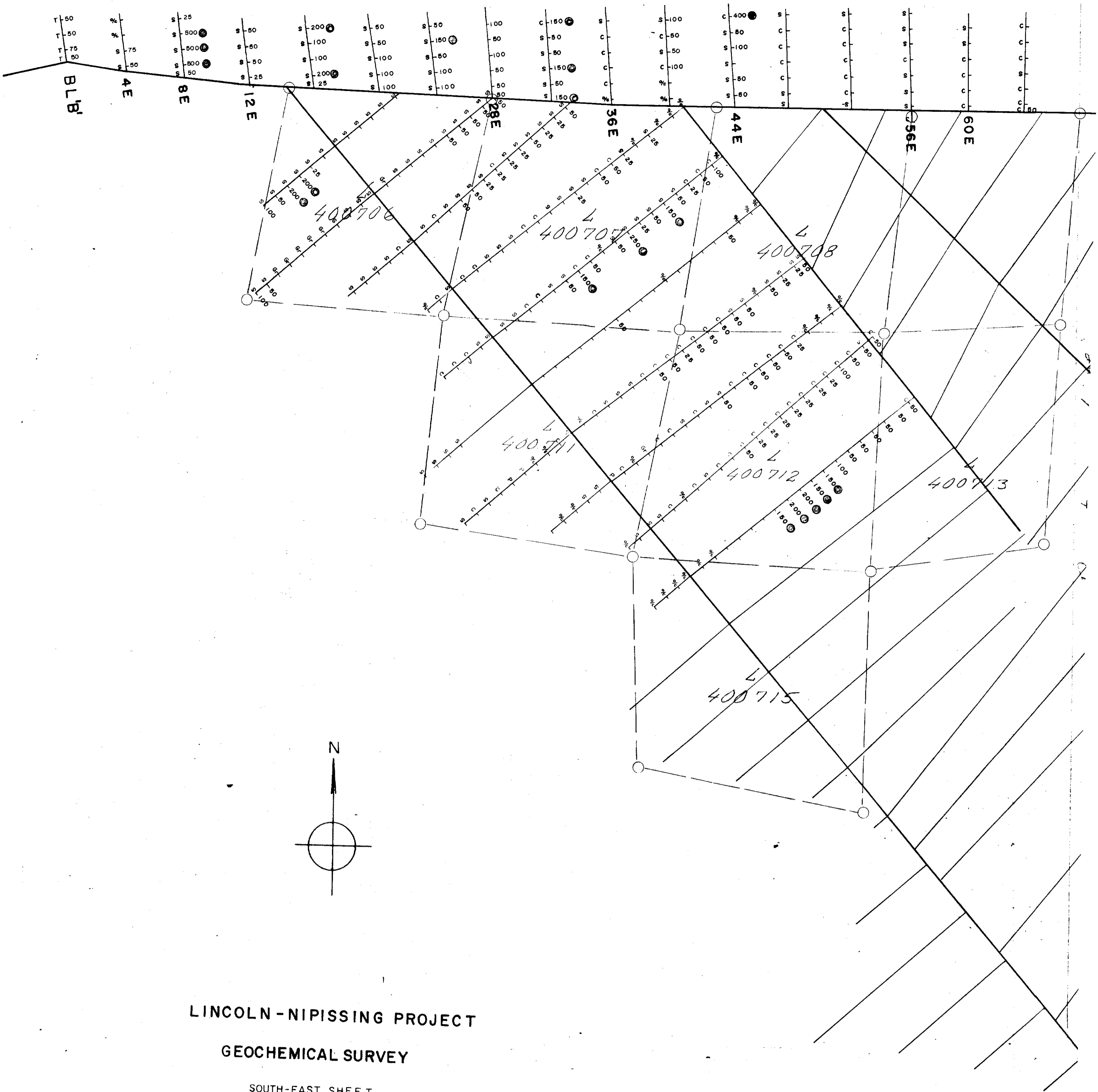
CENTRAL SHEET
 SCALE 1" = 400'



ANOMALIES
 ● WEAK 150-250 P.P.M.
 ● MODERATE 300-400 P.P.M.
 ● STRONG OVER 500 P.P.M.

LEGEND
 T TILL
 S SAND
 P PEAT, BLACKMUCK
 C CLAY
 GR GRAVEL
 B BOULDERS
 W WATER
 % OUTCROP
Chain lines approximate

EXTRACTION AMMONIUM CHLORIDE
 ANALYSIS - COBALTIMETRIC
 B HORIZON
 TOTAL NITRYL
 % WATER



LINCOLN-NIPISSING PROJECT
GEOCHEMICAL SURVEY

SOUTH-EAST SHEET

SCALE: 1" = 400'

LEGEND

- T TILL
- S SAND
- P PEAT, BLACK MUCK
- C CLAY
- GR GRAVEL
- B BOULDERS
- W WATER
- % OUTCROP

Extraction - Ammonium Citrate
 Analysis - Colorimetric
 'b' Horizon
 Total Heavy Metals in p.p.m.

ANOMALIES

- WEAK 150-250 P.P.M.
 - MODERATE 300-400 P.P.M.
 - STRONG OVER 500 P.P.M.
- Claim lines approximate*



320045E9885 2.2332 SKEAD

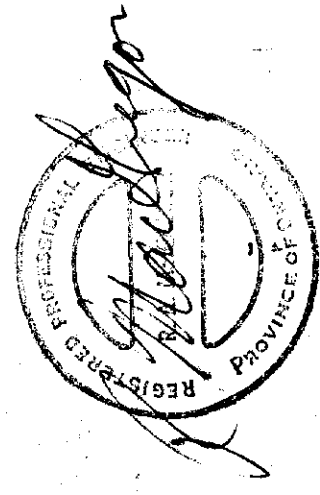
LINCOLN - NIPissing PROJECT
GEOCHEMICAL SURVEY

EAST SHEET
SCALE: 1" = 400'

