



42A07NW0212 2.4994 CARMAN

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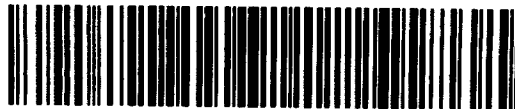
**RECEIVED**  
AUG 16 1982  
MINING LANDS SECTION

**Assessment Report**  
**of**  
**Geochemical Survey**  
**Carman Bay Claim Group (NH-4)**  
**Carman Township, Porcupine Mining Division, Ontario**

June 15, 1982  
Timmins, Ontario

D.R. Pyke, Ph.D.

See previous files: T-1009  
T-1464  
T-2369



42A07NW0212 2.4994 CARMAN

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### Introduction

This report covers a geochemical survey carried out over part of the Carman Bay Claim Group, located in southeast Carman Township, District of Cochrane, Porcupine Mining Division. The property consists of the following claims:

P 568704	P 568708
P 568705	P 568709
P 568706	P 568710
P 568707	P 568711

D.R. Pyke, of 157 Burbank Drive, Willowdale, Ontario is the current holder of the claims.

### Location and Access

The Carman Bay Claim Group is located in southeast Carman Township, approximately 20 miles southeast of the Timmins City Center.

The property is accessible by boat from either the north end of Nighthawk Lake or from the Langmuir Mine Site, near the south end of Carman Bay.

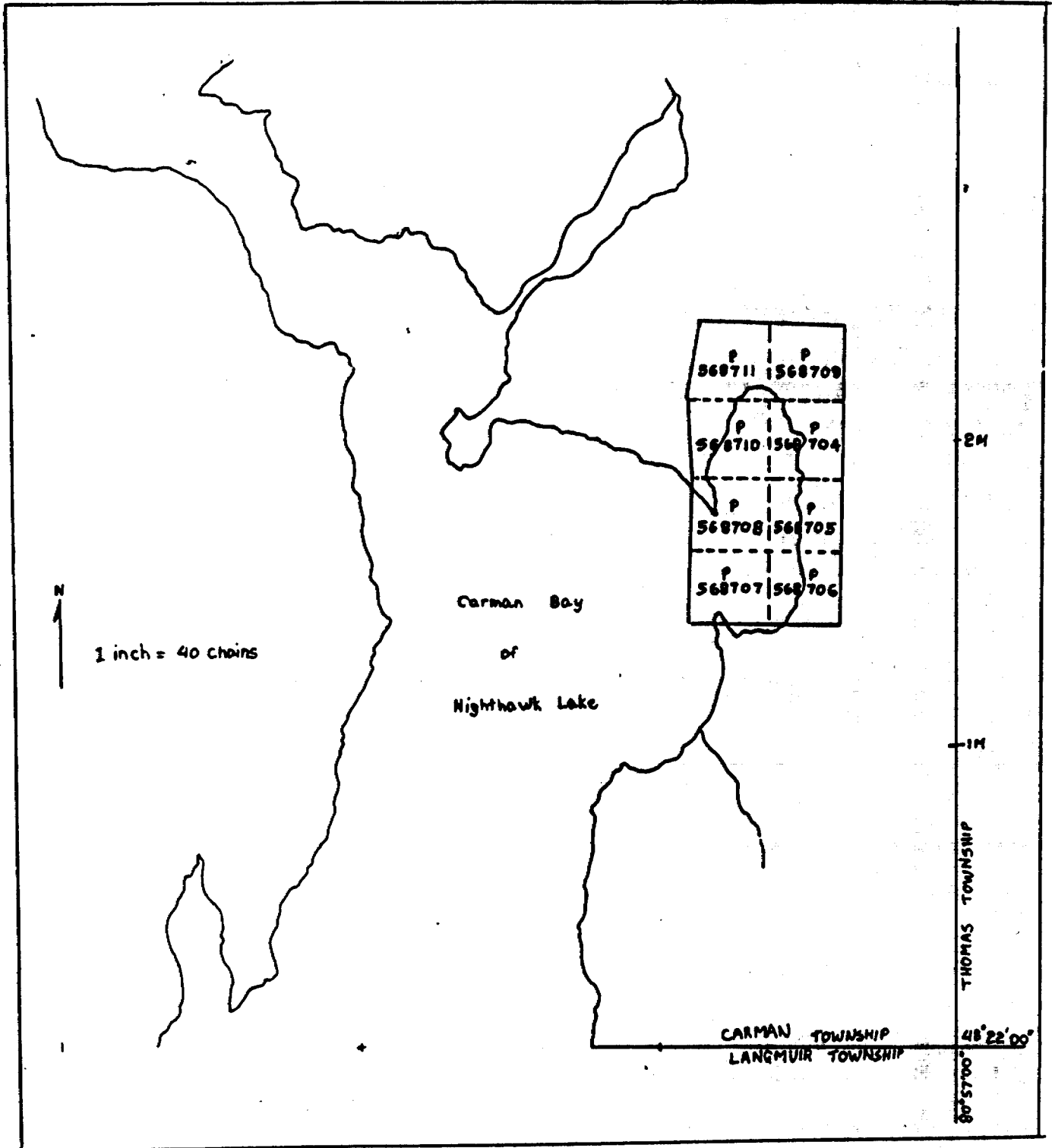
### Previous Work

The area was mapped by Berry (1940) and subsequently by Leahy (1971) and Pyke (1976).

The property covers a gold showing, previously explored

# FIGURE 1

LOCATION OF CARMAN BAY CLAIM GROUP, (NH-4)  
CARMAN TOWNSHIP, PORCUPINE MINING DIVISION



by the Carman Gold Syndicate in 1936. Exploration work consisted of a number of trenches, now largely flooded by the lake, and six diamond drill holes totalling 2000 feet. Gold assays are reported ranging from 0.005 to 0.45 ounces per ton (File T-1464\*).

In 1971, Inco Limited conducted magnetic and electromagnetic (VLEM) surveys over most of the property (File T-1009\*). Two roughly north-south trending conductors were detected between the east shore of the bay and the point of land on claim P 568708 (Figure 1).

#### Topography and Drainage

The property is generally characterized by low relief, with approximately 40% of the area being covered by the waters of Carman Bay (Figure 2). Locally, clay banks up to 40 feet high occur along the eastern shore of the bay.

Close to the shoreline (100-200 feet), the area is poorly drained and populated by alders, willow and cedar trees. Further from the shoreline, the property exhibits good drainage and is wooded primarily by balsam, poplar and birch trees with abundant growths of second generation alders occurring throughout.

#### Glacial Geology

Glacial material covers over 99 percent of the exposed

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\* Ontario Geological Survey, Assessment Files, Timmins, Ont.

property area. Previous drilling in the immediate offshore area of Carman Bay indicates that the glacial material consists of a basal unit of till overlain by a relatively thick (50-100 feet) sequence of varved clays. Locally the tills are absent and are replaced by sands or silts (W.O. Karvinen & Associates, Ltd.; personal communication). Overburden thickness on the area surveyed in this report is unknown; however, as areas of outcrop occur along the eastern shoreline of the bay, it is probable that the overburden depth in this area does not exceed 50 feet.

