GEOCHEMICAL SURVEY

on

MINERAL CLAIM No. 373404

POWELL TOWNSHIP, ONTARIO

INTRODUCTION

A reconnaissance geochemical survey was made on June 8th and 9th, on claim No. 373404 in Powell Township, Larder Lake Mining Division. This report and the map attached cover the work done and show the results of the survey.

Claim 373404 is located about two miles north-west of the village of Matachewan and about 1 claim west of the north end of Otisse Lake. Access is from Highway 566 by means of an old road, now overgrown, that runs east from the highway to the north end of Otisse Lake and crosses the claim.

The area is covered with bush, logged over many years ago. The topography is relatively flat with some low lying wet areas, particularly in the southeastern part of the claim. Drainage is toward the south but by low areas rather than distinct drainage channels.

Bedrock can be seen in a number of places, mostly in the northern half and toward the east and west boundaries. Overburden is probably fairly shallow in general but could be deeper in some of the swampy areas.

GEOLOGY

Geology of the area is described in the Ontario Department of Mines Geological Report No. 51 and Map 2110 which accompanies the report. A band of syenite porphyry classified as an Algoman intrusive strikes east-west through the central and northern part of the claim. Timiskaming sediments occupy the rest of the claim south of the intrusives and possibly a slice in the north-east corner of the claim. A later diabase dyke is thought to run north and south through the centre of the claim.

Map 2110 shows one small gold showing in the north east part of the claim, and pyrite is believed to occur in places in sediments.

SURVEY GRID

For the reconnaissance survey the old road cutting through the claim was used as a base line and pace and compass lines were run north and south of the road to the north and south boundaries. Lines were spaced generally about 225 feet apart, and stations were marked every 100 feet along lines using red plastic flagging.

The method of gridding is not entirely accurate. However with the relatively short length of lines from the road to the boundaries and by checking the distance from line to line no large errors could accumulate. Thus the position of

each station is fairly accurate in relation to nearby stations, or sufficiently so for a reconnaissance survey.

SOIL DEVELOPMENT

In general the overburden is quite thin in the claim area and soils are not well developed. At a typical station, immediately below the thin organic forest material the leached A horizon was composed of light grey clayey silt to a depth of 2 to 4 inches. At about half of the stations this was followed by an enriched B horizon of brown clay and soil one to three inches thick, and followed in turn by a grey layer of silt or rubble. Whenever it was present the B horizon was sampled and the sample was assigned a quality classification of good.

When the B horizon was absent or only barely present the sample was taken of grey clay or silt at a depth of 4 to 6 inches and classified as fair.

At some stations in low-lying flat areas soils were absent and there was only humic material or occasionally only boulders. If a sample was taken of humus or of a little silt between boulders it was classified as humic or poor.

SOIL SAMPLING SURVEY

Soil samples were collected at every 100 foot station along each line using a grub hoe and trowel, for a total of 71 samples. Notes were made as to sample material, and terrain,

if significant. The map enclosed shows the locations of samples, a note at each station of the sample quality, and also notes some low-lying wet areas. The ground is generally flat and no distinct drainage channels were noted.

SAMPLE ANALYSES

Samples were analyzed by Technical Service Laboratories in Toronto using an acid extractable method on the minus 80 mesh portion. Extraction was by a 25% nitric acid at 100° Centigrade for 1 hour. Analyses were then made for copper and zinc using an atomic absorption method, with final results stated in parts per million.

As a matter of economy and to eliminate some samples of poorer quality analyses were only made of 42 samples, with selection made on sample quality and spacing.

SURVEY RESULTS

The map enclosed dated July 2, 1974, shows the sample locations, the sample quality and the copper and zinc values obtained.

Of 42 samples analyzed for copper only 7 were over 3 ppm, and the background was low at about 2 ppm. Seven samples with the lowest at 9 ppm were circled as anomalous.

Zinc analyses averaged 8 ppm after elimination of the 5 highest. Nine samples over 13 ppm were circled as anomalous.

Humic material at several stations appears to have acted as a metal collector and the high values at 6 and 11 north on Line 2, 1 north on Line 4, and 3 south on Line 10, should probably all be discounted. This leaves only three anomalous stations on Line 1 at 1N, 6N and 10N, one on Line 2 at 8N, and one on Line 4 at 3N.