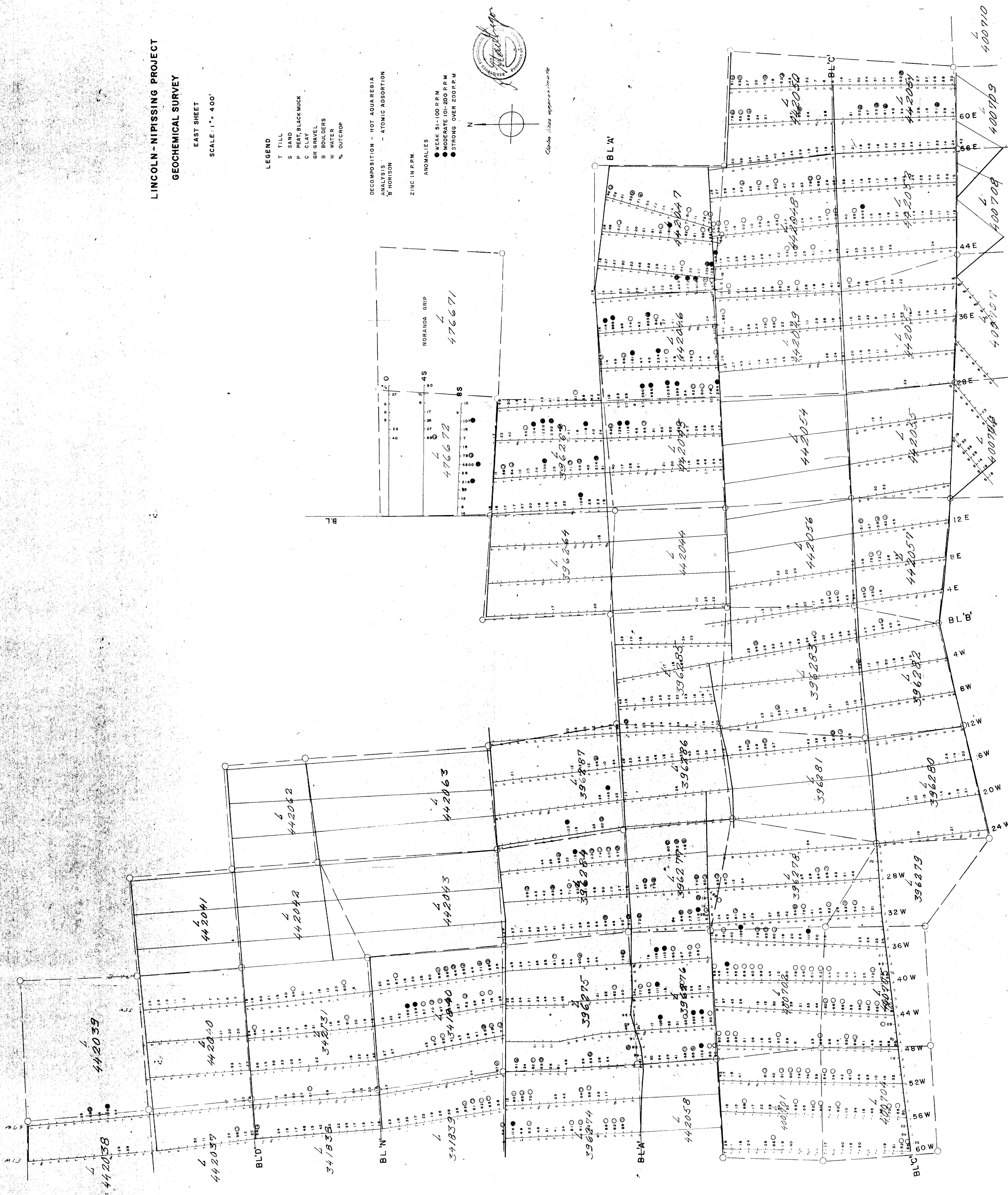
- LEGEND
 T TILL
 S SAND
 P PEAT, BLACK MUCK
 C CLAY
 GR GRAVEL
 B BOULDERS
 W WATER
 % OUTCROP