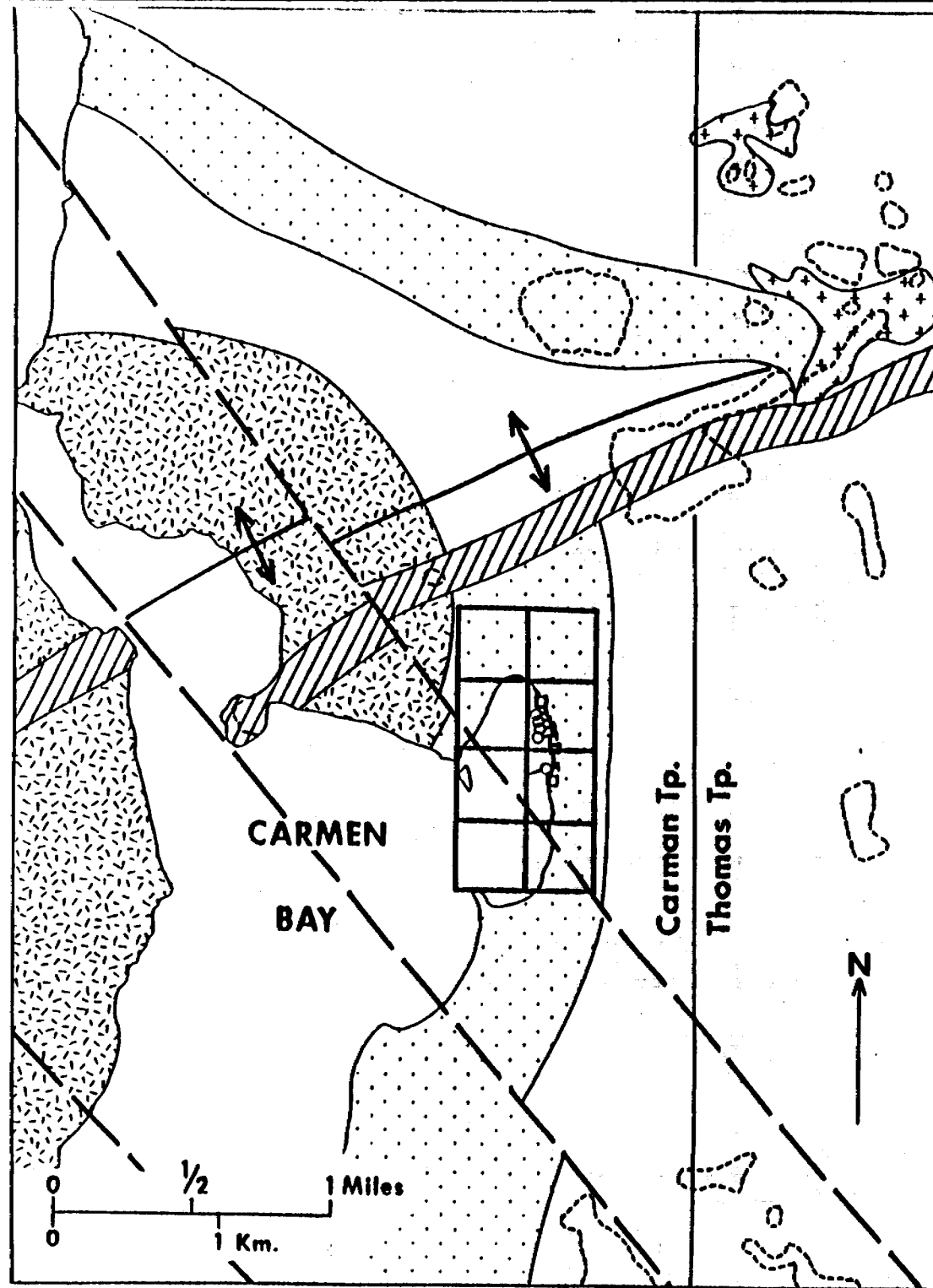
#### General Geology

The claims are situated along the eastern margin of the Shaw Dome, the axis of which passes one half mile to the north (Fig. 2). Leahy (1971) interprets a number of northeast trending faults in the immediate area, one of which passes through the claim group.

#### Property Geology

The property is interpreted to be underlain entirely by peridotitic komatiites. Outcrop, however, is sparse and confined to a few small exposures on the shore of the bay. Here, the ultramafic flows are sheared, serpentinized and locally highly carbonatized. Green carbonate is common and portions of the flows contain 3 to 5 percent pyrite.

A report of the Carman Gold Syndicate states that










- LEGEND**
- PRECAMBRIAN  
ARCHEAN**
- TISDALE GROUP**
-  Diabase
  -  Quartz-feldspar porphyry
  -  Tholeiitic volcanics
  -  Peridotitic komatiites
- DELORO GROUP**
-  Unsubdivided felsic volcanics
- SYMBOLS**
-  Rock outcrop
  -  Anticlinal axis
  -  Fault
  -  Diamond drill hole
  -  Pit or trench

Figure 2 - General geology in vicinity of the Carmen property. Modified after Leahy, (1971) and Pyke, (1980b).

"Three test pits were hand steeled on the main vein which runs about 1500 feet in a northeasterly direction. It is quartz porphyry with schist and greenstone".

#### Present Survey

The survey was carried out on August 20, 1980. The work was performed by Dale Pyke (presently residing in Willowdale, Ontario) and Kimberly Cunnison (presently residing in Aurora, Ontario).

The survey entailed sampling of the humus (A<sup>0</sup>) horizon. This horizon was found to be variably developed over the area surveyed. Along the shoreline, humus layer development was generally moderate to poor and the humus contained a considerable component of clay. Over the remaining area, the humus horizon was found to range from one to five inches in thickness and was characteristically dark brown in colour and peat-textured.

Sample location sites are plotted on Map C accompanying this report. Samples were collected at approximate 100 foot (30 meter) intervals along 10 east-west lines traversing the area surveyed. A total of 84 samples were obtained. The samples were subsequently hang-dried and submitted to X-Ray Assay Laboratories for geochemical analysis. Each sample was analyzed for gold (parts per billion) and arsenic (parts per million) using neutron activation method.



## Survey Results

The survey results are plotted on Maps D and E accompanying this report and are also displayed in Appendix A. The survey method is described in Appendix B.

### Gold content in humus- Map D

Background gold content in the humus horizon developed over the area sampled ranged from less than one to seven parts per billion, the average being between 3 and 4 parts per billion.

The survey outlined four restricted areas (labelled "A" - "D") yielding gold values ranging from 8 to 13 parts per billion, with the exception of a single sample station yielding an anomalous value of 91 parts per billion.

Area "A" - comprises a single sample station yielding a gold value of 91 parts per billion. The sample station is located on line ON at station 8W, and occurs within 10 feet of a large (eight feet long and four feet deep) trench on the shore of the bay.

Area "B" - trends northeast for a distance of 200 feet and comprises 2 sample stations yielding gold values of 10 and 13 parts per billion. Area "B" is situated in the northwest quarter of the area surveyed, and occurs on lines 3N and 4N.

Area "C" - is situated on the northern margin of the survey area, on line 6N, and encompasses two sample stations yielding gold values of 10 and 12 parts per billion.

Area "D" - is of irregular outline and occurs in the extreme southeast corner of the survey area. Area "D" comprises four sample stations yielding gold values of 8 - 9 parts per billion, and trends roughly northeast.

