



42H03SW0010 2.6915 LENNOX

010

ASSESSMENT REPORT

ON THE

TWIN LAKES GROUP
(4 CLAIMS)

750413, 750436, 750437, 750438

BY

S. L. FUMERTON
CHEVRON CANADA RESOURCES LIMITED
167B WILSON AVENUE
TIMMINS, ONTARIO
P4N 2T2

FOR

HUBBAY MINING LTD.
Box 200
CALGARY, ALBERTA

RECEIVED
JUN 29 1984
MINING LANDS SECTION

June 4, 1984.

The 78 days of work credits from the Input survey, and 78 days from the Total Field Magnetic Survey are to be distributed evenly over the total claim group as listed below:

<u>Claim</u>	<u>Input</u>	<u>Mag</u>	<u>Total Days Credit</u>
750413	20	19	39
750436	20	19	39
750437	19	20	39
750438	19	20	39

Fig. 1 - Location Map

● Twin Lakes Group (4 claims)
Lennox Twp S 1/2 Con IV
Lot 12

P 750436	P 750413
P 750437	P 750438

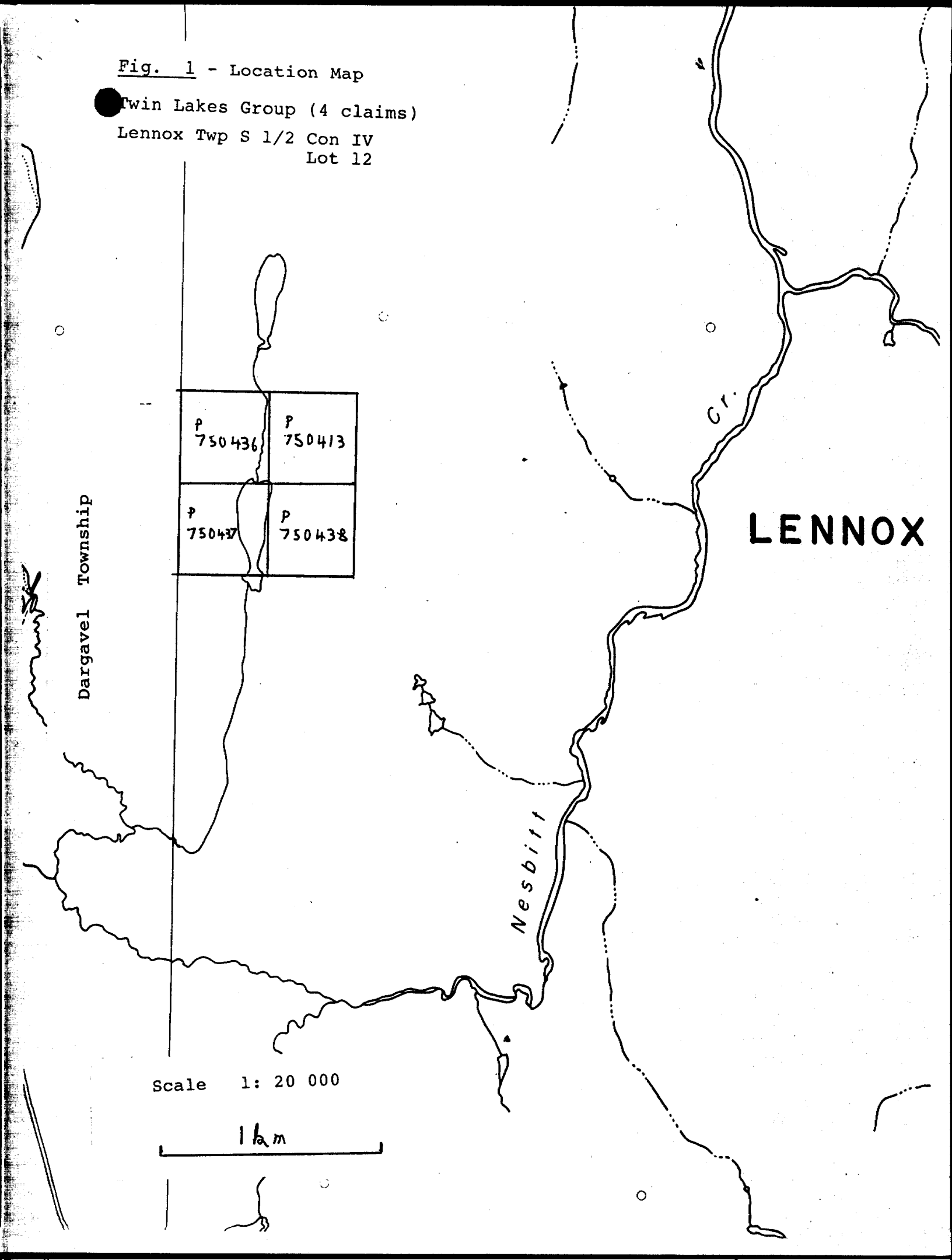
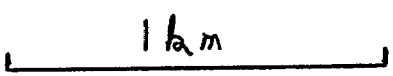
Dargavel Township

