



52G15SW0034 52G15SW0025 BELL LAKE

010

R E P O R T

F O R

MATTAGAMI LAKE MINES LIMITED

covering MAGNETIC and ELECTROMAGNETIC surveys

over their #51 CLAIM GROUP

STURGEON LAKE AREA

PATRICIA MINING DIVISION, ONTARIO

AUGUST

1970

2.61

Report for MATTAGAMI LAKE MINES LIMITED, covering Magnetic and  
Electromagnetic surveys over their #51 Claim Group, Sturgeon  
Lake Area, Patricia Mining Division, Ontario.

LOCATION & ACCESS

This group of 84 contiguous claims is located around the northern portion of Claw Lake and extends westward to Swamp Lake; Sturgeon Lake Area. Access is via winter road from the Matabi Mine site on Abitibi Block #7; 7 miles west of the claim group. Alternative access is via bush plane to Swamp or Claw Lakes.

PREVIOUS WORK & REPORTS

Ontario Department of Mines - Airborne Magnetics - Bell Lake 1117G  
sheet 52G/15  
Ontario Department of Mines - Geological Compilation #2169

The claim group is primarily underlain by felsic volcanic rocks. A magnetic high extends from the north end of Swamp Lake to the northwest corner of Claw Lake. The area was flown by Questor for Mattagami Lake Mines Ltd. with the claim group being staked to cover a string of strong 6 channel anomalies that coincide with the magnetic high mentioned above and continues along the northern arm of Claw Lake. Numerous other strong airborne anomalies occur, scattered across the claim group approximately 1500' south of this zone.

AUTOCOS. STORED SEPERATELY

EQUIPMENT USED AND OPERATORS

Magnetic - A McPhar fluxgate magnetometer was used measuring the vertical component of the earth's magnetic field directly in gammas. Base stations were established and normal drift correction procedures carried out. Instrument accuracy is  $\pm 10$  gammas. Number of stations read was 4204 on 66.9 miles of line. Field supervisor was Robert Major, Mattagami Lake Mines staff, Box 190, Ignace, Ontario. Survey dates were between January 10 and February 28, 1970.

Electromagnetic - A Crone JEM "Shootback" unit was used with operating frequencies of 480 and 1800 Hz and a coil separation of 200'. The "resultant dip angle" is measured with an accuracy of  $\pm 1^\circ$ . Number of stations read was 4037 on 66.9 miles of line. Field supervisor and period of survey were the same as the magnetic survey.

LINECUTTING

A total of 66.9 miles of line and 5.6 miles of base line were cut under contract to Fred Corcoran, 116 Villeneuve Street, Val D'Or, P.Q. during the period November 1 to December 20, 1969. The grid has a 400' line interval.

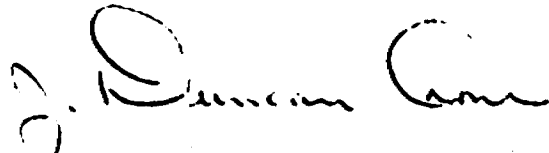
## INTERPRETATION

Three long and strong conductive zones were located on the ground. The zones are also magnetic producing coincident magnetic highs in the order of 2000 to 4000 gammas but in some cases rising up to 13,000 gammas.

The first conductor extends across the entire claim group from 1500' north of Swamp Lake across to Claw Lake, under the northern portion of Claw Lake then towards Hump Lake north of the stream joining the two. Both ends are still open. The conductor varies considerably in character along its length. Between lines 100 and 120E, it is narrow and near surface this changes to a zone approximately 300' wide, buried at a depth of up to 100' between lines 132E and 144E. Line 140 would be a good section to test this portion of the conductor. Between 148E and 156E the zone breaks up into one or more individual bands then becomes wide, near surface and strong again between 160E and 176E. Testing of this section on either 160 or 168E is recommended. Approaching Claw Lake the conductor breaks up into individual bands then continues under the middle portion of Claw Lake as a poor conductor typical of fracture filling type sulphides. Between 228E and 4E of the eastern grid the conductor becomes 2 near surface strong anomalies approximately 50' in width. At line 8E there is a sharp change to a wide zone of banded conductors of poor conductivity. A very strong wide conductor forms on line 20E that should be tested by drilling.

Two other conductive zones occur the first between lines 176E and 196E is a narrow near surface massive sulphide type conductor on lines 180E and 184E but breaks up into several bands of poorer conductivity. What is probably the extension of this conductor appears on line 212E, emerging as a very strong and wide zone on lines 216E and 220E. Drilling on line 216E is recommended. This zone continues eastward to the claim group boundary but forming a wide zone of multiple conductors that are narrow, of good conductivity and are near surface.

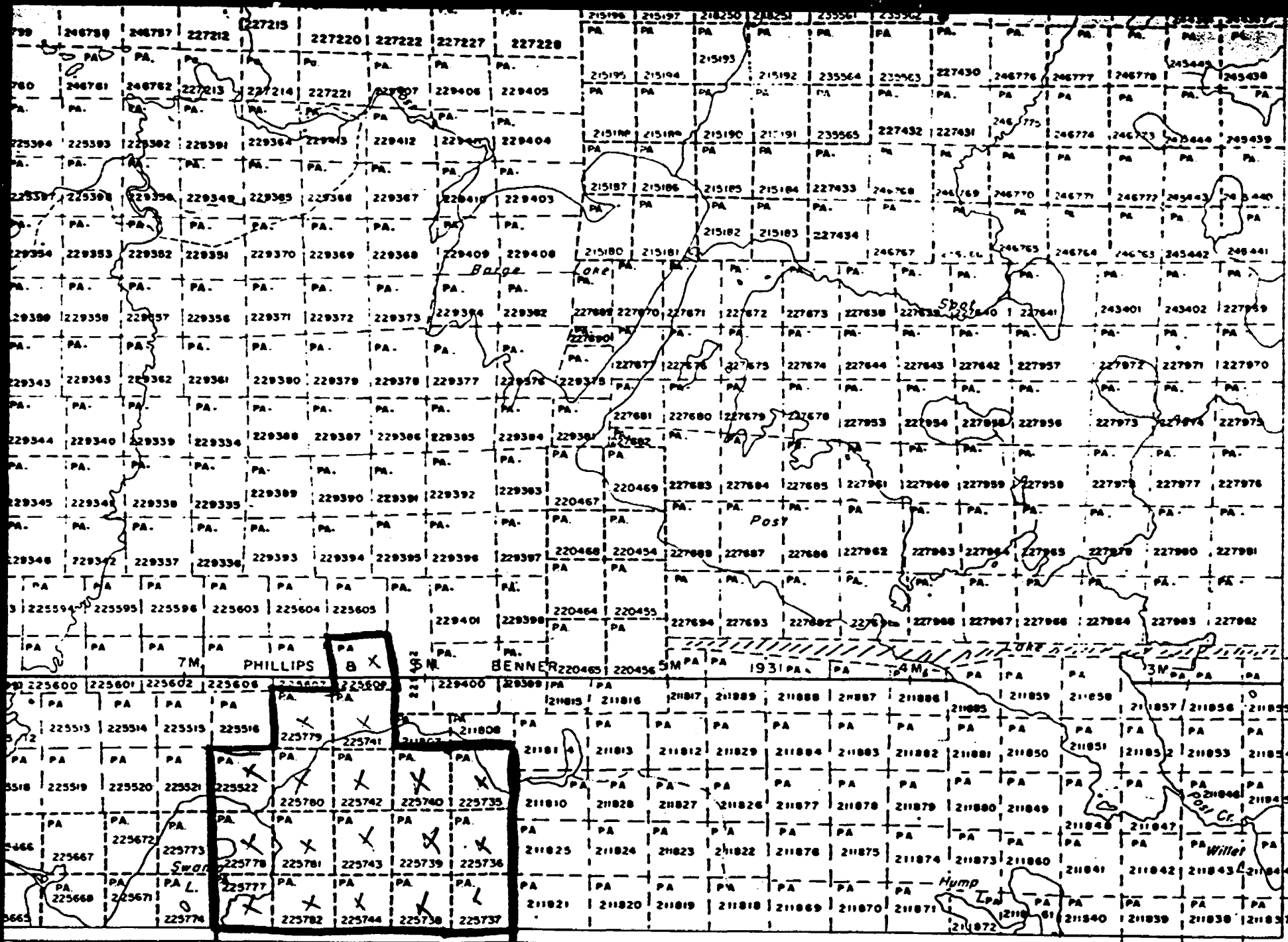
Respectfully submitted,



J. Duncan Crone, B.A., P.Eng.  
Geophysicist.







Quest

SIX MILE LAKE  
 M-2872  
 40 chains  
 Scale: 1"=40chains

NATIONAL TOPO  
 PLAN NO.