Arsenic content in humus - Map E

Background arsenic content in the humus horizon developed over the area surveyed ranged from 2 to 5 parts per million, and averages between 3 and 4 parts per million.

Two major areas of anomalous arsenic concentration in the humus horizon (Labelled "a" and "b") were outlined by the survey, in addition to three isolated single sample station anomalies.

Area "a" - is situated in the northwest quarter of the survey area, and trends roughly northeast for a distance of 250 feet. Area "a" comprises four sample stations yielding arsenic values of 6 to 8 parts per million, and occurs on lines 3N and 4N.

Area "b" - is of generally circular outline and is located in the southeast corner of the survey area. The area comprises seven sample stations yielding arsenic values of 6 to 8 parts per million.

Three isolated, single sample station anomalies yielding arsenic values of 5 to 7 parts per million occur within the area surveyed, and appear to be randomly distributed.

A moderate correlation exists between the distribution of anomalous gold and arsenic values in the area. Arsenic anomaly "a" is roughly coincident with gold anomaly "B" and both areas display the same general northeast trend. In the southeast quarter of the survey area, the southern portion of arsenic anomaly "b" is coincident with gold anomaly "D".

#### Recommendations and Conclusions

Lack of continuity of the anomalous areas plus the relatively low gold and arsenic values found in these areas indicate that the geochemical anomalies detected are weak and may not reflect a bedrock source for the gold and arsenic.

More detailed humus sampling followed by overburden drilling in the vicinity of gold anomalies "A", "B" and "D" would perhaps best serve to further explore these anomalies.

References

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- 1940: Geology of the Langmuir - Sheraton area;  
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Accompanied by map 49 h. Scale 1 inch to 1 mile

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in geochemical exploration for gold;  
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- 1979: Consider geochemistry when seeking gold;  
The Northern Miner, Exploration issue,  
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and Doxtader, K.G.

- 1974: Geochemistry of gold in the weathering cycle;  
U.S.G.S. Bull. 1330, 80p.

Leahy, E.J.

- 1971: Geology of the Night Hawk Lake area, District  
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Affairs, GR 96, 74p. Accompanied by Map 2222,  
scale 1 inch to  $\frac{1}{2}$  mile

Pyke, D. R.

- 1976: Watabeag River area, Districts of Timiskaming and  
Cochrane; Ontario Div. Mines, Prelim. Map P 1078,  
Geol. Ser., scale 1 inch to 1 mile

APPENDIX A

Humus Sample Analytical Results

Carman Bay Claim Group

SAMPLE 2U PDE 4S DDM

CN-1N-1W	7	4
CN-1N-2W	3	5
CN-1N-3W	9	4
CN-1N-4W	3	2
CN-1N-5W	5	2
CN-1N-6W	4	2
CN-1N-7W	1	2
CN-2N-1W	3	4
CN-2N-2W	4	4
CN-2N-2AW	4	5
CN-2N-3W	3	3
CN-2N-4W	3	3
CN-2N-5W	5	4
CN-2N-6W	6	3
CN-2N-7W	6	5
CN-3N-1W	6	5
CN-3N-2W	3	4
CN-3N-2AW	3	4
CN-3N-3W	3	4
CN-3N-4W	5	3
CN-3N-4AW	5	5
CN-3N-5W	5	4
CN-3N-6W	7	6
CN-3N-6AW	13	6
CN-4N-1W	9	4
CN-4N-2W	6	3
CN-4N-3W	3	2
CN-4N-4W	5	6
CN-4N-5W	10	5
CN-4N-6W	1	3
CN-5L-1W	2	4
CN-5L-2AW	4	4
CN-5L-3W	3	2
CN-5L-4W	2	3
CN-5L-5W	5	5
CN-5L-6AW	5	7
CN-5L-7W	6	5
CN-5L-8W	3	2
CN-5N-1W	4	5
CN-5N-2W	6	7
CN-5N-3W	4	6
CN-5N-4W	3	5

SAMPLE	AS PPM	AS PPM
CN-0N-4W	5	5
CN-0N-5W	2	<1
CN-0N-6W	3	2
CN-0N-7W	3	4
CN-0N-6W	01	4
CN-1S-1W	0	6
CN-1S-2W	6	8
CN-1S-3W	4	6
CN-1S-4W	2	5
CN-1S-5W	7	6
CN-1S-6W	<1	5
CN-1S-7W	4	4
CN-1S-8W	1	3
CN-2S-0W	8	5
CN-2S-1W	4	6
CN-2S-2W	8	8
CN-2S-3W	1	4
CN-2S-4W	2	5
CN-2S-5W	1	5
CN-2S-6W	5	5
CN-2S-7W	3	4
CN-3S-0W	5	4
CN-3S-1W	4	4
CN-3S-2W	8	3
CN-3S-3W	4	3
CN-3S-4W	3	3
CN-3S-5W	<1	4
CN-3S-6W	2	5
CN-3S-7W	<1	3
CN-5N-1W	3	3
CN-5N-2W	5	3
CN-5N-3W	2	3
CN-5N-4W	6	3
CN-5N-5W	3	3
CN-5N-6W	4	2
CN-6N-1W	6	4
CN-6N-2W	5	4
CN-6N-3W	7	3
CN-6N-4W	12	4
CN-6N-5W	10	3
CN-6N-6W	5	3
CN-6N-650W-CN	4	6

APPENDIX B

Survey Method



## Procedure

During the survey, humus samples were obtained either by hand or by exposing deeper levels of the humus layer with a grub hoe.

After hang-drying, the samples were shipped to X-Ray Assay Laboratories, 1885 Leslie Street, Don Mills, Ontario, for analysis. 84 samples were analyzed by neutron activation method for gold and arsenic.

Sample preparation entailed thoroughly blending each sample in a blender to homogenize the material, followed by hydraulic compression of a portion of the sample to form a pellet weighing eight grams, which was used in the neutron activation process.

## Humus as a sample medium

Gleeson (1979), Lakin et al (1974), Curtin et al (1968) and others have documented the successful use of humus (mull) as a sample medium for detection of auriferous bedrock zones in areas covered by 3 to 120 feet of glacial material. Gleeson (1979) has found that anomalies in the humus generally occur directly over the subcrop area of the auriferous zones, and their dispersion patterns appear to be little effected by glacial transport.

The humus layer sampled consists of the partly decomposed plant debris found under trees or shrubs, and usually occurs as dark brown or black, humus - rich pads mixed with varying amounts of mineral matter.

A summary of the geochemical processes involved in the accumulation of gold in the humus horizon is presented by Lakin et al (1974):

"...ample hydrogen cyanide is formed in the soil by hydrolysis of cyanogenic plants, animals and fungi to result in solution of gold in an oxygenated environment. The gold cyanide thus formed is absorbed by plants, but they do not use it as a nutrient. It is therefore found accumulating as a reject in the woody parts of a plant. The decomposition of plant debris results in the reduction of gold in the plant material and the gold accumulation in the humus horizon of the soil".

Boyle and Dass (1967), through their work in the Cobalt area, have demonstrated that concentrations of such elements as arsenic, zinc, copper and lead also occur in the humus layers over known veins containing these elements.

