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REPORT ON
AIRBORNE GEOPHYSICAL SURVEYS
SAULT STE. MARIE & SUDBURY
MINING DIVISIONS
ON BEHALF OF
CANADIAN JOHNS-MANVILLE CO. LTD.

by

Jan Klein, M.Sc., P. Eng.

Toronto, Ontario.

December 5th, 1968.



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Our Ref: 68-115-01/05



SUMMARY

Airborne magnetic and radiometric surveys were executed over three areas in the Sault Ste. Marie and Sudbury Mining Divisions, Ontario.

The magnetic survey has revealed some linear features reflecting basic dikes. The remainder of the areas show low to moderate relief over the Huronian sediments and granitic intrusions. The broadband radiometric measurements show low relief. Isolated potassium, uranium and thorium anomalies are encountered throughout the areas.

Recommendations have been made for ground follow-up of the uranium anomalies.



REPORT ON AIRBORNE GEOPHYSICAL SURVEYS
SAULT STE. MARIE AND SUDBURY MINING DIVISIONS
ON BEHALF OF
CANADIAN JOHNS-MANVILLE CO. LIMITED

INTRODUCTION

During the latter part of October 1968 geophysical surveys were undertaken by Seigel Associates Limited on behalf of Canadian Johns-Manville Co. Limited in Sault Ste. Marie and Sudbury Mining Divisions, Ontario. The surveys were executed over the following areas (see Fig. 1) selected by Canadian Johns-Manville Co. Limited.

Vernon-Porter claim group, centred $46^{\circ}26'N - 81^{\circ}45'W$
(Vernon, Porter and Dunlop Townships) see Plate 1.

Kirkpatrick Lake claim group, centred $46^{\circ}43'N - 83^{\circ}03'W$
(Townships 1C, 1D, 2C and 2D) see Plate 2.

Wakomata Lake claim group, centred $46^{\circ}34'N - 83^{\circ}22'W$
(Townships 182 and 188).

The first area is situated in the Sudbury Mining Division, the other two areas are in the Sault Ste. Marie Mining Division. In all, about 245 miles of survey cover the approximately 484 claims.

The purpose of the magnetic surveys was to obtain information concerning the structure and the distribution of different rock types in the investigation areas. The purpose of the radiometric surveys was to map the distribution of radioactive material in the area and distinguish between potassium, uranium and thorium sources.

SURVEY EQUIPMENT

The airborne surveys included magnetic and radiometric measurements.

The Scintrex NPM-1 nuclear resonance airborne magnetometer used during these surveys is based on a Newmont modification of a Varian Associates magnetometer and is produced under licence to both companies. It is a lightweight, solid state unit especially designed for use in a helicopter or light, fixed-wing aircraft where weight is an important consideration.



The cycle period of the instrument is 1.1 seconds. It measures the total intensity of the earth's magnetic field and this quantity, in gammas, is recorded, in analogue form, on a 2-channel Moseley recorder. The full scale sensitivity is 1000 gammas and the recorder automatically steps each 500 gammas. The intrinsic noise level is about 5 gammas.

Tie lines were flown across the survey grids to enable contouring of the NPM-1 information.

The airborne radiometric equipment consisted of a 5" diameter x 4" thick sodium iodide, thallium activated, crystal coupled to a photomultiplier tube. Its output is fed into a 4-channel gamma ray differential spectrometer (Scintrex GDSA-4). This "window" type spectrometer accepts only gamma energies falling within the two thresholds of each window. By appropriate proportioning in the analogue computer circuit the readout is indicative of what radioactive material is present on the ground. Four discrete pieces of information can be simultaneously obtained.

For the present survey this instrument was set so that broadband, potassium, uranium and thorium information were read separately. This information was recorded on a Brush 2300 recorder together with the terrain clearance of the aircraft (altimeter) and time reference signals (fiducials). The fiducials are also recorded by one of the sidepens of the 2-channel Moseley recorder and refer to the frames of the film of the continuous strip camera.

