2.3286

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REPORT ON MAGNETIC AND ELECTROMAGNETIC SURVEYS SNAKEWEED PROJECT GRIDS 226-13 AND 14 MITCHELL TOWNSHIP DISTRICT OF KENORA, ONTARIO

L.E. Reed,
A.P. Pryslak,
April, 1980.

INTRODUCTION

A program of magnetic and electromagnetic surveying was carried out in January, 1980 over two blocks of claims located in Mitchell Township, District of Kenora, Ontario, Patricia Portion (Claim Map M-2186).

Block 226-14 is situated approximately 1.5 miles due south of South Bay Mine. Block 226-13 lies approximately 3 miles south-southwest of South Bay Mine. Access to both claim blocks is via the South Bay road.

The geophysical surveys were controlled by contiguous grids of lines spaced at 400-foot intervals. Readings were taken at 100-foot stations along the grid lines and were reduced to 50-foot stations in areas of anomalous activity.

The magnetometer used on this survey was a McPhar M-700 fluxgate instrument which measures the vertical component of the earth's magnetic field to an accuracy of 10 gammas. The electromagnetic instrument used was an Apex Max-Min II electromagnetic unit at a frequency of 1777 Hertz. Coil spacing was 400 feet. In-phase and quadrature components of the secondary field were read to an accuracy of 1% of the primary field.

2/....

GENERAL GEOLOGY

Regionally, the grids lie within the Uchi Lake Greenstone Belt. Stratigraphically, the grids are on the southern extension of the South Bay sequence of metavolcanics. Lithologies consist primarily of dacite schists of undertain origin and felsic to intermediate pyroclastics and flows. The metavolcanics are intruded by dikes and small, irregular-shaped bodies of diorite and granodiorite.

Detailed geological mapping was carried out by the Ontario Geological Survey (Pryslak, 1970) and by various Selco personnel (Sopuck, 1969; Dykes, 1976). Although the bedrock has been classified into respective lithologies, the stratigraphy and structure are poorly understood, particularly in the vicinity of Triangle Lake or grid 226.13. Here the stratigraphy has been complexly folded and faulted.

Lisle carried out a lithogeochemical survey over the area extending from South Bay Mine, south to the vicinity of grid 226-13. The study utilized a discriminant score-value determined from quantitative geochemical data. The geophysical data under discussion were an attempt to identify possible concentrations of sulphides that may be associated with the lithogeochemical anomalies.

3/....

GRID 226-13

C1 Magnetometer Survey Results

The magnetic response over the grid is generally low and relatively uniform with the exception of several positive anomalies that are in the order of two to five times background values. These weak magnetic anomalies are likely due to diorite or granodiorite intrusion which contain minor magnetite. The intrusives have a north-northwest trend in the vicinity of the grid and the computer plotting program has broken up these features into a series of isolated anomalies.

The strong magnetic anomaly in the extreme southeast portion of the grid coincides with a HLEM conductor. It also corresponds to the previously tested Moth sulphide prospect which consists of pyrrhotite-pyrite-sphalerite mineralization.

C2 Electromagnetic Survey Results

The survey has identified a single bedrock conductor which lies at co-ordinate 28+00E, 6+50S. This conductor is the moth prospect sulphide zone.

An anomaly on the quadrature component is noted on line 4+00E. A check survey conducted over lines 0+00 and 4+00E, utilizing all frequencies, failed to show any response on the low frequency channels. The high frequency quadrature response is interpreted as being due to conductive lake bottom sediments.

4/....

GRID 226-14

D1 Magnetometer Survey Results

The magnetic response over this grid is rather low and uniform with background values ranging between 200 and 500 gammas. There are several small anomalies that range from 500 to 1000 gammas. These represent diorite intrusions which contain minor disseminated magnetite.

D2 Electromagnetic Survey Results

No bedrock conductors were identified by the survey. Several weak quadrature responses occur but these coincide either with lake or swamp areas and are interpreted as being due to conductive overburden.

CONCLUSIONS AND RECOMMENDATIONS

Only one bedrock conductor was identified by the two surveys. The conductor, located at co-ordinate 28+00E, 6+50S on grid 222-13, represents the previously tested Moth prospect.

The lithogeochemical anomalies produced by Lisle's discriminant scores are not associated with any apparent concentrations of sulphide minerals.

It is recommended that no further work be carried out over the grids.