LENNOX

Nesbitt

Cr.

Scale 1: 20 000



Quator Mark VI Input Survey, October 1983.

Twin Lakes Group, Lennox Township.

<u>Claim</u>	<u>Km of Continuous Recording</u>
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750413	1.2
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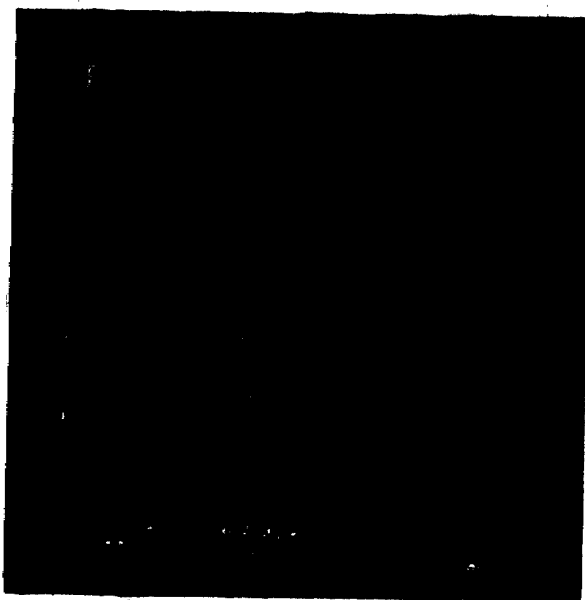
750436	.79
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750437	.86
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750438	1.08
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3.93 = 78 Days

Fig. 2 - Input Survey



See legend on the following pages.
Scale 1:20,000

INPUT PEAK RESPONSE SYMBOLS 1ms PULSE

SURFICIAL RESPONSE	UP-DIP PEAK RESPONSE	BEDROCK RESPONSE	DECAY INTERVAL CLASSIFICATION
			1 Channel (322 microseconds)
			2 Channel (486 microseconds)
			3 Channel (732 microseconds)
			4 Channel (1060 microseconds)
			5 Channel (1470 microseconds)
			6 Channel (1962 microseconds)



Culture Response

50

Associated Magnetic Response

Anomaly Letter

B | 5

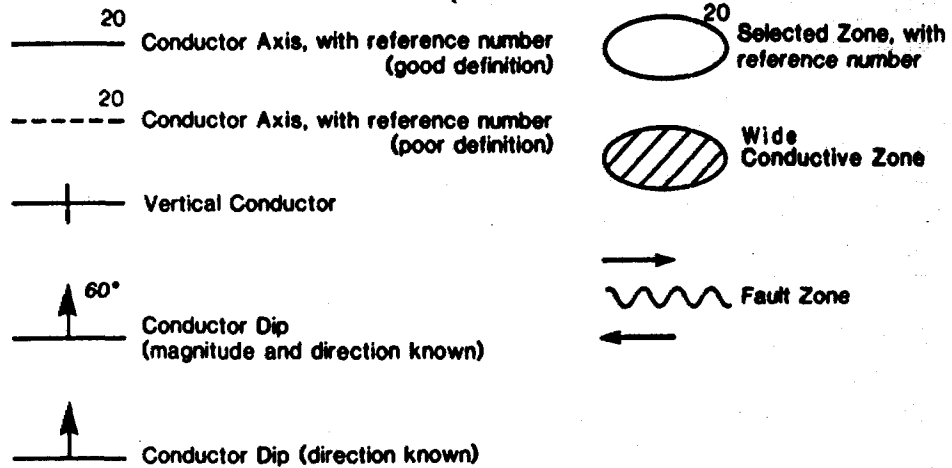
Apparent Conductivity Width (siemens)
(N.C. - No Calculation)