These five anomalous samples are quite scattered and some or all could be erratics or show values caused by transported material. The south boundary of the syenite as mapped should be close to 6N on Line 1 and 3N on Line 4 and it is just possible there is some connection between the samples and the contact.

CONCLUSIONS

Soil horizons in the claim area are not well developed. Backgrounds for both copper and zinc are low, only about 10 samples show anomalous values and 5 of these are probably due to metal collection by humic material.

The five remaining anomalous samples are in scattered locations, show no pattern in relation to geology or other features, and could simply be erratics. However, as the overburden is thin and the values in these locations are quite high, prospecting or further geochemical testing near

these locations would be warranted.

F. J. Garbutt

July 12, 1974. F. J. Garbutt, P.Eng.

900

GEOPHYSICAL – GEOLOC
TECHNICAL DATA

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey Reconnaissance Geochemical Survey
Township or Area Powell Twp.
Claim holder(s) F. J. Garbutt

Author of Report F. J. Garbutt
Address 242 Hanna Rd., Toronto, Ont.
Covering Dates of Survey June 8 to 9 & July 2 to 12
(linecutting to office)
Total Miles of Line cut None

SPECIAL PROVISIONS CREDITS REQUESTED	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical
	--Electromagnetic
	--Magnetometer
	--Radiometric
ENTER 20 days for each additional survey using same grid.	--Other
	Geological
	Geochemical 21 days *

* See 'Man days' breakdown

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer ____ Electromagnetic ____ Radiometric ____
(enter days per claim)

DATE: July 27, 1974 SIGNATURE: F. J. Garbutt
Author of Report or Agent

PROJECTS SECTION
Res. Geol. ____ Qualifications 6.3.1081
Previous Surveys 2.86 (Mag + EP)

Checked by ____ date ____

GEOLOGICAL BRANCH LD

Approved by ____ date ____

GEOLOGICAL BRANCH ____

Approved by ____ date ____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	373404

If space insufficient, attach list

TOTAL CLAIMS 1

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations _____ Number of Readings _____

Station interval _____

Line spacing _____

Profile scale or Contour intervals _____

(specify for each type of survey)

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base station location _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____

(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION -- RESISTIVITY

Instrument _____

Time domain _____ Frequency domain _____

Frequency _____ Range _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken 373404

71 Sampled
Total Number of Samples 42 Analyzed
Type of Sample Soil - Clays in thin overburden
(Nature of Material)
Average Sample Weight 2 To 4 ounces
Method of Collection Grub hoe & trowel

Soil Horizon Sampled B if present, or A.
Horizon Development Fairly good to Poor
Sample Depth 4 to 6 inches
Terrain Flat -

Drainage Development Poor - partly swampy
Estimated Range of Overburden Thickness
0 To 8 feet

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis
Minus 80 mesh

General

ANALYTICAL METHODS

Values expressed in: per cent ☐ p. p. m. ☑ p. p. b. ☐

(Cu,) Pb, (Zn,) Ni, Co, Ag, Mo, As,-(circle)

Others

Field Analysis (_____ tests)
Extraction Method
Analytical Method
Reagents Used

Field Laboratory Analysis
No. (_____ tests)
Extraction Method
Analytical Method
Reagents Used

Commercial Laboratory (42 tests)
Name of Laboratory Technical Service Labs
Extraction Method 25% Nitric Acid @ 100°C for 1 hr.
Analytical Method Atomic Absorption
Reagents Used

General

Baden Twp. (M.205)

Bannockburn Twp. (M.207)

Cairo Twp. (M. 210)

Yarrow Twp. (M. 260)

THE TOWNSHIP
OF

POWELL

DISTRICT OF
TIMISKAMING

2.1532 LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

L.O. 7601 Covers Flooding Rights In This Twp To Below Contour 870'.00 To H.E.P.C.
File: 12290 Vol. 2.