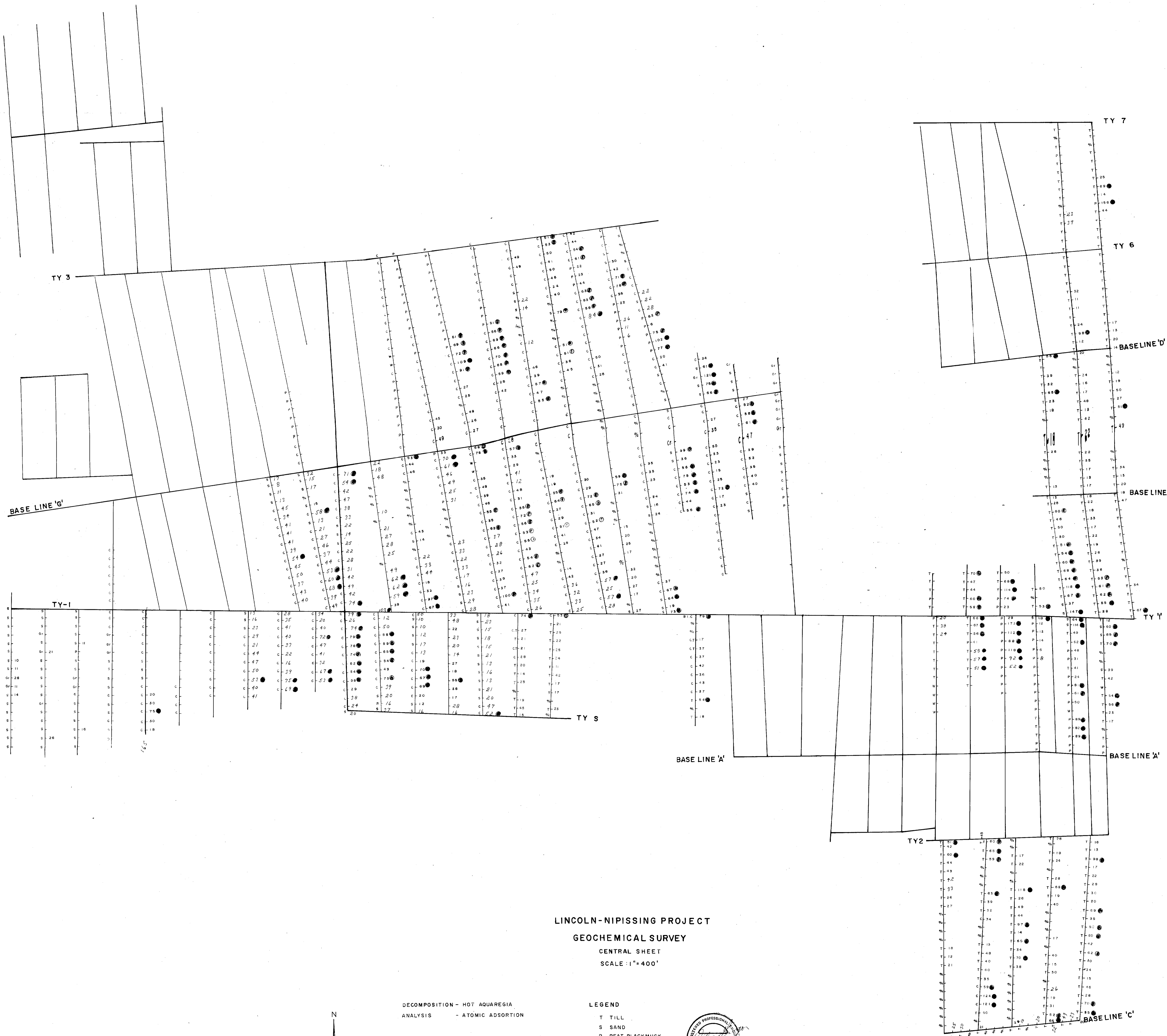
DECOMPOSITION - HOT AQUAREGIA
 ANALYSIS - ATOMIC ABSORPTION
 B HORIZON

ZINC IN P.P.M.
 ANOMALIES
 ● WEAK 51-100 P.P.M.
 ● MODERATE 101-200 P.P.M.
 ● STRONG OVER 200 P.P.M.



Chain lines approximate





LINCOLN-NIPISSING PROJECT
 GEOCHEMICAL SURVEY
 CENTRAL SHEET
 SCALE: 1"=400'

DECOMPOSITION - HOT AQUAREGIA
 ANALYSIS - ATOMIC ADSORTION

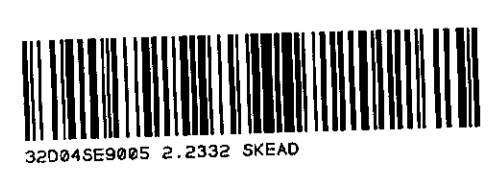
ZINC IN P.P.M

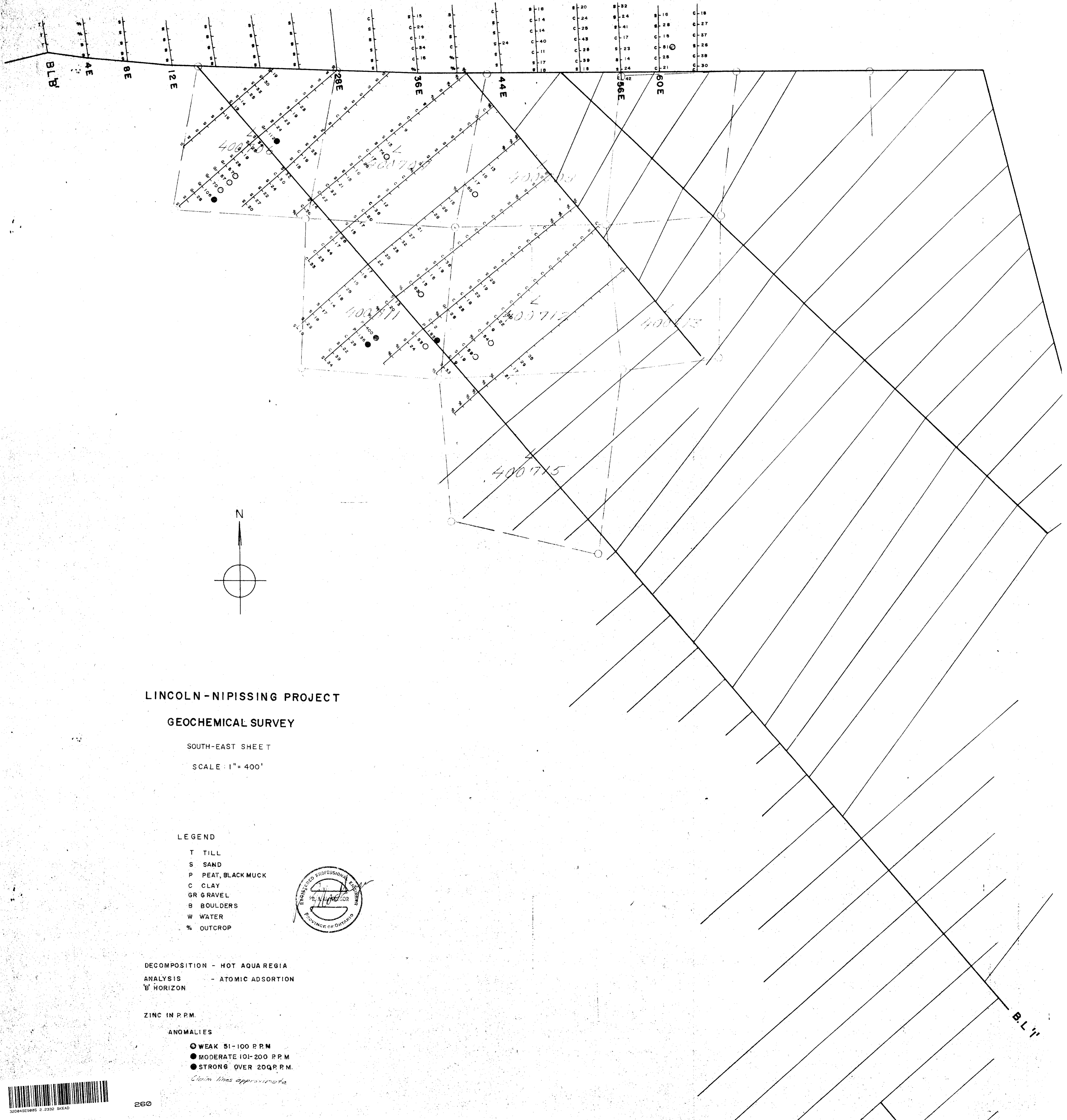
ANOMALIES

- WEAK 51-100 P.P.M
- MODERATE 101-200 P.P.M
- STRONG OVER 200 P.P.M

LEGEND

- T TILL
- S SAND
- P PEAT, BLACKMUCK
- C CLAY
- GR GRAVEL
- B BOULDERS
- W WATER
- % OUTCROP





LINCOLN - NIPISSING PROJECT

GEOCHEMICAL SURVEY

SOUTH-EAST SHEET

SCALE: 1" = 400'

LEGEND

- T TILL
- S SAND
- P PEAT, BLACK MUCK
- C CLAY
- GR GRAVEL
- B BOULDERS
- W WATER
- % OUTCROP



DECOMPOSITION - HOT AQUA REGIA
 ANALYSIS - ATOMIC ADSORPTION
 'B' HORIZON

ZINC IN P.P.M.