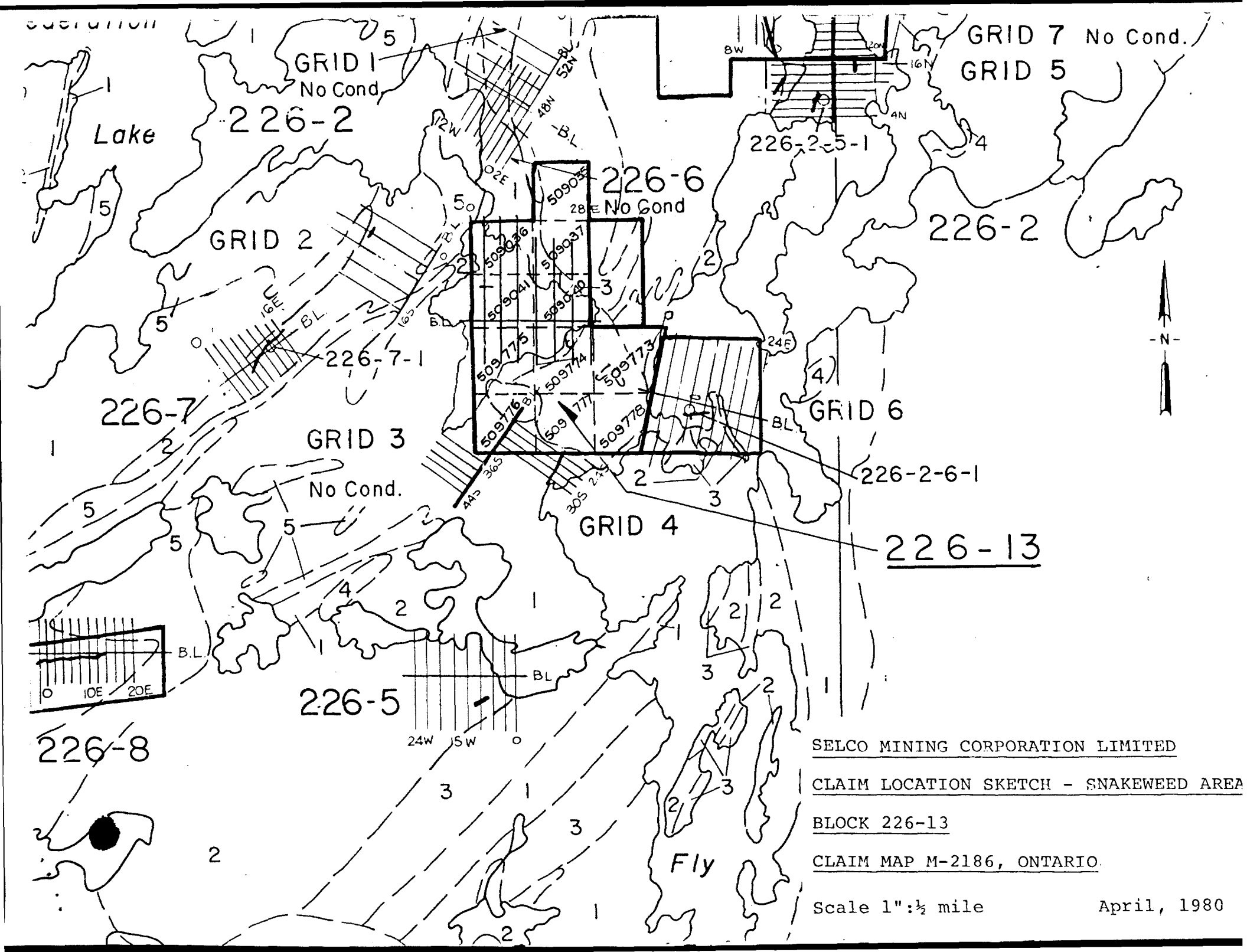
L.E. Reed,
A.P. Prvslak.