L.O. 11167 Shown thus: ~~~ File: 90970

MINING LANDS
DATE OF ISSUE
JUL 31 1974
MINISTRY
OF NATURAL RESOURCES

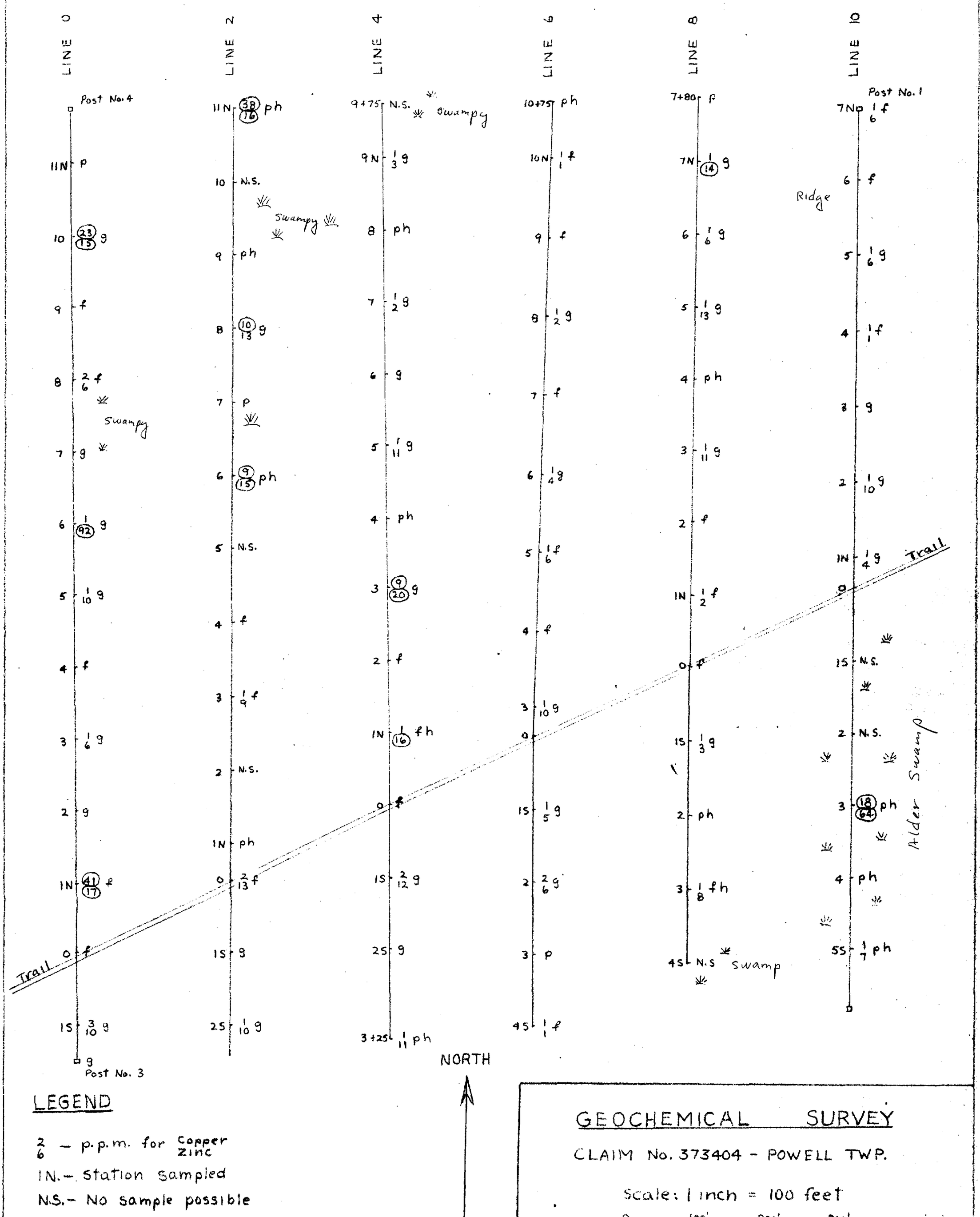
PLAN NO. M.241

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

41P15NE8262 2.1532 POWELL

200

J.P.v.K.



LEGEND

2/6 — p.p.m. for copper / zinc

IN.— Station sampled

N.S.— No sample possible

Sample Quality:
- g - good
- f - fair
- p - poor
- h - humic

es are circled.

GEOCHEMICAL SURVEY

CLAIM No. 373404 - POWELL TWP.

Scale: 1 inch = 100 feet

0 100' 200' 300'

July 2, 1974

F.J Garbutt, P. Eng.