ANOMALIES

- WEAK 51-100 P.P.M.
- MODERATE 101-200 P.P.M.
- STRONG OVER 200 P.P.M.

Claim lines approximate



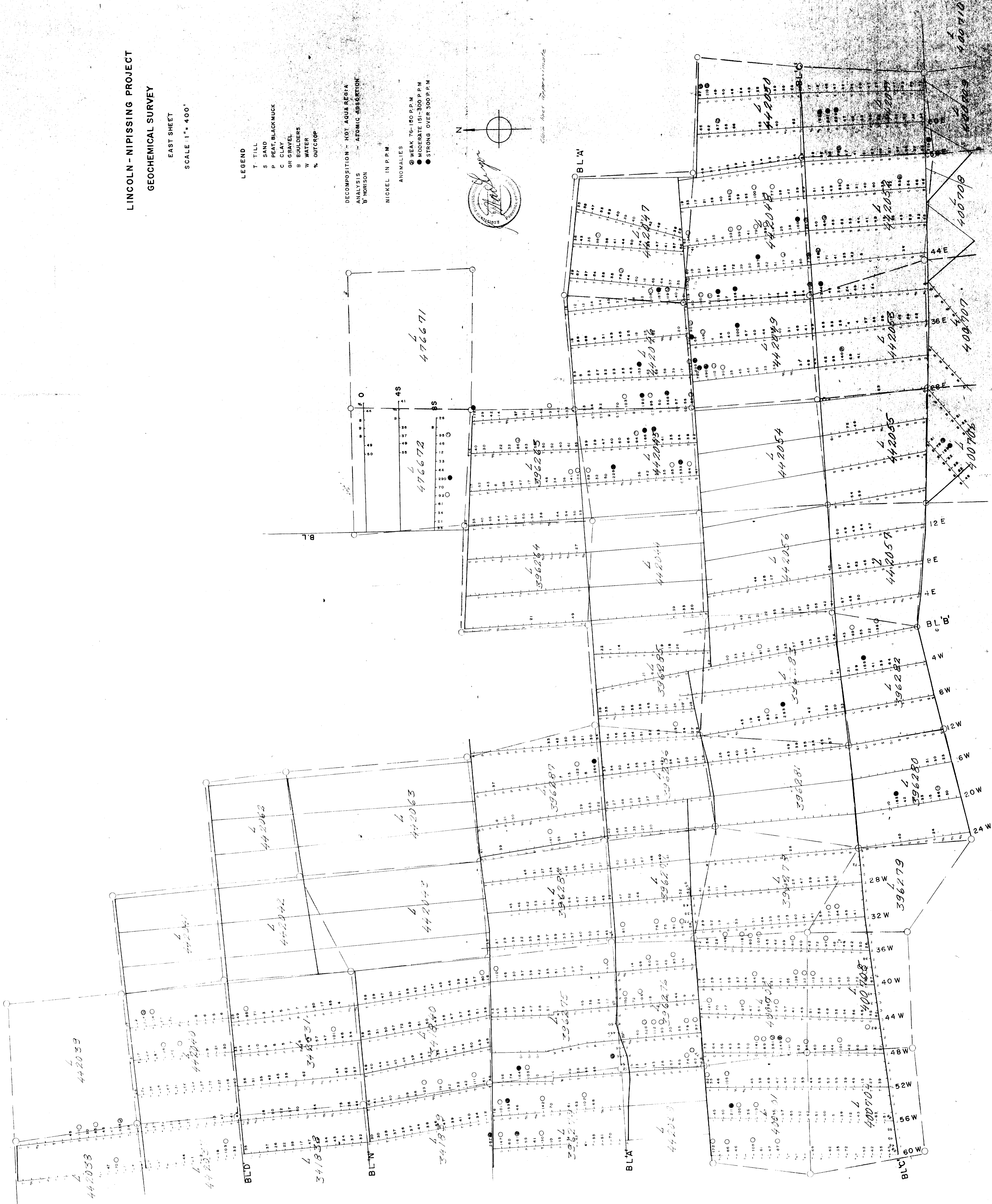
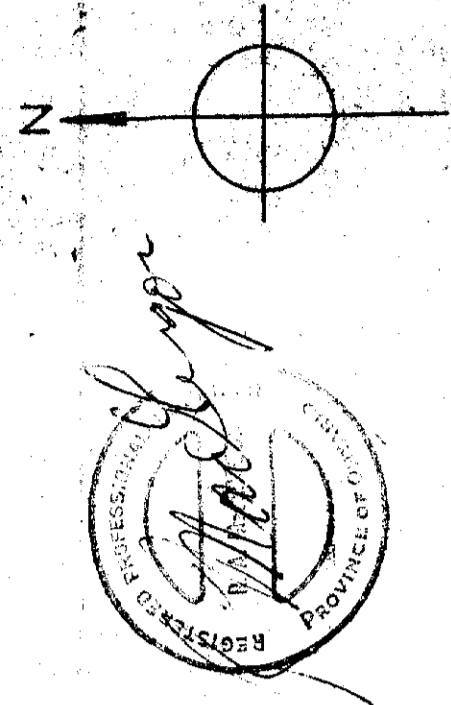
LINCOLN - NIPISSING PROJECT
GEOCHEMICAL SURVEY