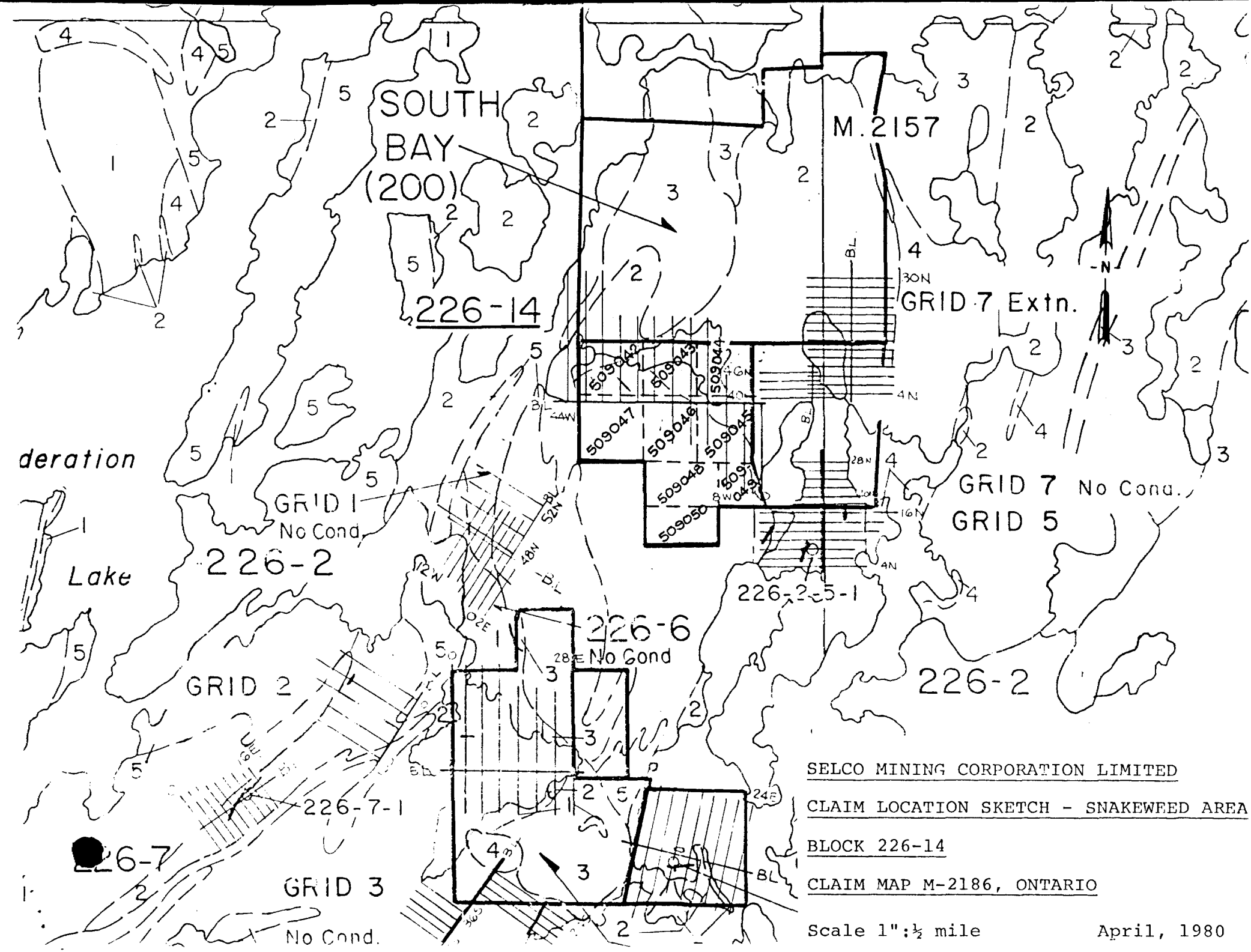
REFERENCES

LISLE, E.T., 1979: Geochemical, Geological and Geophysical characteristics of the area surrounding the South Bay Deposit, Ontario. M.Sc. Thesis, Queen's University.

PRYSLAK, A.P., 1970: Preliminary Map P.634 Mitchell Township, District of Kenora (Patricia Portion) Ontario Division of Mines.

THURSTON, P.C. and JACKSON, M.C.: Preliminary Map P.1975, Confederation Lake Area, District of Kenora (Patricia Portion) Ontario Geological Survey.


GRID 1
No Cond.
226-2
Lake
GRID 2
226-7-1
226-7
GRID 3
No Cond.
226-8
226-5
226-6
28E No Cond
GRID 4
GRID 5
226-2-5-1
GRID 7 No Cond.
226-2
GRID 6
226-2-6-1
226-13
Fly
N
509035
509036
509037
509040
509041
509775
509774
509773
509776
509777
509778
SELCO MINING CORPORATION LIMITED
CLAIM LOCATION SKETCH - SNAKEWEED AREA
BLOCK 226-13
CLAIM MAP M-2186, ONTARIO
Scale 1":½ mile
April, 1980



SELCO MINING CORPORATION LIMITED

CLAIM LOCATION SKETCH - SNAKEWEED AREA

BLOCK 226-14

CLAIM MAP M-2186, ONTARIO

Scale 1":½ mile April, 1980

File 226-13

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.