52' 51' 50' 49' 48' 47' 46' 90°45'

49°52'30"

55'

54'

53'



BELL LAKE  
M-1888

Scale: 1" = 40 chains

225787	225788	225789	225790	225791	225792	225793	225794	225795	225796	225797	225798	225799	225800	225801	225802	225803	225804	225805	225806	225807	225808	225809	225810	225811	225812	225813	225814	225815	225816	225817	225818	225819	225820	225821	225822	225823	225824	225825	225826	225827	225828	225829	225830	225831	225832	225833	225834	225835	225836	225837	225838	225839	225840	225841	225842	225843	225844	225845	225846	225847	225848	225849	225850	225851	225852	225853	225854	225855	225856	225857	225858	225859	225860	225861	225862	225863	225864	225865	225866	225867	225868	225869	225870	225871	225872	225873	225874	225875	225876	225877	225878	225879	225880	225881	225882	225883	225884	225885	225886	225887	225888	225889	225890	225891	225892	225893	225894	225895	225896	225897	225898	225899	225900	225901	225902	225903	225904	225905	225906	225907	225908	225909	225910	225911	225912	225913	225914	225915	225916	225917	225918	225919	225920	225921	225922	225923	225924	225925	225926	225927	225928	225929	225930	225931	225932	225933	225934	225935	225936	225937	225938	225939	225940	225941	225942	225943	225944	225945	225946	225947	225948	225949	225950	225951	225952	225953	225954	225955	225956	225957	225958	225959	225960	225961	225962	225963	225964	225965	225966	225967	225968	225969	225970	225971	225972	225973	225974	225975	225976	225977	225978	225979	225980	225981	225982	225983	225984	225985	225986	225987	225988	225989	225990	225991	225992	225993	225994	225995	225996	225997	225998	225999	226000
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TECHNICAL ASSESSMENT WORK CREDITS

Recorder Holder Mattagami Lake Mines Limited  
Township or Area Bell and Shikag Lakes and Sixmile Lake Areas

Type of Survey and number of Assessment Days Credits per claim

GEOPHYSICAL Airborne  Ground   
Magnetometer ..... 20 ..... days  
Electromagnetic ..... 10 ..... days  
Radiometric ..... days  
.....  
GEOLOGICAL ..... days  
GEOCHEMICAL ..... days  
SECTION 84 (14) ..... days  
Special Provision  Man days

NOTICE OF INTENT TO BE ISSUED

- Credits have been reduced because of partial coverage of claims.
- Credits have been reduced because of corrections to work dates and figures of applicant.
- NO CREDITS have been allowed for the following mining claims as they were not sufficiently covered by the survey:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mining Claims
PA. 205344 to 66 Inclusive
211800 to 06 Inclusive
211864 to 68 Inclusive
221157 - 58
221162 to 67 Inclusive
225522
225608
225698 to 709 Inclusive
225735 to 46 Inclusive
225752 to 57 Inclusive
225775 to 83 Inclusive

*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;*

MAGNETIC SURVEY

Work to be applied on the following contiguous claims;

<u>CLAIM NO.</u>	<u>DAYS</u>	<u>CLAIM NO.</u>	<u>DAYS</u>
PA 205344	20	PA 211868 <sup>SS</sup>	20
PA 205345	20	PA 225522 <sup>SM</sup>	20
PA 205346	20	PA 225608 <sup>SM</sup>	20
PA 205347	20	PA 225698	20
PA 205348	20	PA 225699	20
PA 205349	20	PA 225700	20
PA 205350	20	PA 225701	20
PA 205351	20	PA 225702	20
PA 205352	20	PA 225703	20
PA 205353	20	PA 225704	20
PA 205354	20	PA 225705	20
PA 205355	20	PA 225706	20
PA 205356	20	PA 225707	20
PA 205357	20	PA 225708	20
PA 205358	20	PA 225709	20
PA 205359	20	PA 225735	20
PA 205360	20	PA 225736	20
PA 205361	20	PA 225737	20
PA 205362	20	PA 225738	20
PA 205363	20	PA 225739	20
PA 205364	20	PA 225740	20
PA 205365	20	PA 225741	20
PA 205366	20	PA 225742	20
PA 221157	20	PA 225743	20
PA 221158	20	PA 225744	20
PA 221162	20	PA 225745	20
PA 221163	20	PA 225746	20
PA 221164	20	PA 225752	20
PA 221165	20	PA 225753	20
PA 221166	20	PA 225754	20
PA 221167	20	PA 225755	20
PA 211500	20	PA 225756	20
PA 211801	20	PA 225757	20
PA 211802	20	PA 225775	20
PA 211803	20	PA 225776	20
PA 211804	20	PA 225777	20
PA 211805	20	PA 225778	20
PA 211806	20	PA 225779	20
PA 211864	20	PA 225780	20
PA 211865	20	PA 225781	20
PA 211866	20	PA 225782	20
PA 211867	20	PA 225783	20

SS

SS  
SM  
SM

SM SM

SS SS

SM SM

AREA CODE - 416  
TELEPHONE - 365-6918



2.61

WHITNEY BLOCK  
QUEEN'S PARK  
TORONTO 182. ONT.

DEPARTMENT OF MINES AND NORTHERN AFFAIRS  
MINING LANDS BRANCH

January 29th, 1971.

Mr. W.A. Buchan,  
Mining Recorder,  
Court House,  
Sioux Lookout, Ontario.

Dear Sir:

Re: Mining Claim No. PA.205344 et al,  
Bell and Shikag Lakes and  
Sixmile Lake Areas

The Geophysical (Magnetometer and Electromagnetic) assessment work credits as shown on the attached list have been approved as of the date above. Please inform the recorded holder and so indicate on your records.

Yours very truly,

A handwritten signature in dark ink, appearing to read "Fred W. Matthews".

Fred W. Matthews,  
Supervisor,  
Projects Section.

c.c. Mattagami Lake Mines Ltd.,  
205-8 King Street East,  
Toronto 1, Ontario.