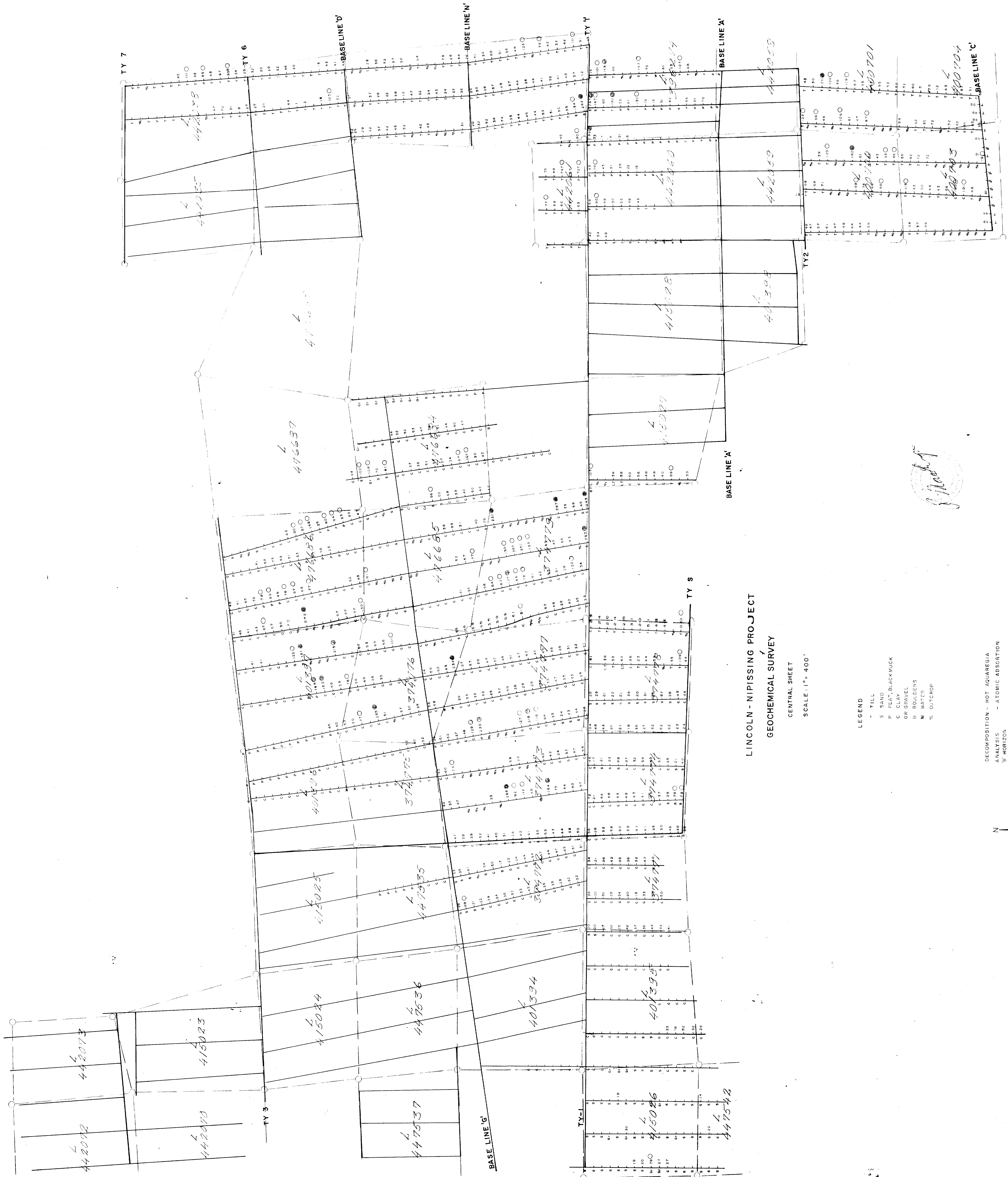
EAST SHEET
SCALE 1" = 400'

- LEGEND
- T. TILL
 - S. SAND
 - P. PEAT, BLACKMUCK
 - C. CLAY
 - GR. GRAVEL
 - B. Boulders
 - W. WATER
 - % OUTCROP

DECOMPOSITION - HOT AQUA REGIA
ANALYSIS - ATOMIC ABSORPTION
B. BORON

NICKEL IN P.P.M.
ANOMALIES
● WEAK 75-150 P.P.M.
● MODERATE 151-300 P.P.M.
● STRONG OVER 300 P.P.M.





LINCOLN - NIPISSING PROJECT
GEOCHEMICAL SURVEY

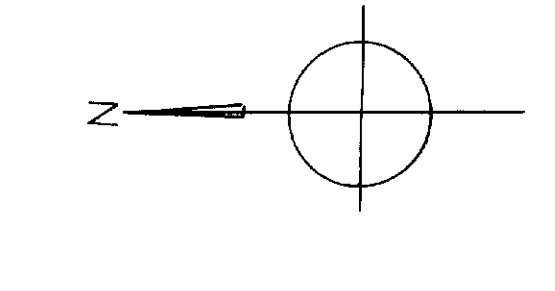
CENTRAL SHEET
SCALE: 1" = 400'