Type of Survey Geophysical

Township or Area M-2186

Claim holder(s) Selco Mining Corporation Limited
55 University Ave., Suite 1700,

Author of Report A.P. Pryslak, L.E. Reed

Address P.O. Box 100, Cochenour, Ontario P0V 1L0

Covering Dates of Survey February, 1980
(linecutting to office)

Total Miles of Line cut 4.5 miles

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

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

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

DATE: April 21 80 SIGNATURE: J E Reed
Author of Report or Agent

PROJECTS SECTION L.E. REED 2 62

Res. Geol. _____ Qualifications _____

Previous Surveys _____

Checked by _____ date _____
L.D.

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

MINING CLAIMS TRAVERSED
List numerically
MAG EM

	KRL	✓509036	✓
	(prefix) KRL	1/3 509037	1/2
	KRL	✓ 509040	✓
	KRL	✓509041	✓
	KRL	1/3 509774	1/3
30	KRL	1/4 509775	1/3
	EM: KRL 509037 100m		

If space insufficient, attach list

TOTAL CLAIMS 6

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations EM = 233 MAG = 312 Number of Readings EM = 233 MAG = 312

Station interval 100' and 50'

Line spacing 400'

Profile scale or Contour intervals 1":20% (specify for each type of survey) Every 100 gammas to 1500 gammas
Every 500 gammas to 2000 gammas
Every 1000 gammas thereafter
Not below 0

MAGNETIC

Instrument McPhar M-700

Accuracy - Scale constant ±5 gammas

Diurnal correction method Base Stations

Base station location Taken at the intersection of B.L. and Cross Lines

ELECTROMAGNETIC

Instrument Apex Max-Min II

Coil configuration Horizontal

Coil separation 400'

Accuracy 0.5%

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

Frequency 1777 Hertz (specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field as a percentage of primary field.

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

File 226-14

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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: Geophysical

Township or Area: M-2186

Claim holder(s): Selco Mining Corporation Limited
55 University Ave., Suite 1700,

Author of Report: A.P. Pryslak, L.E. Reed

Address: P.O. Box 100, Cochenour, Ontario P0V 1L0

Covering Dates of Survey: January, 1980
(linecutting to office)

Total Miles of Line cut: 4.8 miles

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	20
–Magnetometer	40
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: April 21 80 SIGNATURE: J.E. Pryslak
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications _____

Previous Surveys _____

Checked by _____ date _____

L.D

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

MINING CLAIMS TRAVERSED
List numerically

MAG EM

(prefix)	(number)	
KRL	509042	
KRL ✓	509043 ✓	
KRL ✓	509045 ✓	
KRL	509046	
KRL	509049	

If space insufficient, attach list

TOTAL CLAIMS 5

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations EM = 205 MAG = 275 Number of Readings EM = 2-5 MAG = 275

Station interval 100' and 50'

Line spacing 400'

Profile scale or Contour intervals 1":20% Every 100 gammas to 1000 gammas
(specify for each type of survey) Every 5000 thereafter.

MAGNETIC

Instrument McPhar M-700

Accuracy - Scale constant ±5 gammas

Diurnal correction method Base Stations

Base station location Taken at the intersection of B.L. & Cross Lines

ELECTROMAGNETIC

Instrument Apex Max-Min II

Coil configuration Horizontal

Coil separation 400'

Accuracy 0.5%

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

Frequency 1777 Hertz
(specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field as a percentage of primary field.