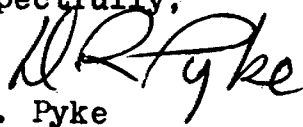
Certificate

I, D. R. Pyke, submit this document to certify that the following statements are, to the best of my knowledge, true and correct:

1. That I supervised the geochemical survey conducted on the Carman Bay Claim Group on August 20, 1980.
2. That I am the author of the corresponding assessment report entitled "Assessment Report of Geochemical Survey, Carman Bay Claim Group (NH-4), Carman Township, Porcupine Mining Division, Ontario".
3. That I have received the following university degrees in geology:

B.Sc. - University of Saskatchewan	1959
M.Sc. - University of Saskatchewan	1959
Ph.D. - McGill University, Quebec	1967
4. That I have been working as a geologist in the general Timmins Area for 15 years, and I am familiar with the geology of the area under consideration.

Respectfully,

  
D.R. Pyke

Assessment Work Breakdown

1. Expenditure Credits for Geochemical Survey  
(see Technical data statement)

84 humus samples analyzed for gold and  
arsenic, at \$6.50 per sample ..... \$ 546.00

Assessment Credits - one day's work for each  
\$15 expended. Total number of assessment  
credits obtained for chemical analyses ..... 36.40 days

Number of expenditure credits credited per claim,  
(one claim to be credited) ..... 36.40 days

2. Assessment credits earned for total 8-hr.  
technical days (see Assessment Work Breakdown  
Statement) ..... 21.00 days

Number of technical credits credited per claim,  
(one claim to be credited) ..... 21.00 days

Total number of assessment credits per claim  
earned from this survey work ..... 57.40 days  
per claim

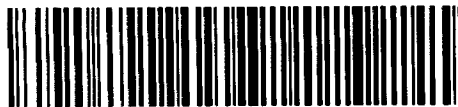
Submitted by D.R. Pyke for purposes of obtaining assessment  
work credits for mining claim P. 568704, comprising a  
portion of the Carman Bay Claim Group, Porcupine Mining  
Division, Ontario

*D.R. Pyke*



Ministry of M

GEOPHYSICAL - GEO  
TECHNICAL D



42A07NW0212 2.4994 CARMAN

900

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.

MINING LANDS S...

Type of Survey(s) Geochemical (humus sampling)

Township or Area Carman Township

Claim Holder(s) D.R. Pyke, 157 Burbank Dr.,  
Willowdale, Ontario

Survey Company -----

Author of Report D.R. Pyke

Address of Author 157 Burbank Dr., Willowdale, Ont.

Covering Dates of Survey August 20, 1980 - June 15, 1982  
(linecutting to office)

Total Miles of Line Cut -----

MINING CLAIMS TRAVERSED  
List numerically

P. 568704  
(prefix) (number)

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

- Geophysical
- Electromagnetic \_\_\_\_\_
- Magnetometer \_\_\_\_\_
- Radiometric \_\_\_\_\_
- Other \_\_\_\_\_
- Geological \_\_\_\_\_
- Geochemical \_\_\_\_\_

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

ENTER 20 days for each  
additional survey using  
same grid.

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Aug 12/82 SIGNATURE: D R Pyke  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 23899

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 1

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.L.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 \_\_\_\_\_

**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 P 568704, P 568705

Total Number of Samples 84  
 Type of Sample soil sample - humus  
(Nature of Material)  
 Average Sample Weight 8 grams  
 Method of Collection sampled by hand/grub hoe

Soil Horizon Sampled humus - A<sup>0</sup>  
 Horizon Development Variable 0.5-5 inches  
 Sample Depth 0.5 - 5 inches  
 Terrain One of low relief. Step clay banks occur along shoreline  
 Drainage Development generally good, poor on shoreline  
 Estimated Range of Overburden Thickness Overburden estimated to not exceed 50 feet in area surveyed, as outcrop occurs on the property.

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_  
Samples hang-dried before analysis

General Samples were blended in a blending machine for homogeneity of material. All samples were thoroughly dried before blending

ANALYTICAL METHODS

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

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

Others Gold - parts per billion

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

84 samples tested

Commercial Laboratory (for Au and As tests)

Name of Laboratory X-Ray Assay Laboratory

Extraction Method -----

Analytical Method Neutron Activation

Reagents Used -----

General 84 samples were analyzed each for gold and arsenic.

Samples were analyzed at

X-Ray Assay Laboratories,

1885 Leslie St.,

Willowdale, Ontario

Blended sample material was

hydraulically compressed to form

a pellet weighing 8 grams



ASSESSMENT WORK BREAKDOWN

1. Type of Survey Geochemical (humus sampling)

2. Township or Area Carman Township, Porcupine Mining Division

3. Numbers of Mining Claims Traversed by Survey P 568704, P 568705

4. Number of Miles of Line Cut ----- Flown -----

\*5. Number of Stations Established -----

\*6. Make and type of Instrument Used -----

\*7. Scale Constant or Sensitivity -----

\*8. Frequency Used and Power Output -----

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 3.0

Total 8 hour Line-Cutting Days 0

Calculation

$$\frac{3.0}{\text{Technical}} \times 7 = \frac{21.0}{\text{Line-cutting}} + \frac{0}{\text{Line-cutting}} = \frac{21.0}{\text{Line-cutting}} \div \frac{1}{\text{Number of claims}} = \frac{21.0}{\text{Assessment credits per claim}}$$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims  Check

If otherwise, please explain -----

Dated: Aug 12/82

Signed: MR Fyke

- Note:
- (A) \* Complete only if applicable.
  - (B) Complete list of names, addresses and dates on reverse side.
  - (C) Submit separate breakdown for each type of survey.
  - (D) Submit in duplicate.

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

<u>Type of Work</u>	<u>Name &amp; Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Geochemical (humus sampling)	D.B. Pyke, 157 Burbank Drive, Willowdale, Ont.	Date worked - August 20, 1980	1.0
	K.M. Cunnison, 200 Kennedy St. West, Aurora, Ont	Date worked - August 20, 1981	1.0

2. CONSULTANTS

<u>Name &amp; Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<u>Name &amp; Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
K. Cunnison	Draughting	June 15, 1982	0.5
200 Kennedy St. W. Aurora, Ont.	Typing	June 15, 1982	0.5

TOTAL 8 HOUR TECHNICAL DAYS 3.0

4. LINE-CUTTING

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Not applicable			

TOTAL 8 HOUR LINE-CUTTING DAYS ---

# X-RAY ASSAY LABORATORIES

LIMITED

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • (416) 445-5755

April 28, 1981

D. R. Pyke & Associates Inc.  
157 Burbank Drive  
Willowdale, Ontario  
M2K 1N9

## STATEMENT OF SERVICES SUPPLIED & COST

### CN SERIES

84	Samples	Au, As ppb	NA	@6.50	<u>\$546.00</u>
----	---------	------------	----	-------	-----------------

**X-RAY ASSAY LABORATORIES LTD.**

*Paid*  
-----  
*J. Eagles*  
-----

NEGOTIABLE WITHOUT CHARGE AT ANY BRANCH OF CANADIAN IMPERIAL BANK OF COMMERCE IN CANADA (FAR NORTHERN BRANCHES EXCEPTED)