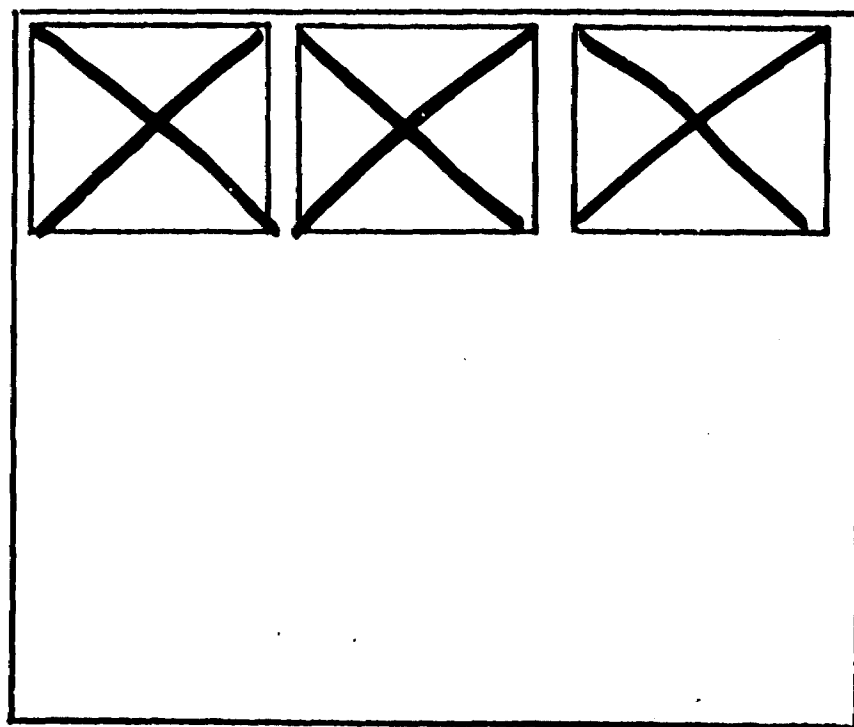
c.c. Mr. H.L. King,  
Resident Geologist,  
808 Robertson St.,  
Kenora, Ontario. ✓

FWM/mr

SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS

52G/15SW-0025 #1-2

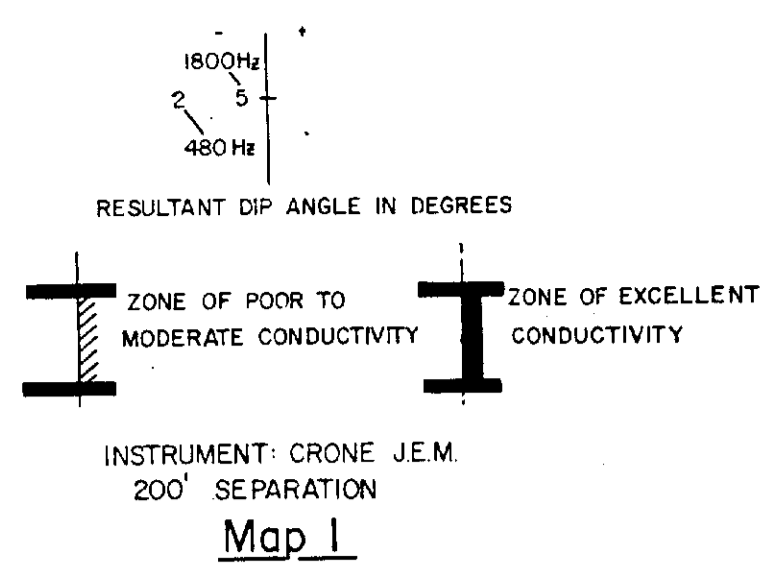
LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (x)



FOR ADDITIONAL  
INFORMATION

SEE MAPS:

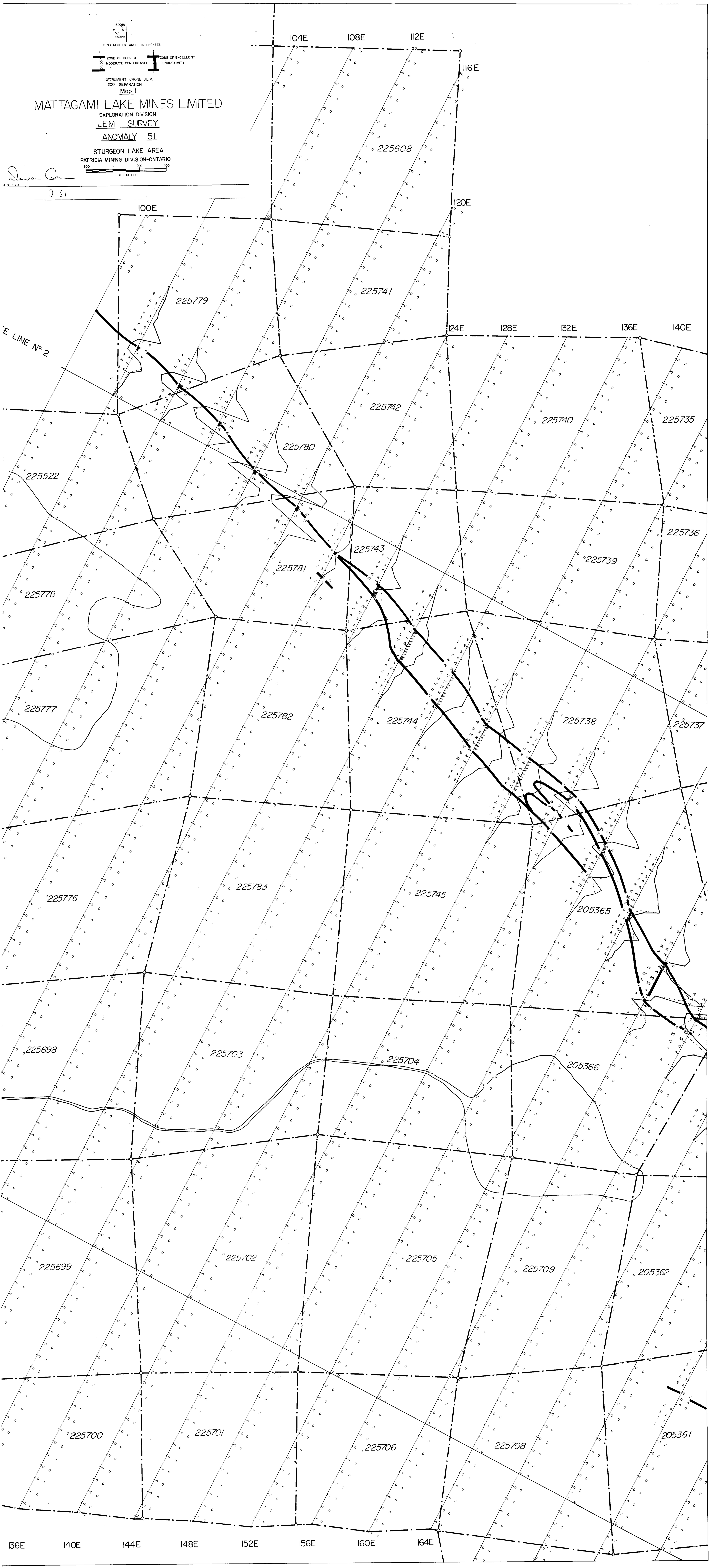
52G/15SW-0025 # 2-3



MATTAGAMI LAKE MINES LIMITED

EXPLORATION DIVISION  
J.E.M. SURVEY  
ANOMALY 51

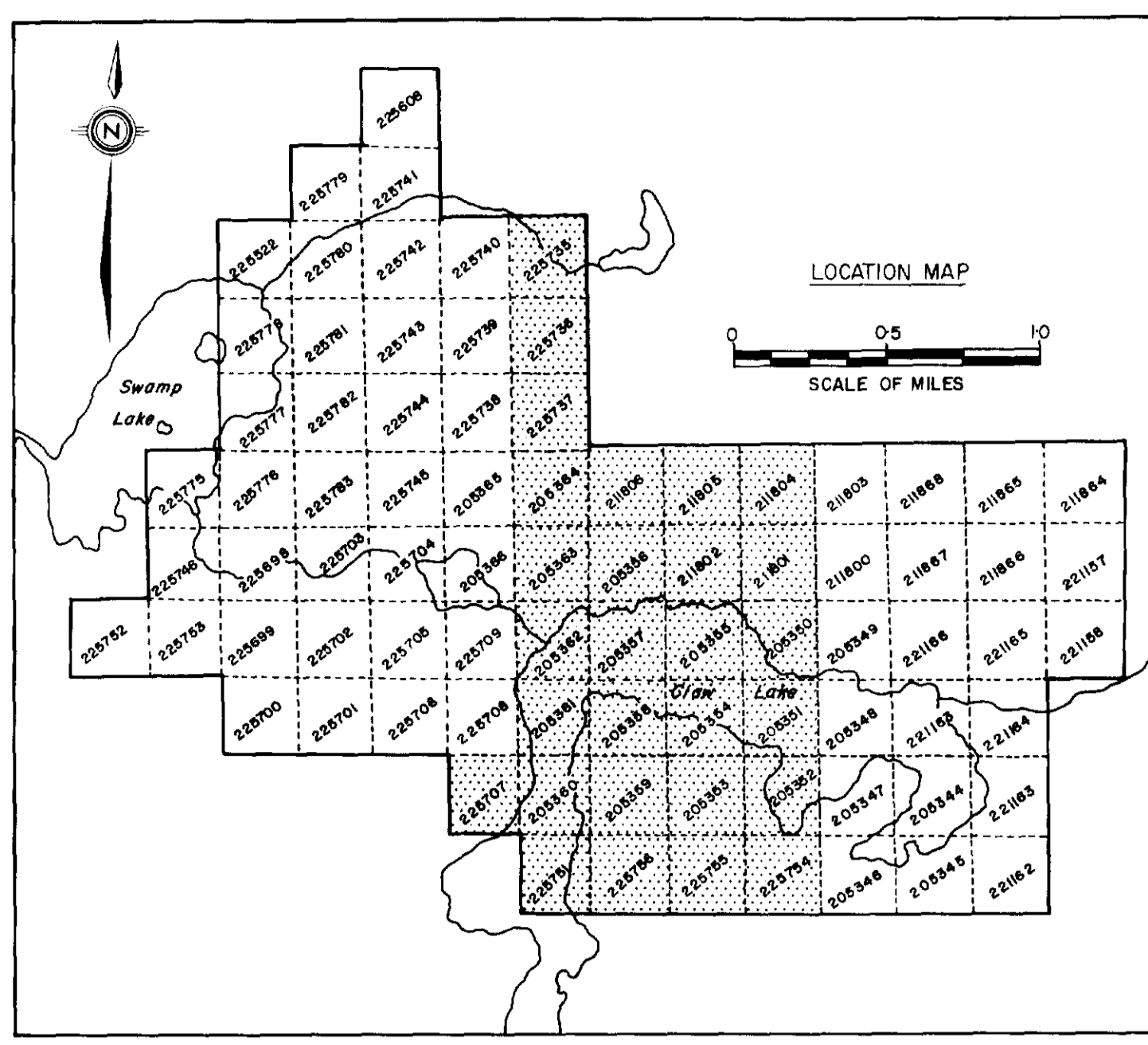
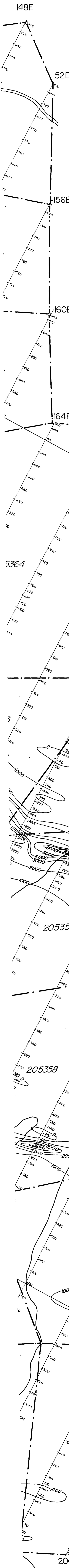
STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO



100E 104E 108E 112E 116E 120E 124E 128E 132E 136E 140E

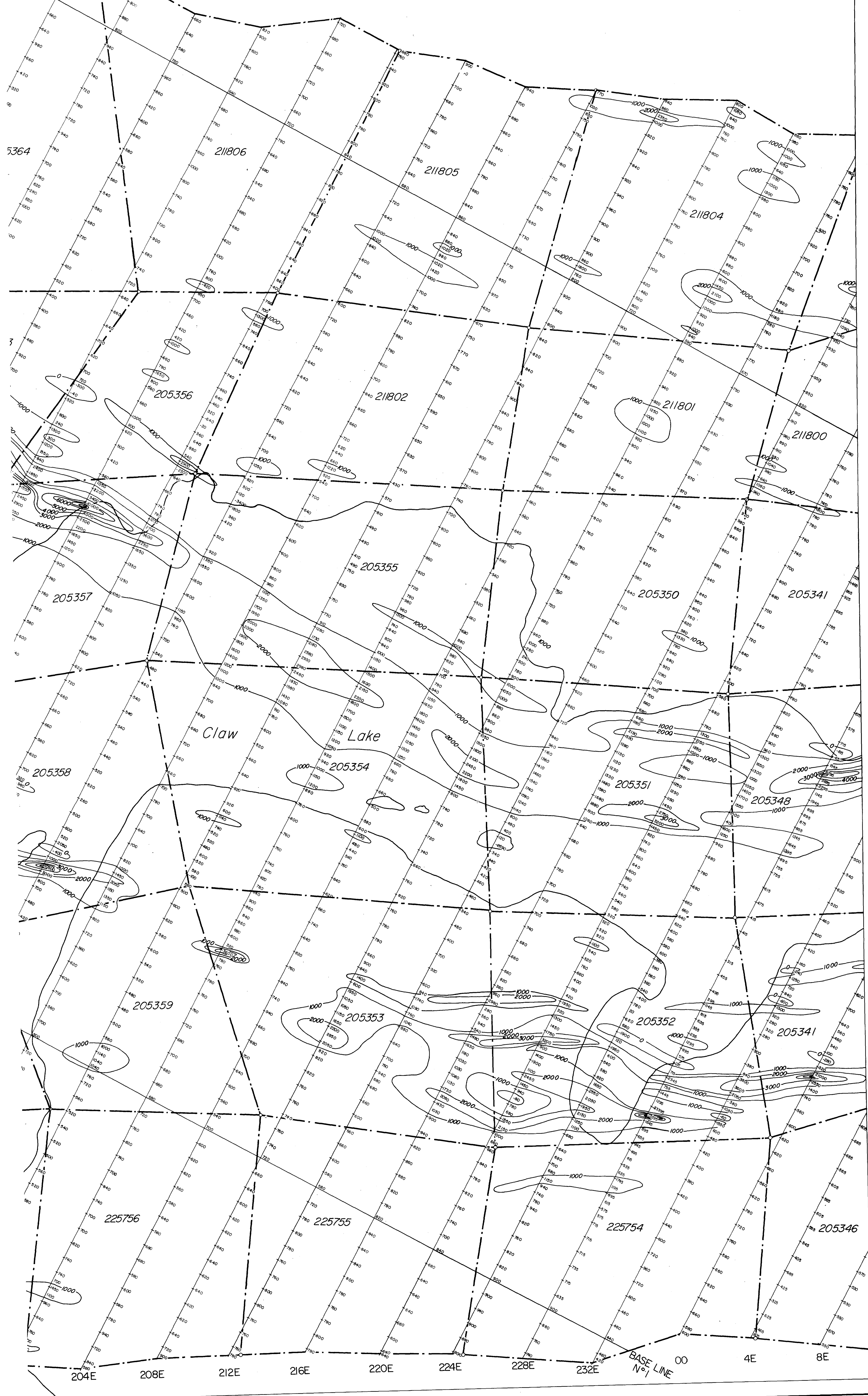
136E 140E 144E 148E 152E 156E 160E 164E

52G/15SW-0025#2



CONTOUR INTERVAL 1000 Y'S  
 INSTRUMENT: M-PHAR M-700  
 Map 2  
**MATTAGAMI LAKE MINES LIMITED**  
 EXPLORATION DIVISION  
**MAGNETOMETER SURVEY**  
**ANOMALY 51**  
 STURGEON LAKE AREA  
 PATRICIA MINING DIVISION-ONTARIO  
 FEBRUARY 1970  
 SCALE OF FEET  
 2.61