- LEGEND
- T TILL
 - S SAND
 - P PEAT, BLACKMUCK
 - C CLAY
 - GR GRAVEL
 - B BOULDERS
 - W WATER
 - % OUTCROP

DECOMPOSITION - HOT AQUAREGIA
ANALYSIS - ATOMIC ADSORPTION
B HORTEON

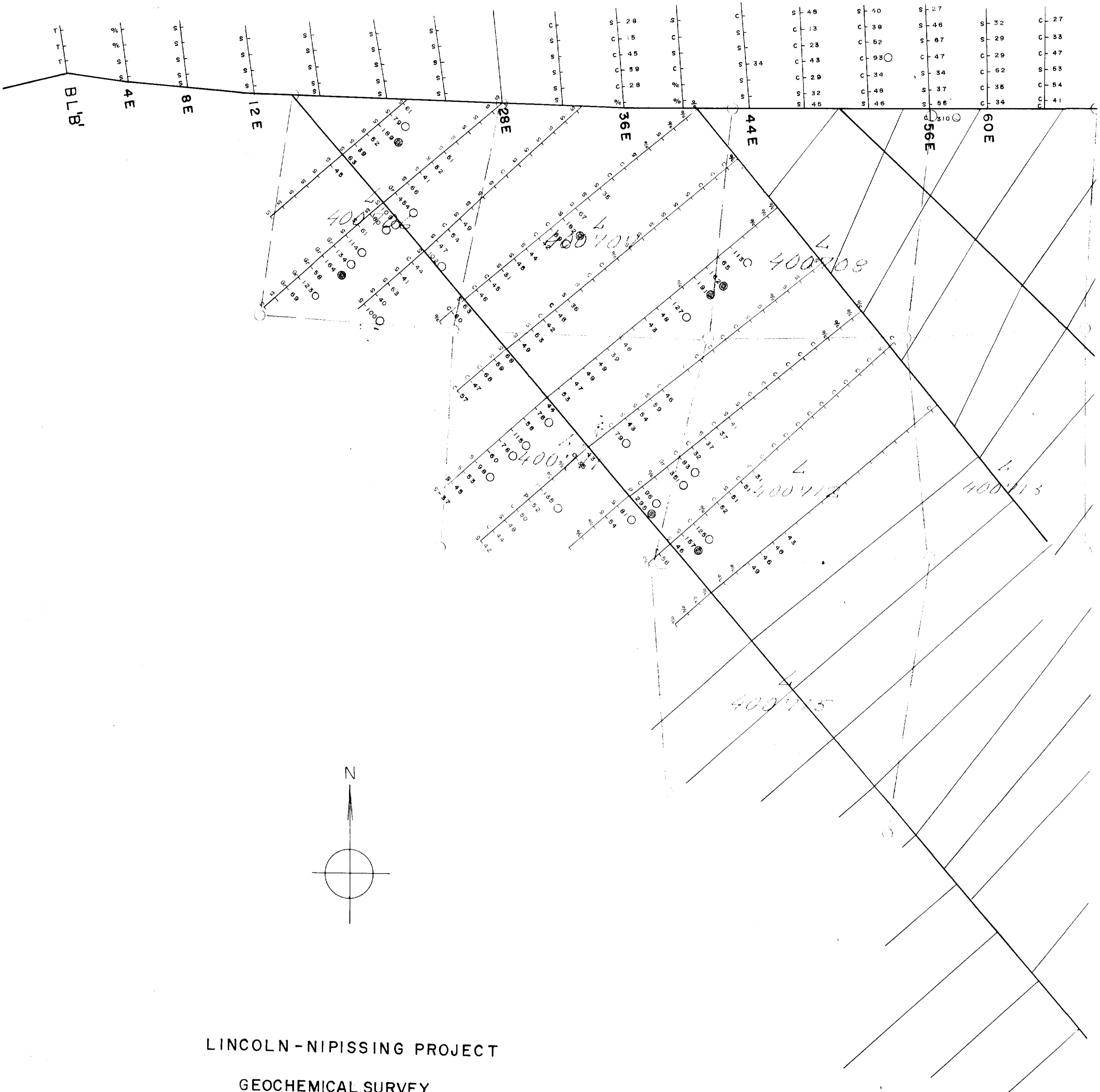
NICKEL IN P.P.M.

- ANOMALIES
- WEAK 76-150 P.P.M.
 - MODERATE 151-300 P.P.M.
 - STRONG OVER 300 P.P.M.
- Clark Street, Spprox/mat*



Handwritten signature/initials





LINCOLN-NIPISSING PROJECT
GEOCHEMICAL SURVEY

SOUTH-EAST SHEET

SCALE: 1" = 400'

Handwritten signature: R. MacGregor

LEGEND

- T TILL
- S SAND
- P PEAT, BLACK MUCK
- C CLAY
- GR GRAVEL
- B BOULDERS
- W WATER
- % OUTCROP

DECOMPOSITION - HOT AQUA REGIA
 ANALYSIS - ATOMIC ADSORTION
 'B' HORIZON

NICKEL IN P.P.M.

ANOMALIES

- WEAK 76-150 P.P.M.
- ⊙ MODERATE 151-300 P.P.M.
- STRONG OVER 300 P.P.M.



320845E9085 2.2332 SKEAD

Handwritten note: 400/115 line

LINCOLN - NIPISSING PROJECT
GEOCHEMICAL SURVEY

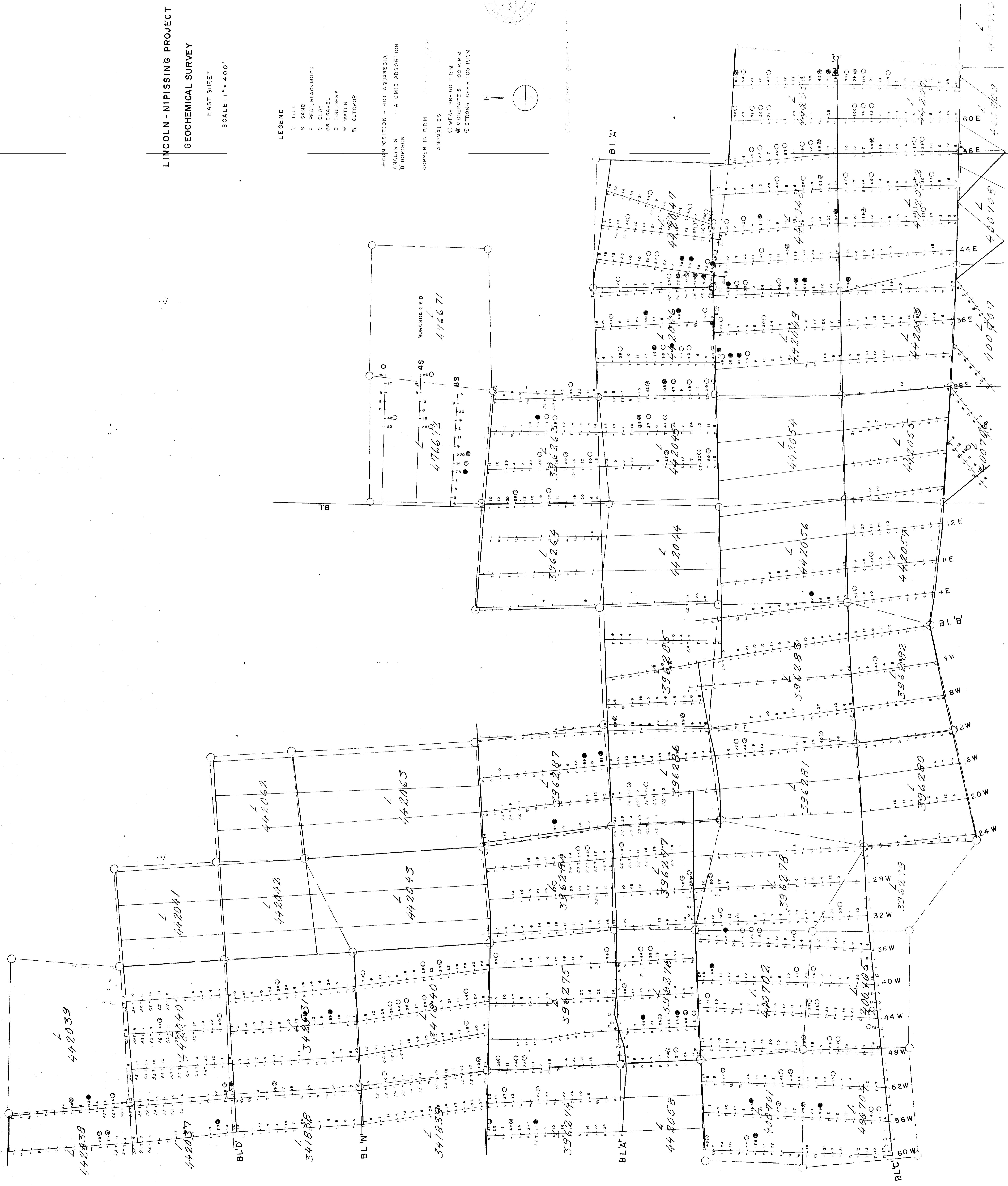
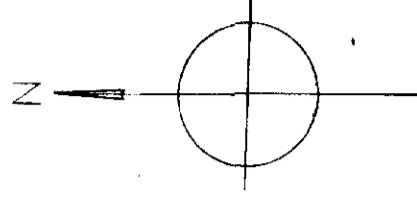
EAST SHEET
SCALE: 1" = 400'