* | 1800

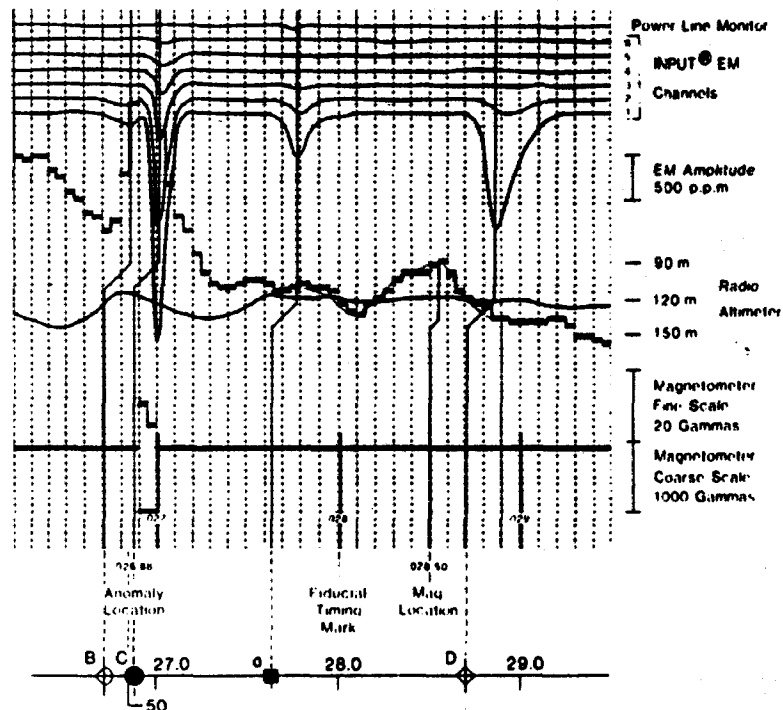
Poorly Defined Response

Ch. 2 Amplitude (p.p.m.)

INTERPRETATION



Representative INPUT® Magnetometer and Altimeter Recording



DESCRIPTIVE NOTES

The aircraft is equipped with the Barringer/Questor Mark VI INPUT[®] airborne E.M. System and the Sonotek PMH 5010 Proton Precession Magnetometer and Sonotek SDS-1200 Series Data Acquisition System. The INPUT[®] system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Discrimination of conductors is based on the rate of transient decay, magnetic correlation and the anomaly shape, together with the conductor pattern and topography.

[®] Registered Trade Mark of Barringer Research Limited

INTERPRETATION REFERENCES

- Becker, A., Gauvreau, C., and Collett, L.S.
1972: Scale Model Study of Time Domain Electromagnetic Response of Tabular Conductors; Canadian Mining and Metallurgical Bulletin, Volume 65, No. 725, p. 90-96.
- Dyck, A.V., Becker, A., and Collett, L.S.
1974: Surficial Conductivity Mapping with the Airborne INPUT[®] System; Canadian Mining and Metallurgical Bulletin, Volume 67, No. 744, p. 104-109.
- Lazenby, P.G.
1973: New Developments in the INPUT[®] Airborne E.M. System; Canadian Mining and Metallurgical Bulletin, Volume 66, No. 732, p. 96-104.
- Nelson, Philip, H.
1973: Model Results and Field Checks for a Time-Domain Airborne E.M. System; Geophysics, Volume 38, No. 5, p. 845-853.
- Palacky, G.J., and West G.F.
1974: Computer Processing of Airborne Electromagnetic Data; Geophysical Prospecting, Volume 22, No. 3, p. 490-509.

This survey forms part of a larger survey which consisted of 1,826 line km.

Type of instrument was Questor/Barringer MK VI Input System mounted on a Britten-Norman Trislander.

Flight line control was achieved using a 35mm strip camera with fiducial points plotted on a 1:20,000 uncontrolled photo mosaic.

No significant conductors were located in this survey within the claim group.



S.L. Fumerton,
Geologist

for J.P. Steele,
Chief Geophysicist

Questor. Total Magnetic Intensity Survey, October 1983.