164E 168E 172E 176E 180E 184E 188E 192E 196E 200E 204E 208E 212E



BASE LINE No. 1 00 4E 8E



52G/15SW-0025 #3

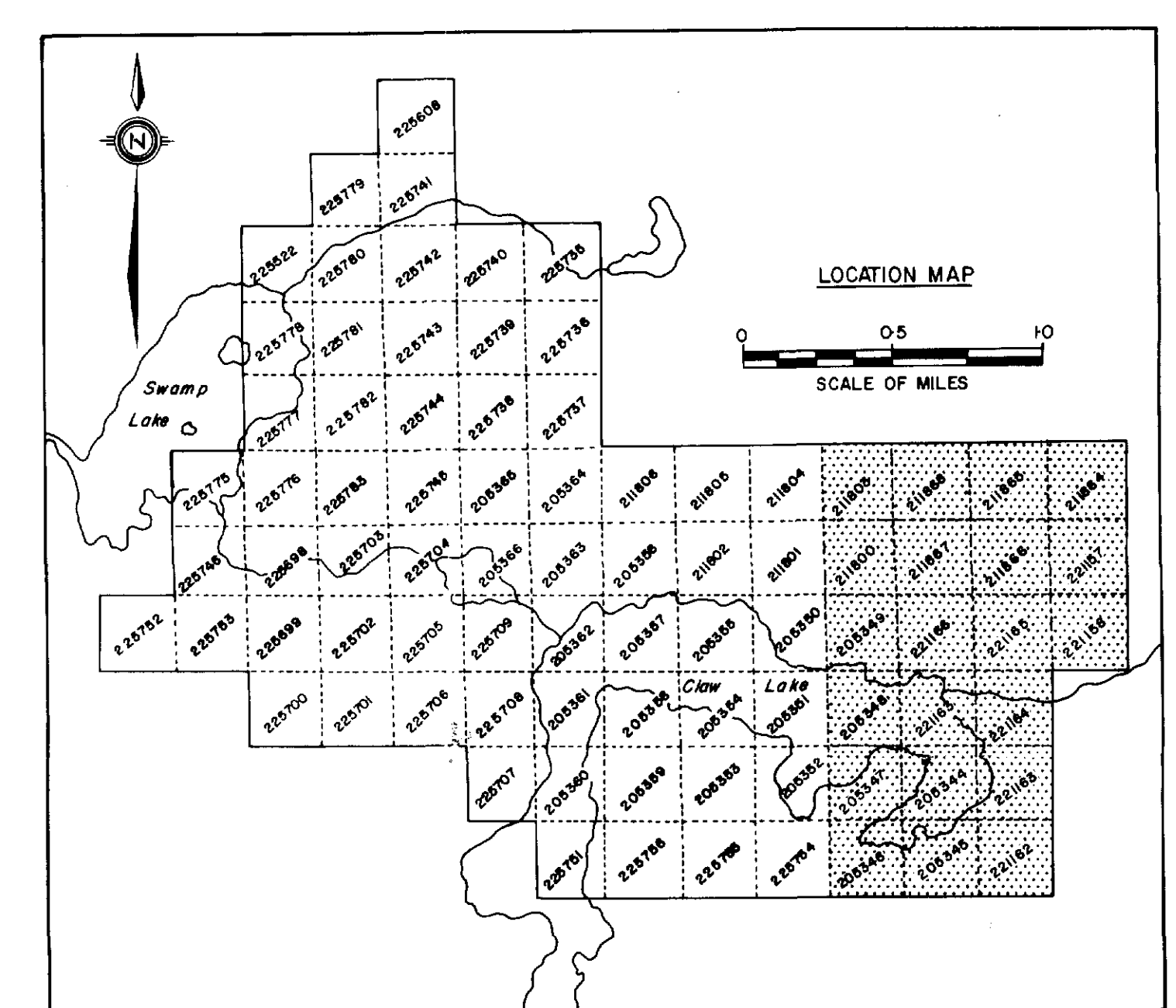