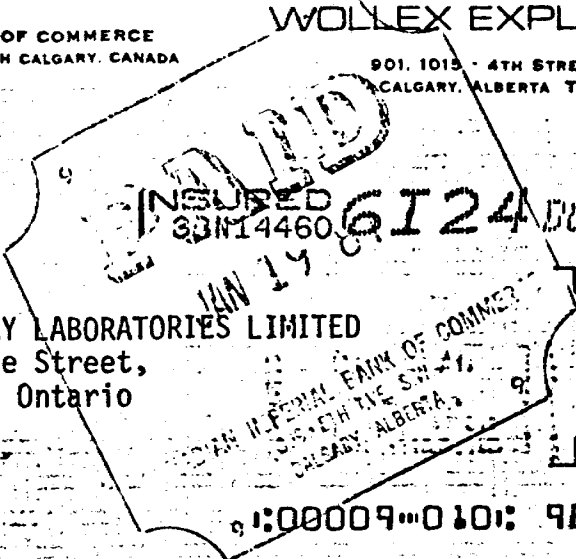
WOLLEX EXPLORATION

No 3560

CANADIAN IMPERIAL BANK OF COMMERCE  
107TH AVENUE S.W. BRANCH CALGARY, CANADA

901, 1015 - 4TH STREET S.W.  
CALGARY, ALBERTA T2R 1J4

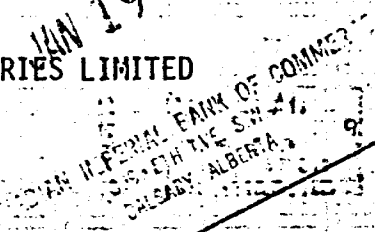
DATE December 31, 1980



6124 DOLS 10 CTS

\$ 6,124.10

X-RAY ASSAY LABORATORIES LIMITED  
1885 Leslie Street,  
DON MILLS, Ontario  
M3B 3J4



WOLLEX EXPLORATION

*[Signature]*  
S. J...

⑆00009⑉010⑆ 98⑉12210⑈

FOR DEPOSIT ONLY  
TO THE CREDIT OF  
X-RAY ASSAY LABORATORIES LTD.  
ONTARIO

06852-003  
ROYAL BANK OF CANADA  
591 YORK MILLS RD.  
TORONTO, ONT.  
C.I. 06852-003  
DATA CENTRE  
TOR. ONT.

010-010  
C.I.B.C.  
DATA CENTRE  
CALGARY, ALBT.

115603

2.4994

1983 05 24

2.4994

Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

RE: *Timmins [115603]*  
Geochemical Survey on Mining Claim P 568704 in the  
Township of Carman. *N7S 50N/YND*

The Geochemical Survey assessment work credits as shown on  
the attached statement have been approved as of the above  
date. *1 day*

Please inform the recorded holder of these mining claims and  
so indicate on your records.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

D. Kinvig:sc

cc: Dr. D.R. Pyke  
31 Delair Crescent  
Thornhill, Ontario  
L3T 2M3

cc: Resident Geologist  
Timmins, Ontario

*100.000  
6.000*

*Bill Gault  
940  
at 11.00*

1983 05 24

Recorded Holder <b>DR. D.R. PYKE</b>
Township or Area <b>CARMAN</b>

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Section <del>86(18)</del> <b>77(19)</b> _____ days <b>Geological</b> _____ days <b>Geochemical</b> <u>21</u> _____ days Man days <input checked="" type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	<b>P 568704</b>

**Special credits under section 86 (15a) for the following mining claims**

--	--

**No credits have been allowed for the following mining claims**

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> Insufficient technical data filed
---	--

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 86(18)-60:



Report of Work  
(Geophysical, Geological,  
Geochemical and Expenditures)

2,4994  
# 230  
P568704

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
- Do not use shaded areas below.

CARMAN.

The Mining Act

Type of Survey(s) <b>Geochemical (Analyses)</b>	Township or Area <b>CARMAN</b>
Claim Holder(s) <b>D.R. Pyke</b>	Prospector's Licence No. <b>K19126</b>
Survey Company	Survey Dates (line cutting to office) 27 8 80 15 6 82 Day Mo. Yr. Day Mo. Yr.
Name and Address of Author (of Geo-Technical report) <b>D.R. Pyke 157 BURBANK DR. WILLOWDALE ONT M2K1N9</b>	Total Miles of line Cut

Instructions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
For each additional survey: using the same grid: Enter 20 days (for each)	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
7	56870A	40			

RECORDED  
JUN 16 1982  
Receipt No. ....

RECEIVED  
PORCUPINE MINING DIVISION

Instructions	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Instructions	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	

Expenditures (excludes power stripping)
Type of Work Performed <b>Geochemical (Mosses and Bedrock Sampling)</b>
Performed on Claim(s) <b>P568704, P568705</b>

Calculation of Expenditure Days Credits
Total Expenditures <b>546</b>
\$ <b>7.46</b> + <b>15</b> = <b>49.7</b>
Total Days Credits <b>36.4</b>

Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.
Report Completed Date of Report <b>June 15 82</b>
Recorded Holder or Agent (Signature) <b>D.R. Pyke</b>

For Office Use Only	
Total Days Cr. Recorded <b>61</b>	Date Recorded <b>June 16/82</b>
Date Approved as Recorded	

Total number of mining claims covered by this report of work <b>1</b>	Mining Recorder <i>[Signature]</i>
	Regional Mining Recorder

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying <b>D.R. Pyke 157 BURBANK DR. WILLOWDALE ONT M2K1N9</b>	Date Certified	Certified by (Signature) <b>D.R. Pyke</b>
--	----------------	--

RECEIVED  
JUN 21 1982  
MINING LANDS SECTION

see revised work statement

## Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
3				21				21		1		21

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim





Ministry of  
Natural  
Resources

Ontario

Your file:

1983 05 24

Our file: 2,4994

**Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7**

**Dear Sir:**

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

Yours very truly,

E.F. Anderson  
Director  
Lands Administration Branch  
Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

**For further information, if required,  
please contact Mr. F.W. Matthews at  
416/965-1380.**

**D. Kinvig; sc**

**cc: Dr. D.R. Pyke  
Thornhill, Ontario**

**cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario**



Ministry of  
Natural  
Resources

Notice of Intent  
for Technical Reports

1983 05 24

2.4994

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



1983 05 24

Recorded Holder <b>DR D.R. PYKE</b>
Township or Area <b>CARMAN</b>

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Section <del>86(19)</del> <b>77(19) see across</b> days <b>Geological</b> _____ days <b>Geochemical</b> _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	<p><b>\$546.00 spent on assaying samples taken from Mining Claims 568704 and 568705.</b></p> <p><b>36 days credit allowed which may be grouped in accordance with Section 76(6) of the Mining Act.</b></p>

**Special credits under section 86 (15a) for the following mining claims**

**No credits have been allowed for the following mining claims**

not sufficiently covered by the survey       Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 86(18)-80:

1983 05 19

2.4994

Dr. D.R. Pyke  
31 Delair Crescent  
Thornhill, Ontario  
L3T 2M3

Dear Sir:

RE:       Geochemical Survey and Expenditure submitted  
          on Mining Claims P 568704-05 in the Township of  
          Carman.