Twin Lakes Group, Lennox Township

Claim Approx. Km of Continuous Recording

750413 1.2

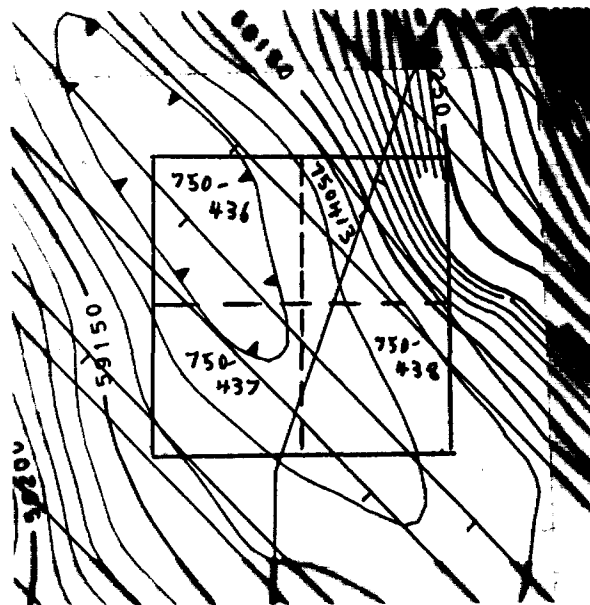
750436 .79

750437 .86

750438 1.08

3.93 = 78 Days

Fig. 3 - Total Intensity Magnetic Survey



See legend on following page.
Scale 1:2,000

MAGNETIC CONTOURS

_____ 10 Gamma Contour Line

_____ 50 Gamma Contour Line

_____ 250 Gamma Contour Line



Magnetic Depression

1 Gamma = 1 Nanotesla in SI Units

This survey forms part of a larger survey which consisted of 1,826 line Km.

Type of instrument was a Sonotek PMP Proton Magnetometer mounted on Britten-Norman Trislander.

Flight line control was achieved using a 35mm strip camera with fiducial points plotted on a 1:20,000 uncontrolled photo mosaic.

Results of the survey indicate that the claims coincide with a northwest trending magnetic low at the northeastern edge of an area with a low magnetic relief (+ 150). The adjacent high relief terrain (+ 1000) extends some distance to the Northeast and this contrast in magnetic susceptibility probably reflects on the existence of a major lithological contact in the underlying basement.



S.L. Fumerton,
Geologist

for J.P. Steele,
Chief Geophysicist

Mining Lands Section

File No 2.6915

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
- GEOLOGICAL
- GEOCHEMICAL
- EXPENDITURE

MINING LANDS COMMENTS:

~~no significant~~
~~no qualifications~~

Doug
Signature of Assessor

2/10/84
Date

LD

August 10, 1984

Your File: 222-84
Our File: 2.6915

Hudbay Mining Ltd
c/o Dome Petroleum
Box 200
Calgary, Alberta
T2P 2H8

Dear Sirs:

RE: Airborne Geophysical (Electromagnetic & Magnetometer)
Survey submitted on Mining Claims P 750413 and P 750436
to 38 inclusive in the Township of Lennox

Enclosed is the last page of the report, in duplicate, for the above-mentioned survey. Please have the author of the report date and sign each page and return them to this office.

In addition, we are endeavouring to compile a list of qualifications of those persons who sign reports of geological, geochemical and geophysical surveys submitted to this Ministry for assessment work credits. I would be appreciated therefore, if you would have Mr. S.L. Fumerton furnish a brief resume of his qualifications for our records.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-4888

D. Kinvig:mc

cc: Chevron Canada Ltd
167-B Wilson Avenue
Timmins, Ontario P4N 2T2

cc: Mining Recorder
Timmins, Ontario

Encl.

Aug 29, 1984
qual. on file 2.6744
will send signature pages down
shortly
Doug

1984 07 05

Your File: 222
Our File: 2.6915

Mr. Bruce Hanley
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for an Airborne Geophysical (Electromagnetic & Magnetometer) Survey submitted on Mining Claims P 750413 in the Township of Lennox.