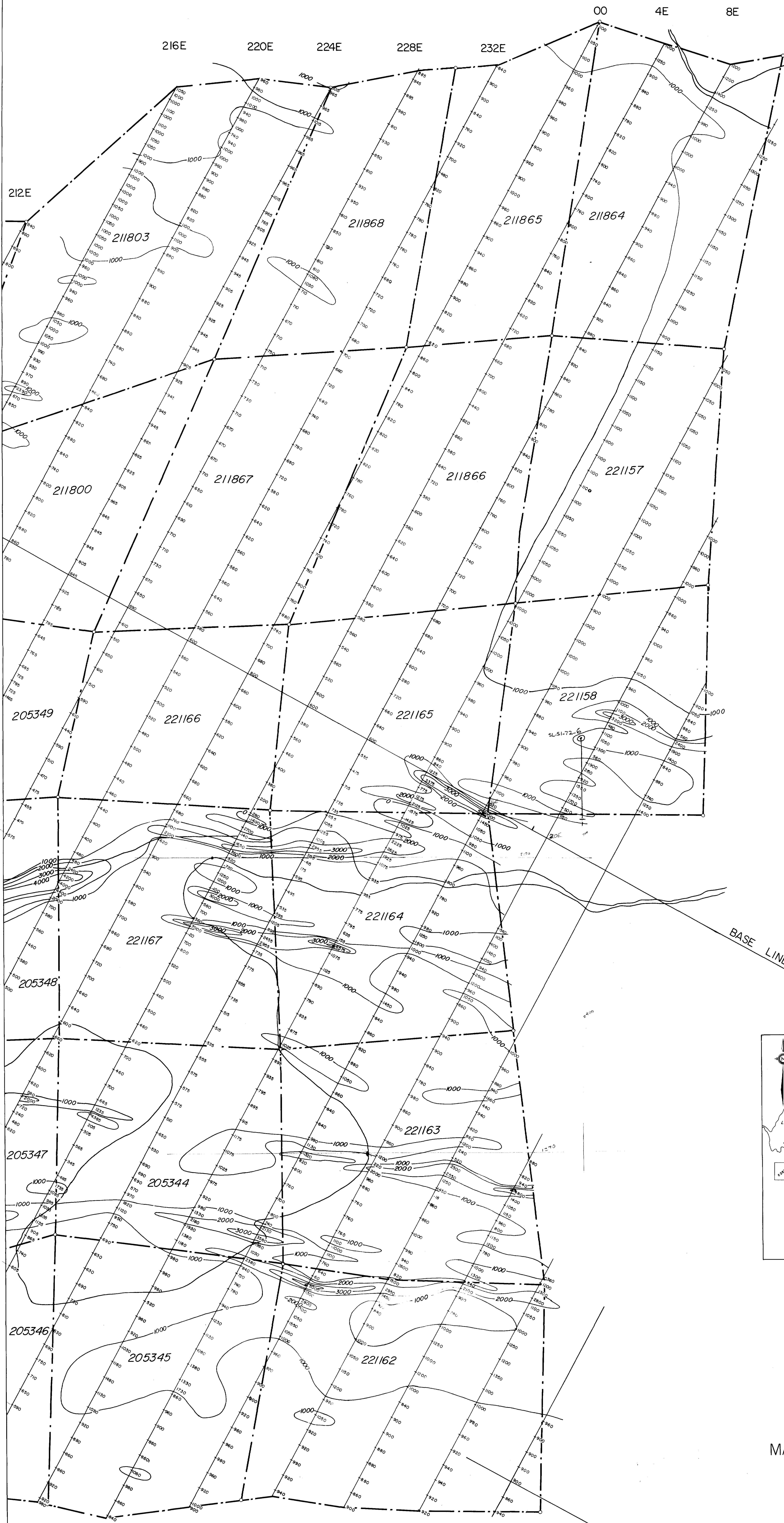
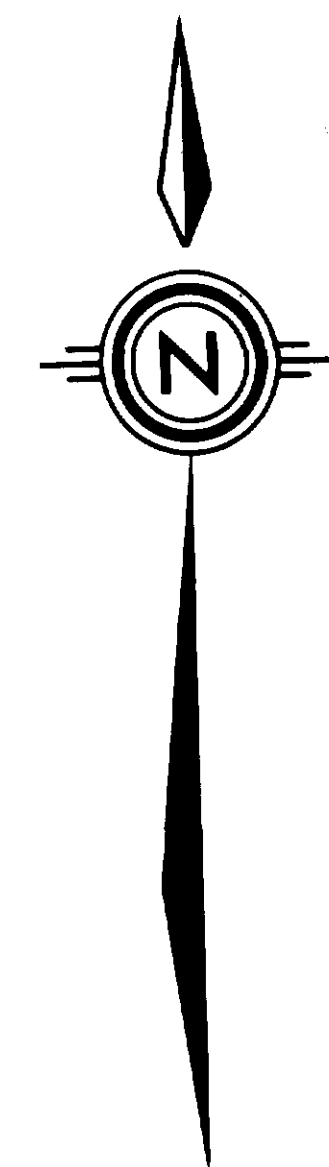
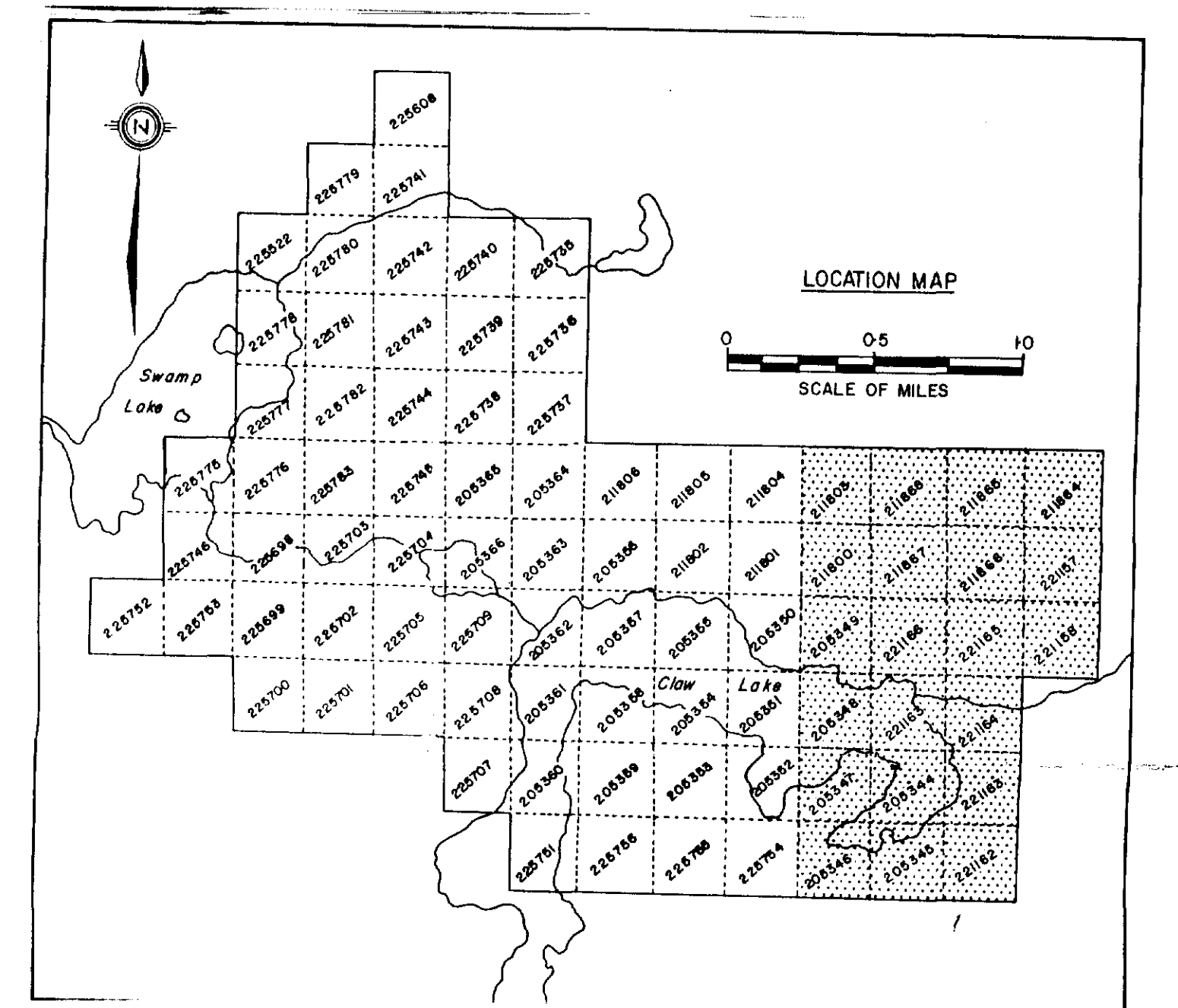
CONTOUR INTERVAL 1000'S  
INSTRUMENT: MGHAR M-700