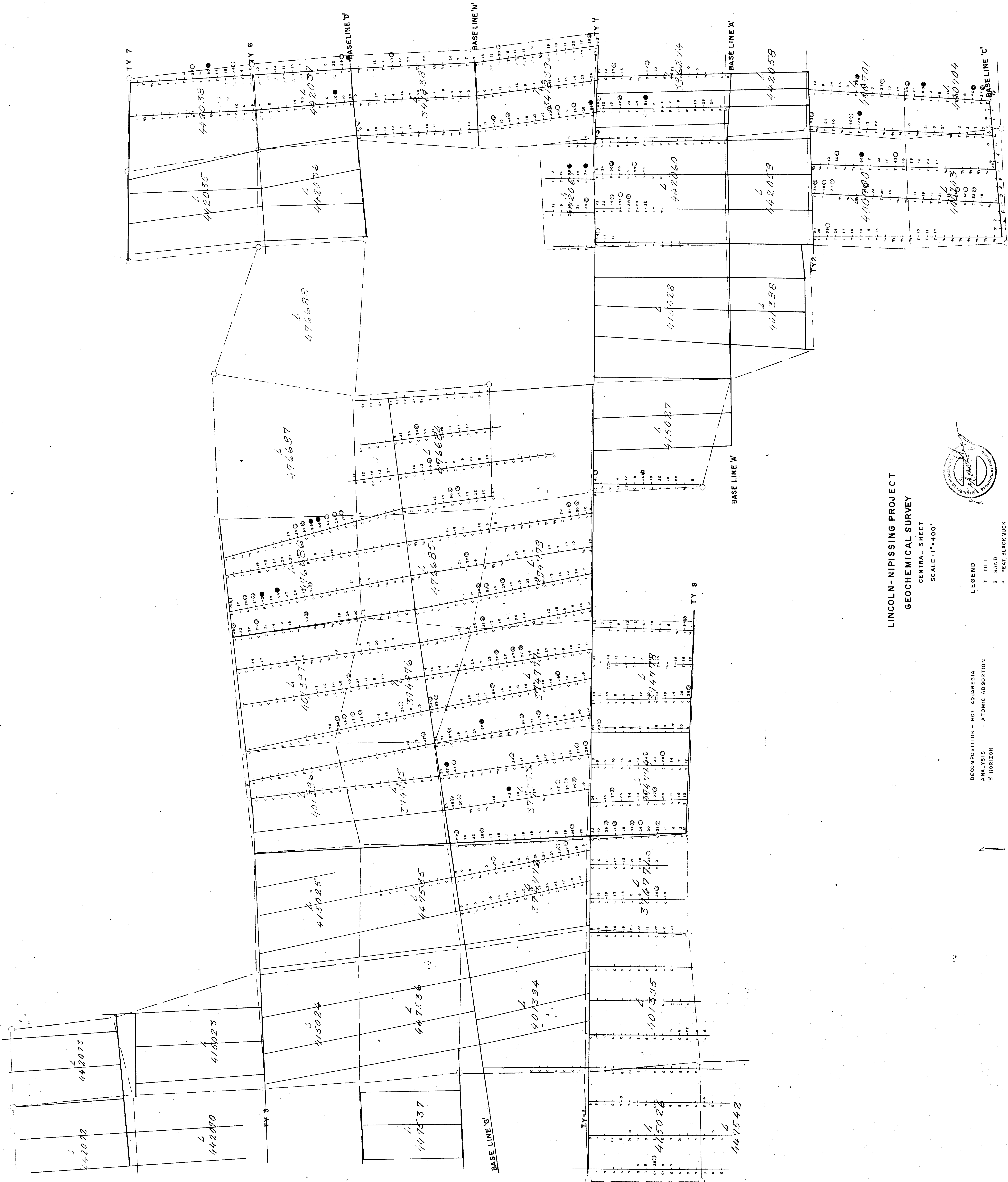
- LEGEND
- T TILL
 - S SAND
 - P PEAT, BLACKMUCK
 - C CLAY
 - GR GRAVEL
 - B BOULDERS
 - W WATER
 - % OUTCROP

DECOMPOSITION - HOT AQUA REGIA
ANALYSIS - ATOMIC ABSORPTION

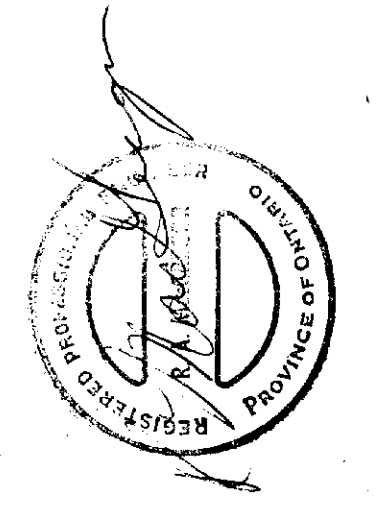
COPPER IN P.P.M.
ANOMALIES

- WEAK 25-50 P.P.M.
- ◐ MODERATE 51-100 P.P.M.
- STRONG OVER 100 P.P.M.