---

On June 6, 1982 you recorded assessment work credits on the above claims for an expenditure of \$746.00 for assay work. You have only provided a receipt from X-Ray Assay Laboratories for \$546.00. Please clarify.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

D. Kinvig:sc

cc: Mining Recorder  
      Timmins, Ontario



Dec 30/82

Mining Lands Comments


To: Geophysics

Comments


<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature
-----------------------------------	---	------	-----------

To: Geology - Expenditures *Mr Kustra*

Comments


<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature
-----------------------------------	---	------	-----------

To: Geochemistry *DR. FORTESCUE*

Comments


<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <i>Jan 3rd 1983</i>	Signature <i>JAC Fortescue</i>
--	---	--------------------------	--------------------------------

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1982 09 20

2.4994

Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

We have received reports and maps for a Geochemical Survey submitted on Mining Claim P 568704 in the Township of Carman.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7S 1W3  
Phone 416/965-1316

J. Skura:sc

cc: D.R. Pyke  
Willowdale, Ontario

D.R. Pyke and Associates Inc.

157 Burbank Drive  
Willowdale, Ontario  
M2K 1N9  
Telephone (416) 221-6210

P.O. Box 965  
Timmins Ont

Lands Management Branch  
Ministry Natural Resources  
Room 6450  
Whitney Block  
Queen's Park  
Toronto M7A 1W3

P4N 7W5

<b>RECEIVED</b>	
Land Management Branch	
CIRCULATE	<input type="checkbox"/>
COMMENTS PLEASE	<input type="checkbox"/>
BY	
AUG 16 1982	
E. F. ANDERSON	
J. R. MORTON	
J. C. SMITH	<input checked="" type="checkbox"/>
J. M. SMALL	
RETURN TO R. 6450	

→ Re: Assessment Report Carman Twp

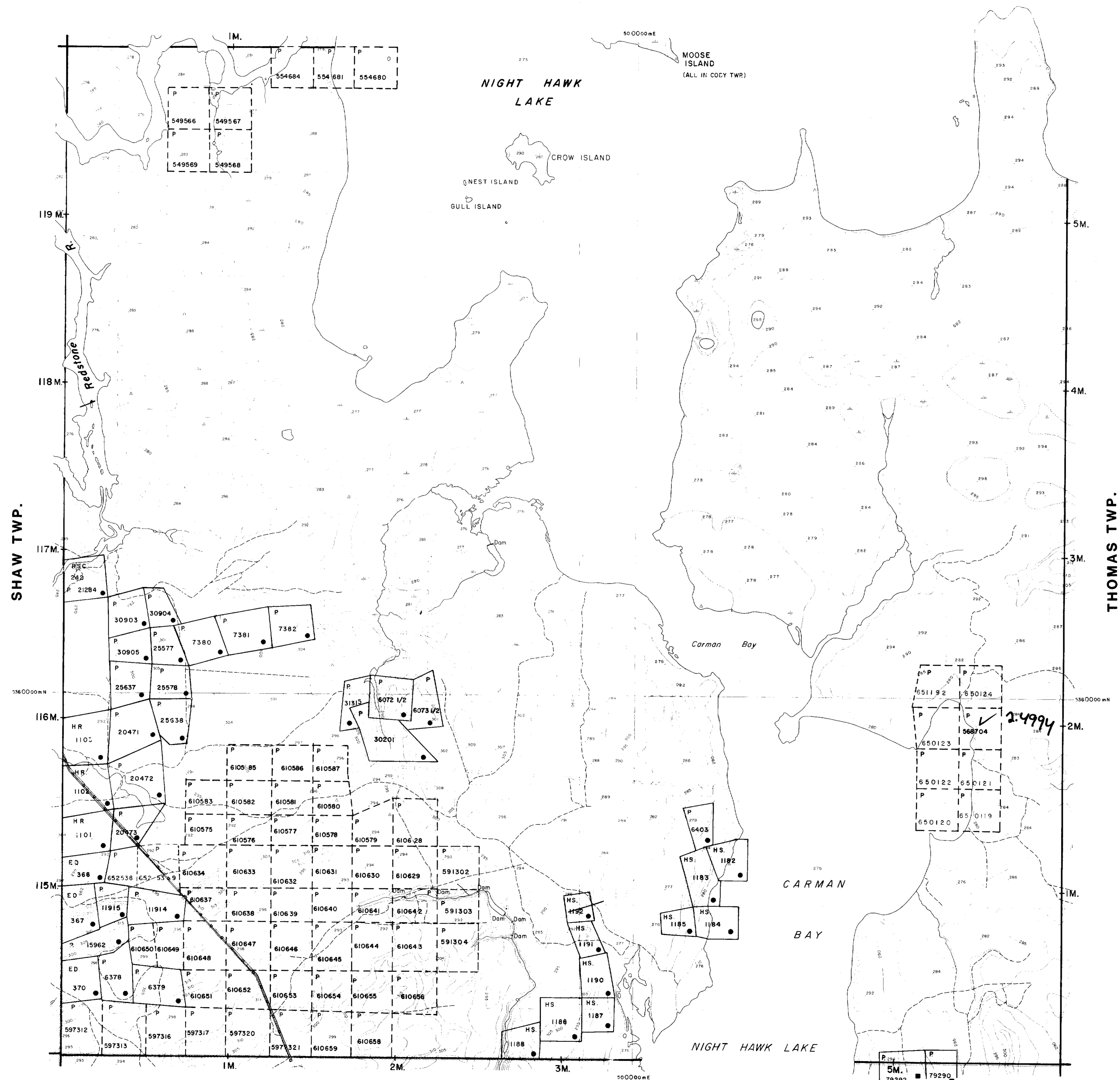
Enclosed is an assessment report for  
a humus survey in Carman Township

Sincerely, D.R. Pyke

MAP SYMBOLOLOGY

Aerial Cableway	Pipeline
Boundary	Railroad
International	Single Track
Intrastate	Double Track
District, Township	Abandoned
Indian Reserve	Turntable
Approximate	Road
Lot, Concession	Highway, County
Approximate	Township
Park Boundary	Access (road of doubtful maintenance or significant driveway)
Bridge	Traffic, Bush Road (garage, alley)
Road, Railroad	Rapids
Building	Double line river with multiple rapids
Chimney	Double line river with multiple rapids
Cliff, Pit, Pile	Reservoir
Contours	River, Stream, Canal
Interpolated	Approximate
Approximate	Dam
Depression	Direction of flow
Control Points	Rock
Horizontal	Significant
Vertical	Spot Elevation
Culvert	(above elevations)
Falls	Tower
Double line river	Transmission Line
Fence, Hedge, Wall	Poles
Feature Outline	Pylons
(Construction features, etc.)	Tunnel
Flooded Land	Utility Poles
Lock	Wharf, Dock, Pier
Marsh or Swamp	Wooded Area
Mast	
Mine Head Frame	
Outcrop	

CODY TWP.