Map 3  
MATTAGAMI LAKE MINES LIMITED  
EXPLORATION DIVISION  
MAGNETOMETER SURVEY

ANOMALY 51

STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO

SCALE OF FEET



CONTOUR INTERVAL 1000'S  
INSTRUMENT: MGHAR M-700

Map 3  
MATTAGAMI LAKE MINES LIMITED  
EXPLORATION DIVISION  
MAGNETOMETER SURVEY

ANOMALY 51

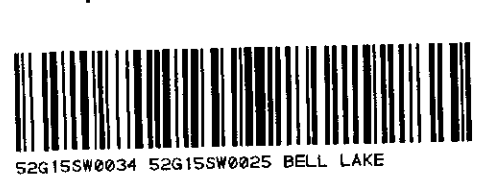
STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO

SCALE OF FEET

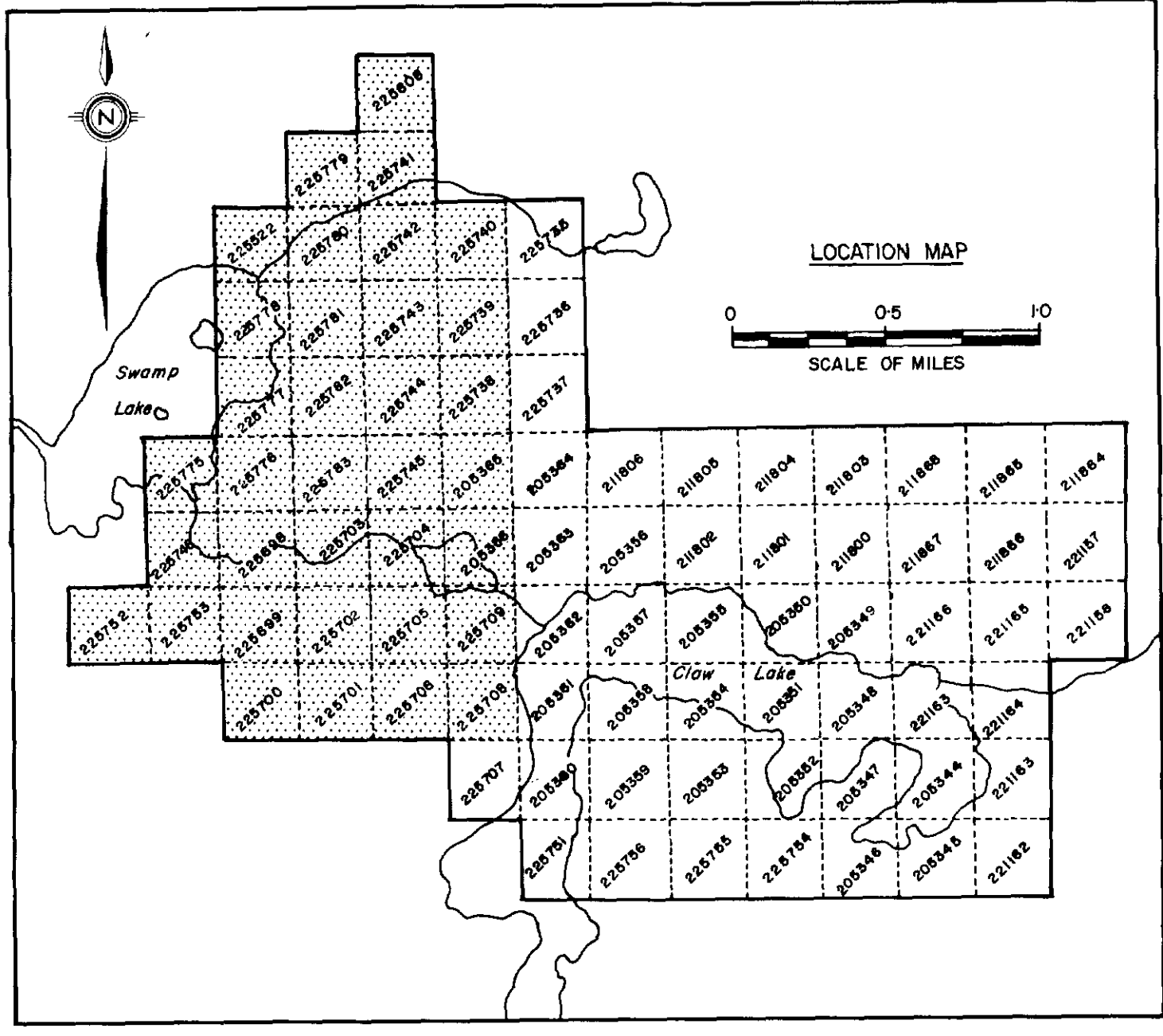
52G/15 SW-0025 #3

*J. Duncan*

FEBRUARY 1970



52G/15SW-0025#1



RESULTANT DIP ANGLE IN DEGREES

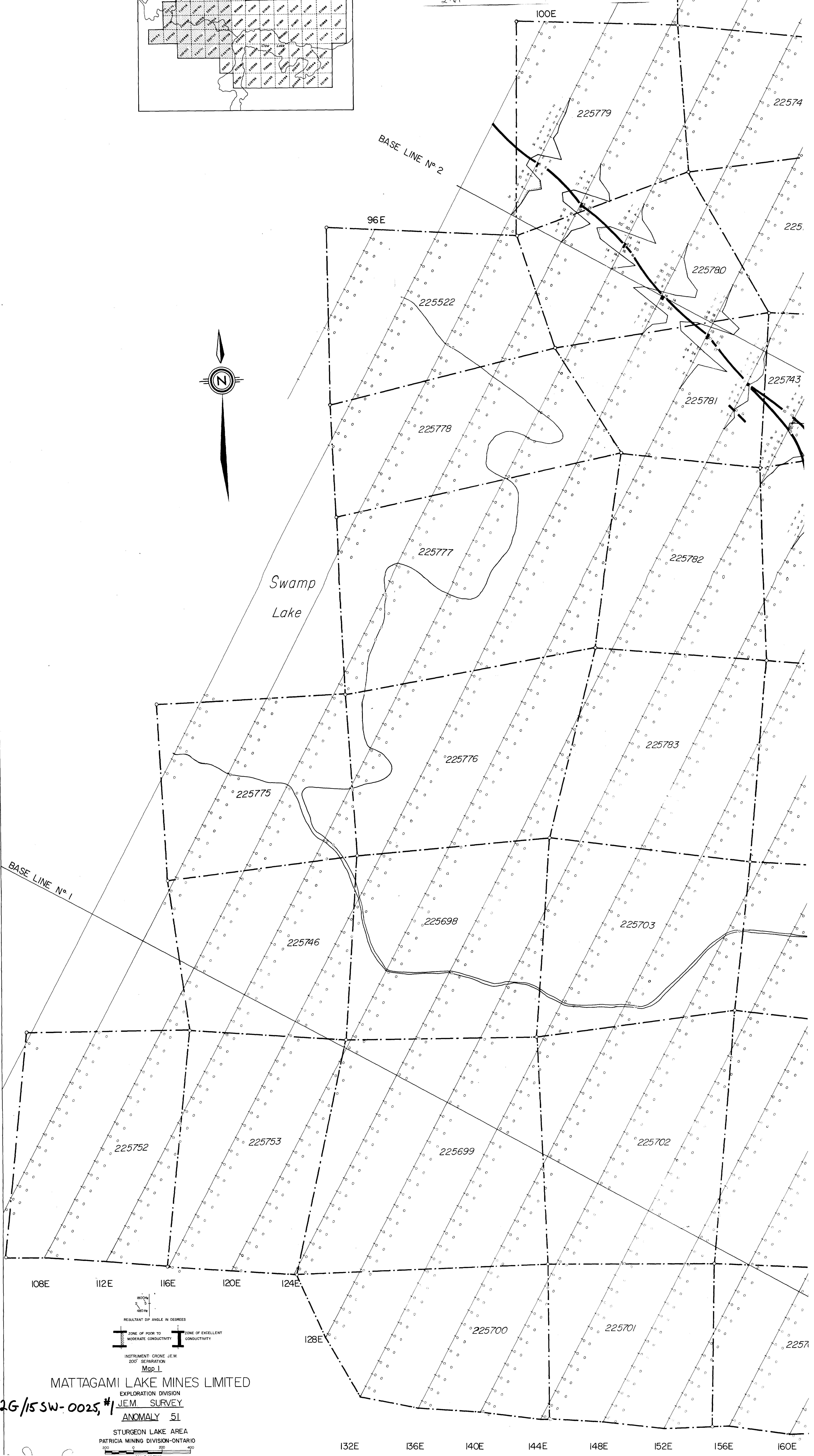
ZONE OF POOR TO MODERATE CONDUCTIVITY      ZONE OF EXCELLENT CONDUCTIVITY

INSTRUMENT CRONE J.E.M.  
200' SEPARATION  
Map 1

MATTAGAMI LAKE MINES LIMITED  
EXPLORATION DIVISION  
J.E.M. SURVEY  
ANOMALY 51  
STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO

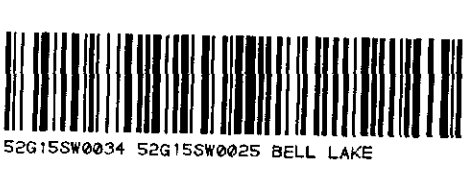
2.61

SCALE OF FEET

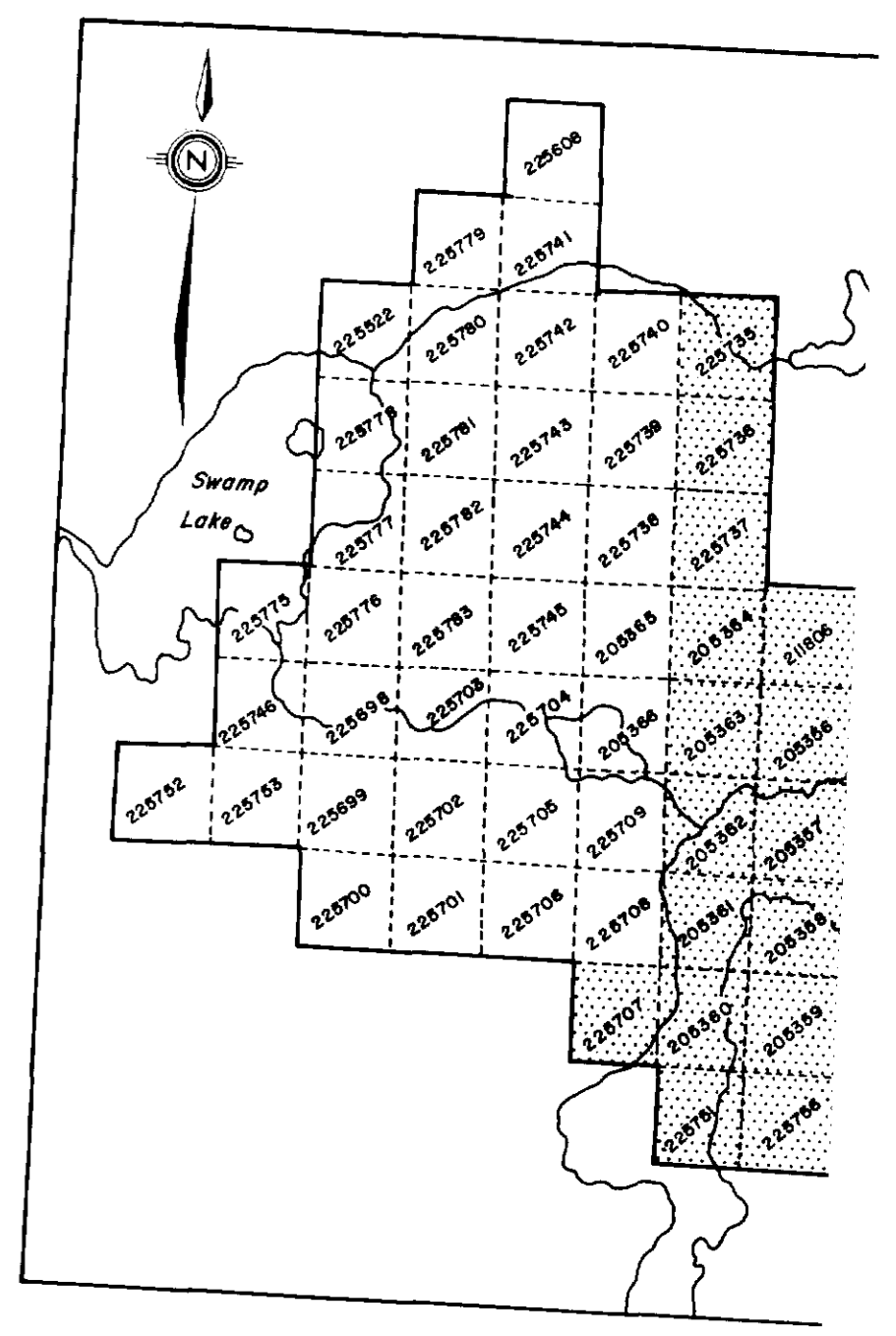


52G/15SW-0025 #1

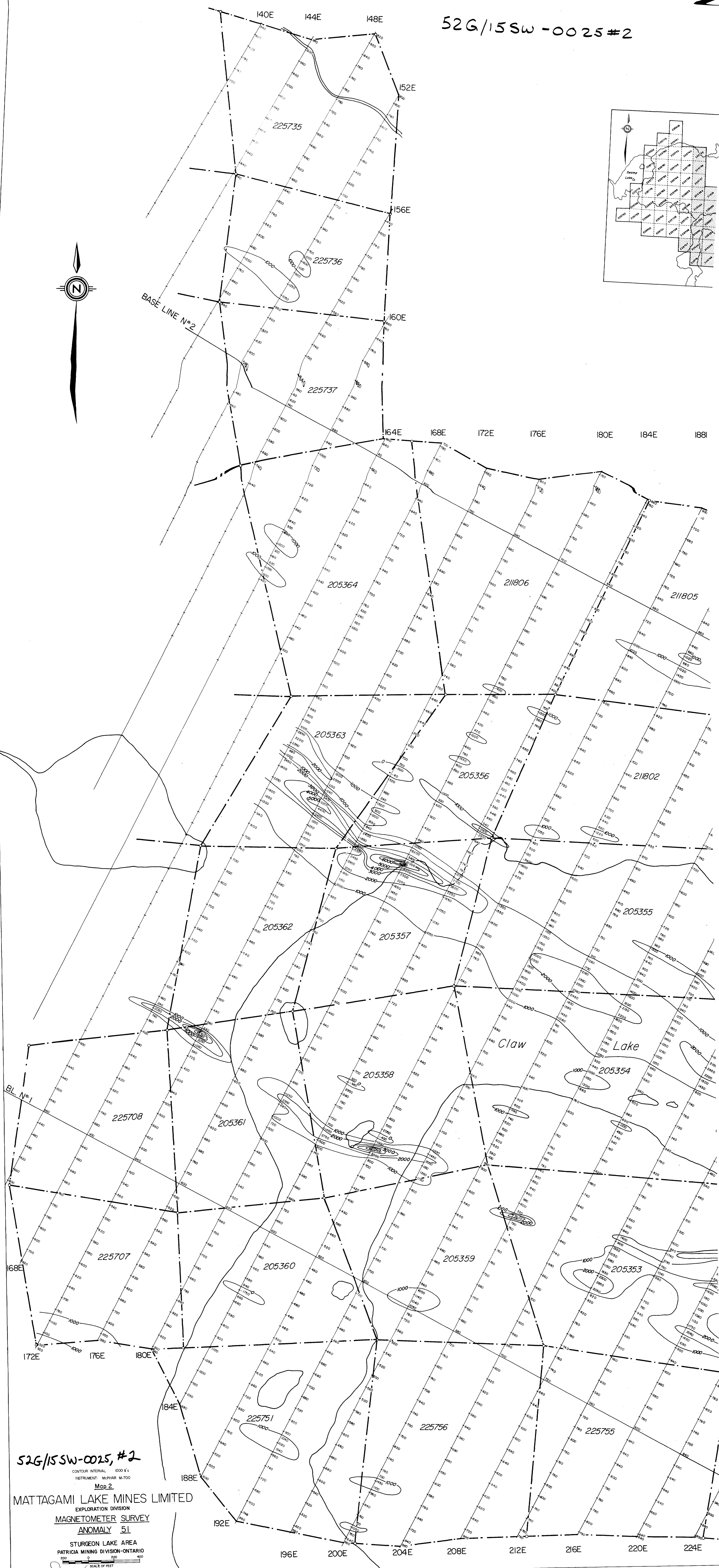
MATTAGAMI LAKE MINES LIMITED  
EXPLORATION DIVISION  
J.E.M. SURVEY  
ANOMALY 51  
STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO



52G/15SW - 0025 #2



BASE LINE N°2



52G/15SW-0025, #2

CONTOUR INTERVAL 1000 G's  
INSTRUMENT: MAPHAR M-700

Map 2

MATTAGAMI LAKE MINES LIMITED

EXPLORATION DIVISION

MAGNETOMETER SURVEY

ANOMALY 51

STURGEON LAKE AREA  
PATRICIA MINING DIVISION-ONTARIO