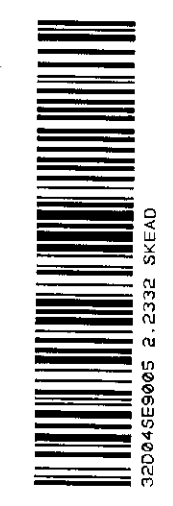
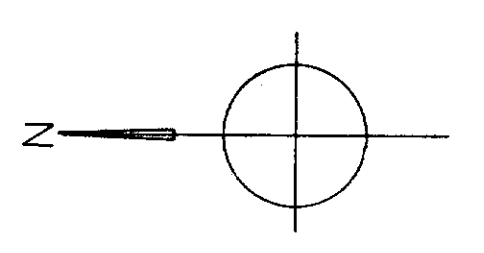


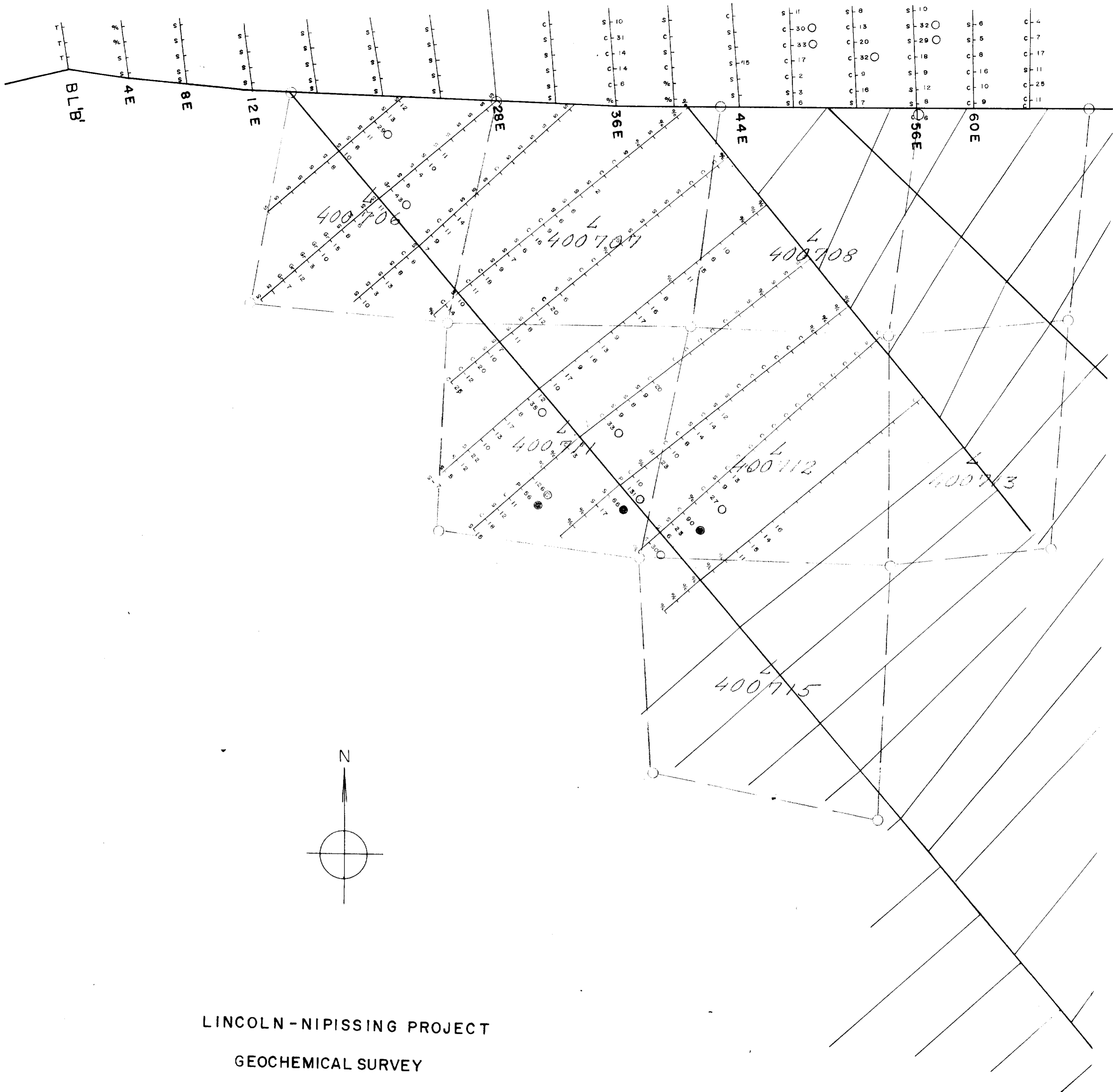


LINCOLN-NIPISSING PROJECT
 GEOCHEMICAL SURVEY
 CENTRAL SHEET
 SCALE 1"=400'



- LEGEND**
- T TILL
 - S SAND
 - P PEAT, BLACKMUCK
 - C CLAY
 - GR GRAVEL
 - B BOULDERS
 - W WATER
 - % OUTCROP
- DECOMPOSITION - HOT AQUAREGIA ANALYSIS**
- HORIZON
 - ATOMIC ADSORPTION
- COPPER IN P.P.M.**
- ANOMALIES
 - WEAK 26-50 P.P.M.
 - MODERATE 51-100 P.P.M.
 - STRONG OVER 100 P.P.M.





LINCOLN-NIPissing PROJECT

GEOCHEMICAL SURVEY

SOUTH-EAST SHEET

SCALE 1" = 400'

LEGEND

- T TILL
- S SAND
- P PEAT, BLACK MUCK
- C CLAY
- GR GRAVEL
- B BOULDERS
- W WATER
- % OUTCROP



DECOMPOSITION - HOT AQUAREGIA
 ANALYSIS - ATOMIC ADSORTION
 S' HORIZON

COPPER IN P.P.M.

ANOMALIES

- WEAK 26-50 P.P.M
- MODERATE 51-100 P.P.M
- ⊙ STRONG OVER 100 P.P.M

Chain lines approx.