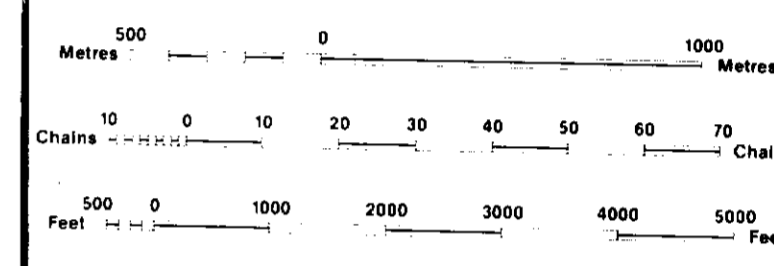
LEGEND

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 OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

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	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

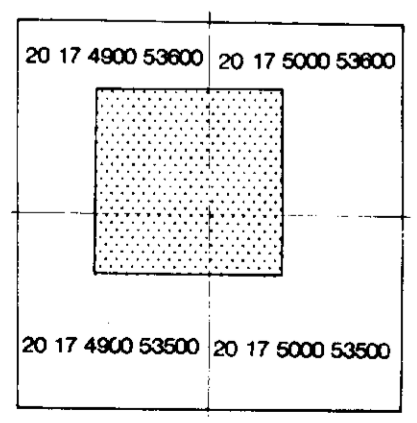
NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.



SCALE 1:20 000

DATE OF ISSUE  
DEC 30 1982  
Ministry of Natural Resources  
TORONTO

KEY PLAN  
For O.B.M. Map



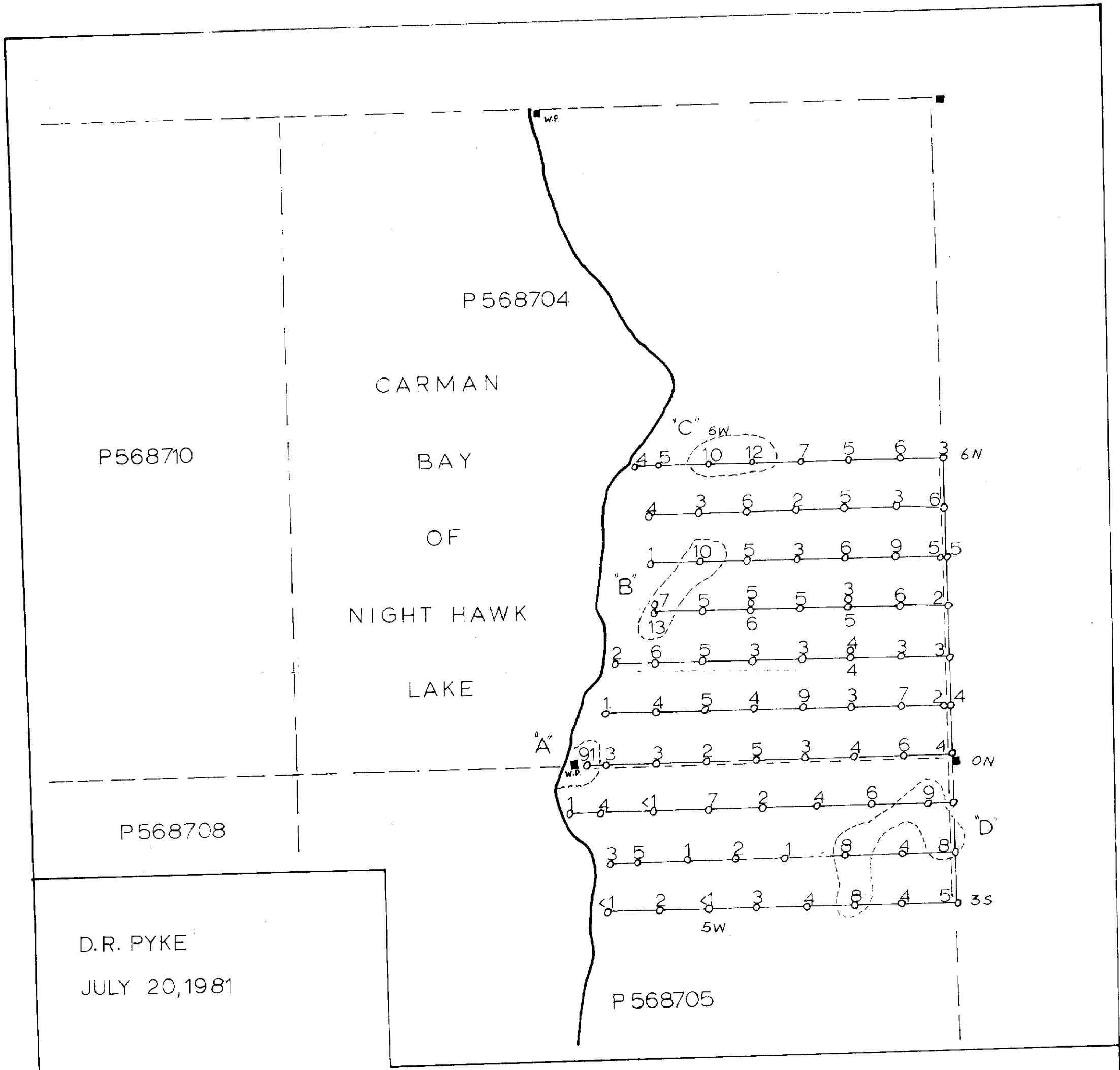
200

TOWNSHIP  
**CARMAN**  
M.N.R. ADMINISTRATIVE DISTRICT  
**TIMMINS**  
MINING DIVISION  
**PORCUPINE**  
LAND TITLES / REGISTRY DIVISION  
**COCHRANE**