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

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

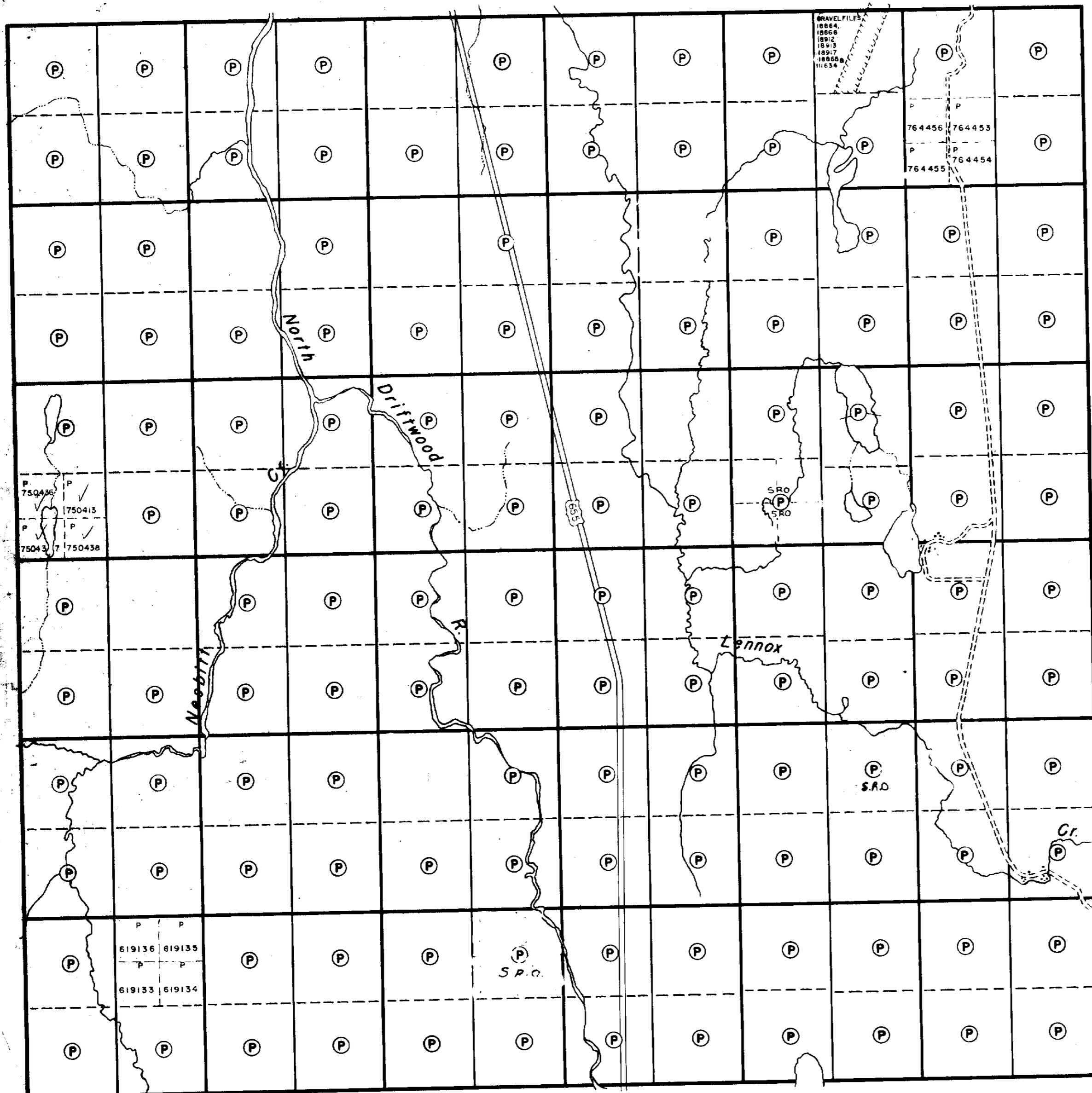
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-1380

A. Barr:sc

cc: Huidbay Mining Limited
Box 200
Calgary, Alberta
T2P 2H8

CALDER TWP.

DARGAVEL TWP.



12

11

10

9

8

7

6

5

4

3

2

1

NESBITT TWP.

VI

V

IV

III

II

I

OTTAWA TWP.

THE TOWNSHIP
OF
LENNOX

DISTRICT OF
COCHRANE
PORCUPINE
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.
ROADS	—
IMPROVED ROADS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—
TRAIL	—

NOTES

400' Surface Rights Reservation around
all Lakes and Fives

DATE OF ISSUE
10.17.1981
Ministry of Natural Resources
TORONTO

PLAN NO. - M.531

MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