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Instrument

Time domain Frequency domain

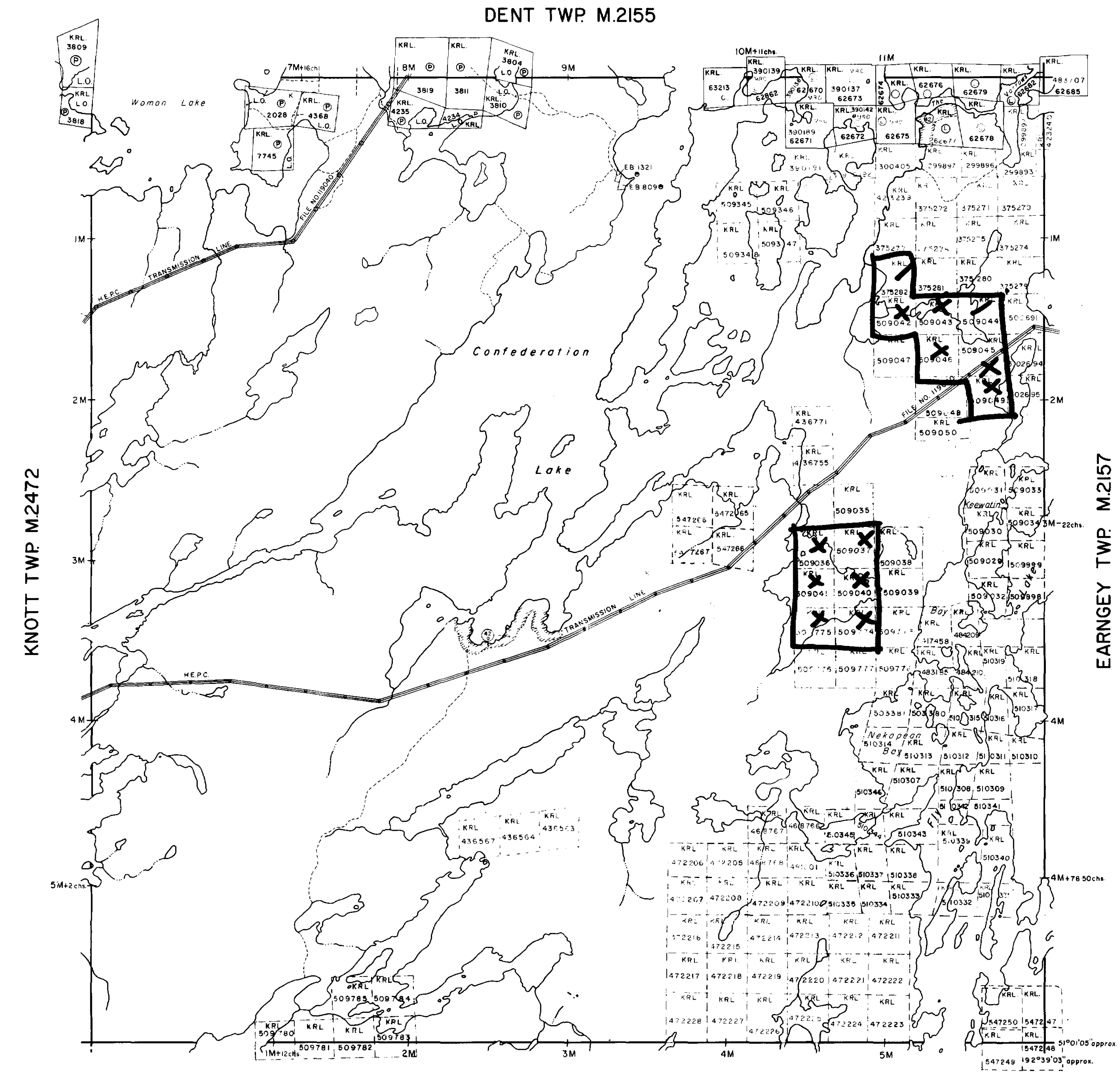
Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode



52N02SE0290 2.3286 MITCHELL TWP

200

NOTES

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

DATE OF ISSUE
MAY - 6 1980
SURVEYS AND MAPPING BRANCH

LEGEND

PATENTED LAND	Ⓟ or ●
PATENTED FOR SURFACE RIGHTS ONLY	
LEASE	Ⓛ
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	

*used only with summer resort locations or when space is limited

2.3286

TOWNSHIP OF

MITCHELL

DISTRICT OF
KENORA
PATRICIA PORTION

RED LAKE
MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

DR.	ck.	PLAN NO.	M.2186
DATE	1/6/71		

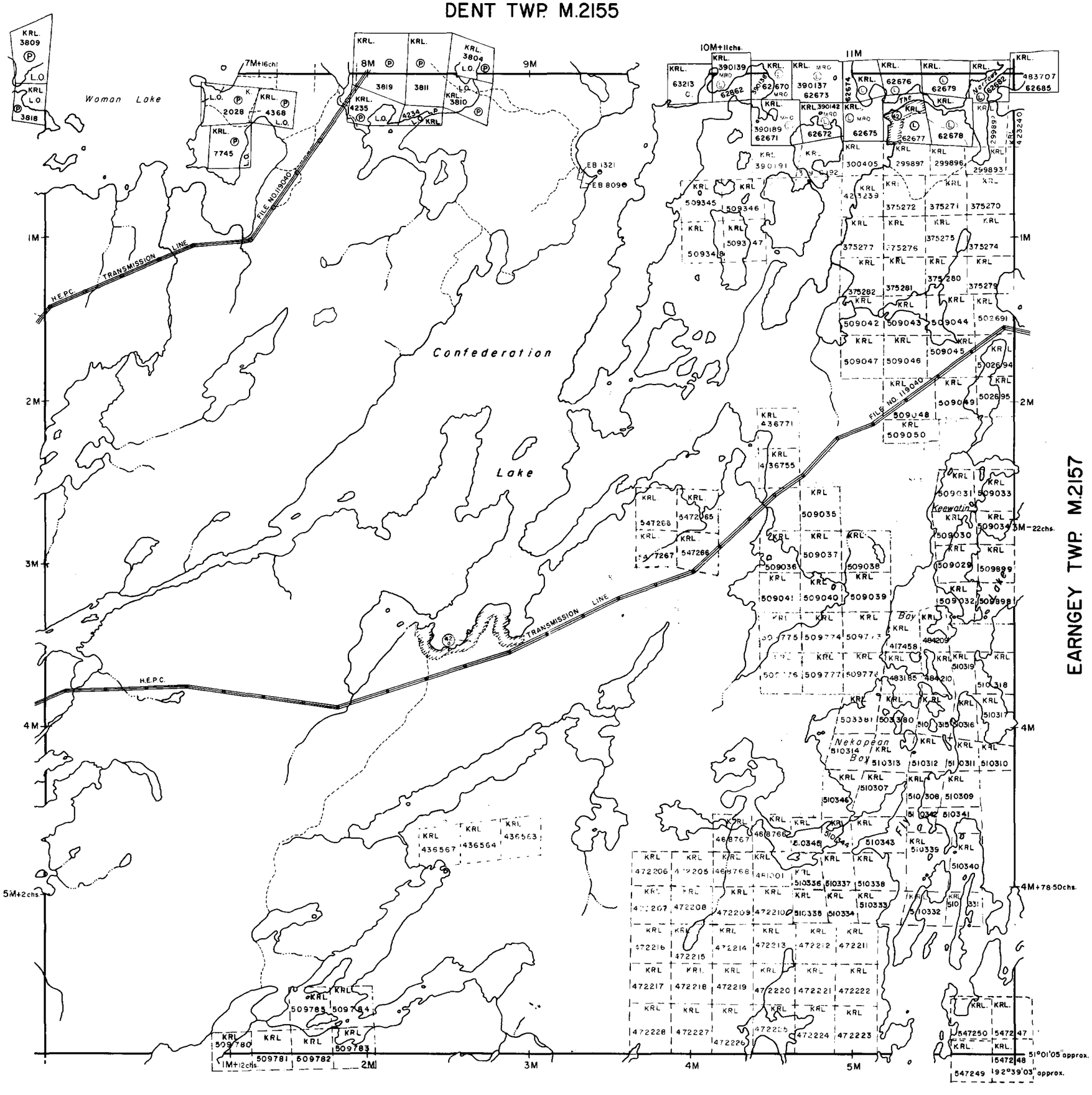
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

DENT TWP. M.2155

KNOTT TWP. M.2472

EARNGEY TWP. M.2157

BOWERMAN TWP. M.2145



NOTES

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

Areas withdrawn from staking under Sec. 42 of the Mining Act.

	File	Date	Disposi.
(42)	163474	17/8/71	S.R.O.