Ministry of Natural Resources  
Land Management Branch  
Ontario

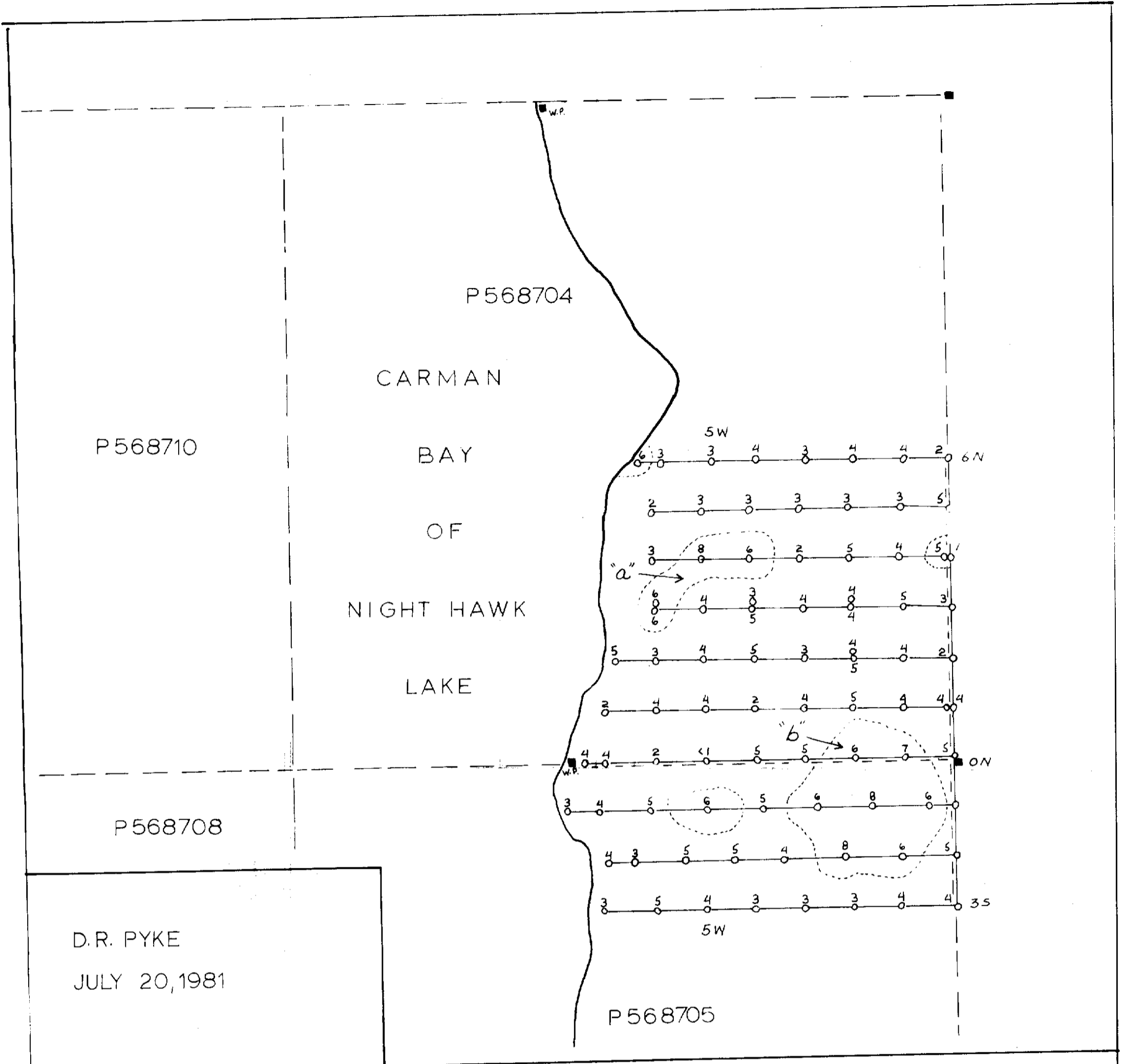
Date: JUNE 1981  
Number: **G-4000**





HUMUS SAMPLES ("CN" SERIES)  
 CARMAN BAY CLAIM GROUP, (NH-4)  
 CARMAN TOWNSHIP  
 GOLD CONTENT - parts per billion





D.R. PYKE  
 JULY 20, 1981

HUMUS SAMPLES ("CN" SERIES)  
 CARMAN BAY CLAIM GROUP, (NH-4)  
 CARMAN TOWNSHIP  
 ARSENIC CONTENT-parts per million

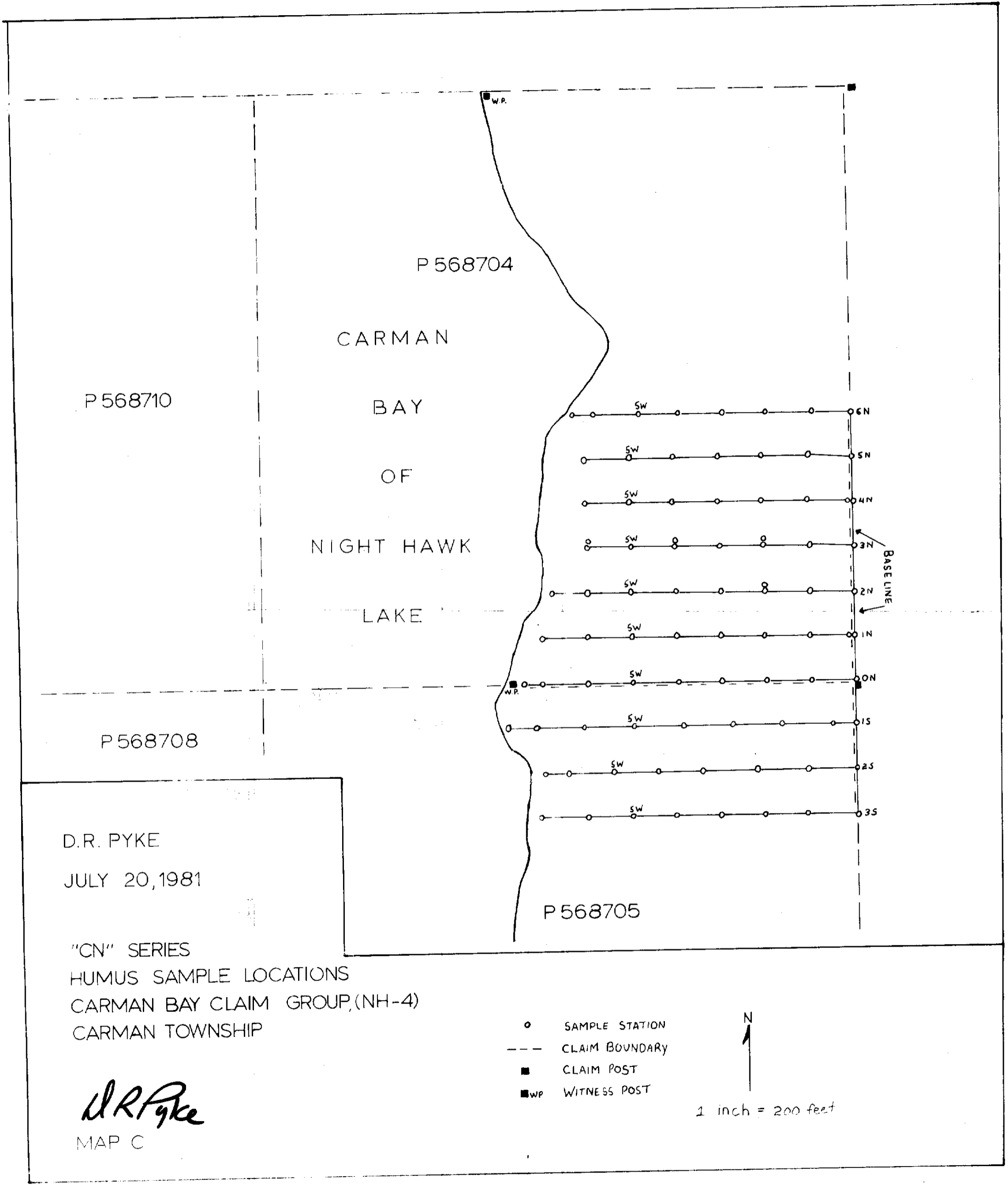
- SAMPLE STATION
- CLAIM BOUNDARY
- CLAIM POST
- WP WITNESS POST

N  
 ↑  
 1 INCH = 200 FEET

MAP E

*D.R. Pyke*





P 568710

P 568704

CARMAN  
BAY  
OF  
NIGHT HAWK  
LAKE

P 568708

P 568705

D.R. PYKE  
JULY 20, 1981

"CN" SERIES  
HUMUS SAMPLE LOCATIONS  
CARMAN BAY CLAIM GROUP, (NH-4)  
CARMAN TOWNSHIP

*D.R. Pyke*  
MAP C

- SAMPLE STATION
- - - CLAIM BOUNDARY
- CLAIM POST
- WP WITNESS POST



1 inch = 200 feet