DATE OF ISSUE
APR 25 1980
SURVEYS AND MAPPING BRANCH

LEGEND

PATENTED LAND	Ⓟ or ●
PATENTED FOR SURFACE RIGHTS ONLY	◒
LEASE	Ⓛ
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	(17)
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	

*used only with summer resort locations or when space is limited

TOWNSHIP OF

MITCHELL

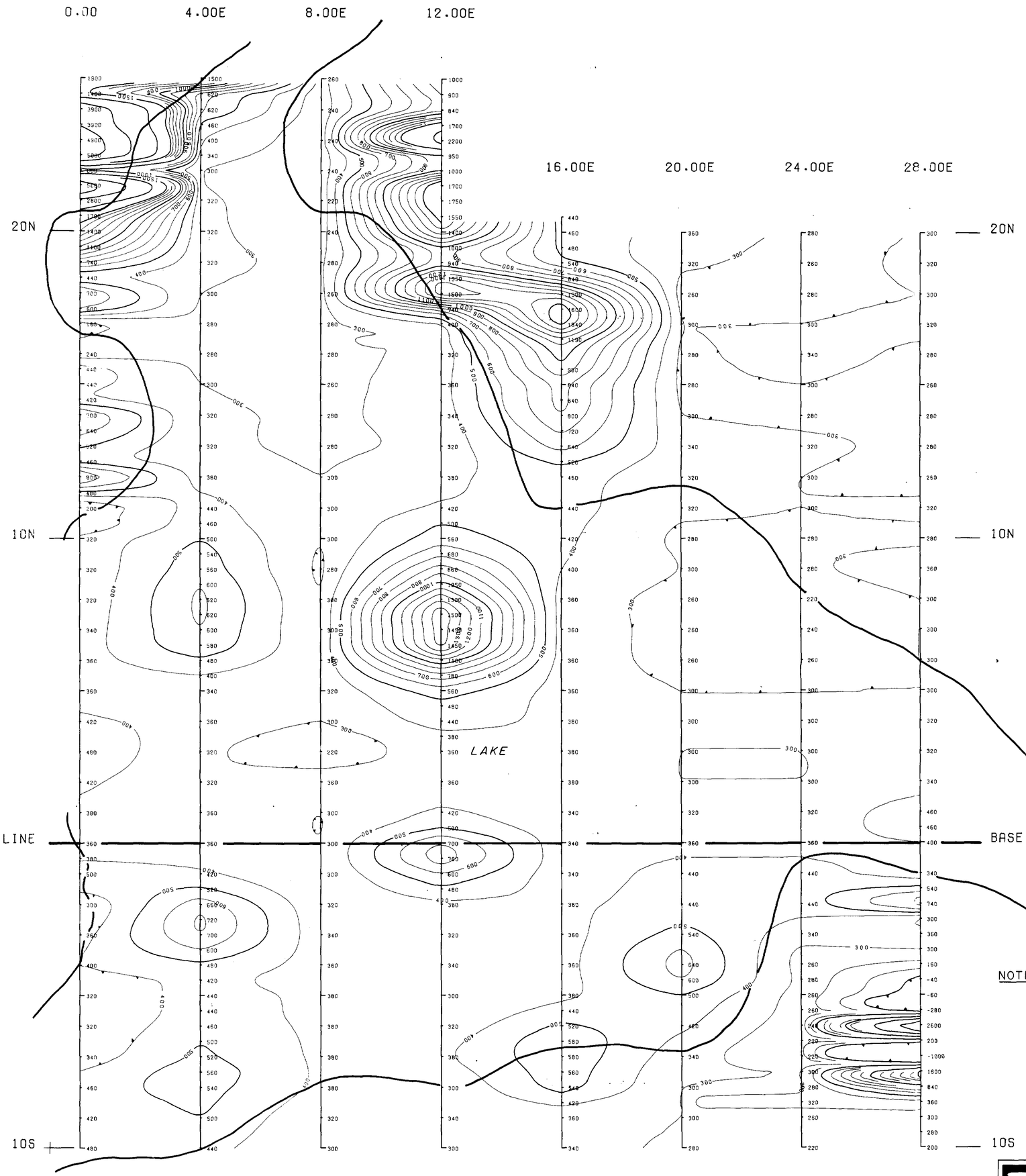
DISTRICT OF
KENORA
PATRICIA PORTION

RED LAKE
MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

DR.	dk.	PLAN NO.	M.2186
DATE	1/6/71		

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



NOTE: REFER TO SN.2878B — H.L.E.M., LOC. PLAN, CLAIMS

MAGNETOMETER INSTRUMENT

TYPE: McPHAR M-700

Readings in Gammas: [380 / 440]

Base:

Profile:

Contour Interval: Every 100 Gammas to 1500 Gammas
Every 500 Gammas thereafter

0 200 400
FEET

SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

SNAKEWEED AREA

BLOCK 226-13 — MAG. SURVEY

DRAWN BY A.C.	DATE Jan. '80	PLAN Nº SN.2878
TRACED BY Data Plot	DATE April '80	

44.00W 40.00W 36.00W 32.00W 28.00W 24.00W 20.00W 16.00W 12.00W 8.00W 4.00W 0.00

30N

20N

10N

BASE LINE

10S

20S

LAKE

LAKE

SOUTH BAY ROAD

POWER LINES

BASE LINE AZ. 90°

0 200 400

FEET

N

NOTE: REFER TO SN. 2879B — H.L.E.M., LOC. PLAN, CLAIMS

MAGNETOMETER INSTRUMENT

TYPE: Mc PHAR M 700

Readings in Gammas: [600 / 460

Base:

Profile:

Contour Interval: Every 100 Gammas to 1000 Gammas
Every 500 Gammas thereafter

SELCO MINING CORPORATION
(EXPLORATION DIVISION) LIMITED

SNAKEWEED AREA

BLOCK 226-14 — MAG. SURVEY

DRAWN BY: D.C.	DATE: Feb. '80	PLAN No: SN.2879
TRACED BY: Data Plot	DATE: April '80	

0.00 4.00E 8.00E 12.00E 16.00E 20.00E 24.00E 28.00E

20N

10N

BASE LINE

509036

509037

509041

509040

509775

509774

LAKE

BASE LINE AZ. 90°

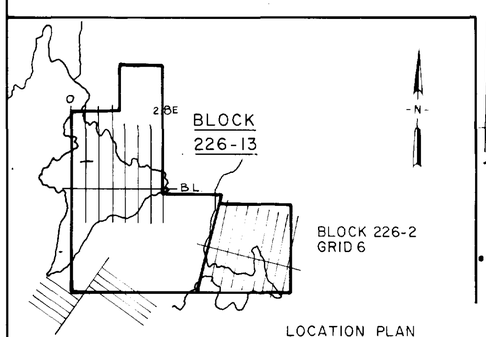
20N

10N

10S

NOTE: REFER TO SN. 2878 — MAG.

-N-



LOCATION PLAN

CLAIM MAP M.2186-ONT

Scale 1": 1/2 mi

52N02SE0290 2.3286 MITCHELL TWP

240

ELECTROMAGNETIC INSTRUMENT

TYPE: APEX MAX-MIN II

HORIZONTAL LOOP (Percent of Primary Field)

Frequency: 1777 Hz

Cable Length: 400'

In Phase: ●—●→ [-1 5 / -2 -1] ←●---● ***Out of Phase Quadrature***

Conductor Width:

Profile Scale: 1": 20%

0 200 400

FEET

SELCO MINING CORPORATION

(EXPLORATION DIVISION) LIMITED

SNAKEWEED AREA

BLOCK 226-13 — H.L.E.M. SURVEY

DRAWN BY	A.C.	DATE	Jan. '80	PLAN Nº SN.2878 B
TRACED BY	Data Plot	DATE	April '80	

44.00W 40.00W 36.00W 32.00W 28.00W 24.00W 20.00W 16.00W 12.00W 8.00W 4.00W 0.00

20B

10A

10S

BASE LINE

BASE LINE AZ.90°

375282

509042

509043

509044

509047

509046

509045

509049

LAKE

LAKE

LAKE

SOUTH BAY ROAD

POWER LINES

NO CONDS

NOTE: REFER TO SN. 2879 — MAG.

0 200 400

FEET

M.2186 M.2157

44W

GRID 7 EXTN.

BLOCK 226-2

GRID 7

GRID 5

BLOCK 226-14

LOCATION PLAN

CLAIM MAP M.2186 – ONT.

Scale: 1/2": 1mi

ELECTROMAGNETIC INSTRUMENT

TYPE: APEX MAX-MIN II

HORIZONTAL LOOP (Percent of Primary Field)

Frequency: 1777 Hz

Cable Length: 400'

In Phase: ●—●— [-2 3 / 0 1] —●—● **Out of Phase Quadrature**

Conductor Width:

Profile Scale: 1": 20%

SELCO MINING CORPORATION

(EXPLORATION DIVISION) LIMITED

SNAKEWEED AREA

BLOCK 226-14 — H.L.E.M. SURVEY

DRAWN BY D.C	DATE Feb. '80	PLAN Nº SN.2879B
TRACED BY Data Plot	DATE April '80	