The geophysical apparatus were, together with a Vinten Mark III 16 mm positioning camera with wide angle lens, a Bonzer high frequency, solid state radioaltimeter and a Scintrex IA-2 intervalometer, installed in a Bell Jet Ranger 206A helicopter, on charter from Pegasus Airlifts (Burlington, Ontario). Navigation was by visual means employing aerial photographs.

SURVEY PROCEDURES AND STATISTICS

Grids of north-south traverses for the Vernon-Porter claim groups and grids of east-west traverses for the Kirkpatrick and Wakomata Lake claim groups were drawn on aerial photos (scale 1" = 1/4 mile) at a nominal 1000 ft. flight line separation.

The survey was flown at a mean altitude of 150 - 200 ft. and an average airspeed of 90 miles per hour.



GEOLOGY

The geology of the different survey areas can be found on Ontario Department of Mines geological map 2108 (1" = 4 miles) and map 291A (1" = 1 mile).

The Vernon-Porter area is for the main part underlain by sedimentary rocks of the Bruce and Cobalt Series, intruded by diabase. The Kirkpatrick Lake and Wakomata Lake areas are mainly underlain by sediments of the Cobalt Series. Some basic dikes strike NW and NE through these areas. The Cobalt and Bruce Series are of Late Huronian age and contain quartzites, siltstones, limestones, arkoses, graywackes and conglomerates. Most of the uranium and thorium bearing beds in the Blind River area are in the conglomerates of the Cobalt Series (especially the Mississagi horizons).

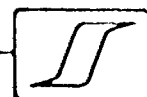
The areas are characterized by steep rocky ridges and rolling hills, up to several hundreds of feet above the surrounding valleys, which contain many lakes. Outcrops are fairly numerous, but the overburden appears to be heavy in some locations.

PRESENTATION OF DATA

The results of the geophysical surveys are presented on Plates 3, 4 and 5, on the scale of 1" \approx 1320 ft. On the four plates the flight lines are shown as well as some topographic features. Fig. 1 on Plates 3, 4 and 5 shows the isomagnetic contours. Contour interval is 25 gammas in areas of low magnetic relief, in disturbed areas larger contour intervals have been used. Fig. 2 on Plates 3, 4 and 5 show broadband radiometric contours. The contour interval is 5 c. p. s. The peaks of individual potassium, uranium and thorium anomalies are denoted by circles alongside the traverse lines. The anomalies are designated by three values. The top righthand values are related to potassium, the lefthand values to thorium, and the bottom values to uranium. These values show the amplitude above local background in counts per second for the respective channels.

Parts of the survey lines with significantly higher than normal counts per second are marked with a bar. These bars thus provide an approximate outline of the anomalous areas.

The magnetometer data are presented together with altimeter and fiducial recordings on a dual trace Moseley recorder chart, the radiometric data, with fiducial recording, on a Brush recorder chart.



The original geophysical traces are on the following scales:

Magnetometer 1" = 100 gammas, with automatic steps of 500 gammas.
The magnetic base level is 59,000 gammas.

Gamma ray spectrometer (from top to bottom of chart)

- 1st channel - fiducial markers
- 2nd channel - thorium channel 3 cps/div.
- 3rd channel - uranium channel 15 cps/div.
- 4th channel - potassium channel 9 cps/div.
- 5th channel - broadband channel 20 cps/div.

DISCUSSION OF RESULTS

Vernon-Porter Area (Plate 3)

The magnetic contour plan shows, in general, low relief, especially over the Huronian sediments where less than 250 gammas difference is encountered. Some small anomalies (up to 400 gammas) trending NE were recorded in the NW part of the area and are presumably caused by batholithic intrusives. The narrow linear features striking NW along lines 23N - 28S may reflect an olivine diabase dike. A small, open, magnetic high along line 21N may reflect an intrusive plug within the sediments.

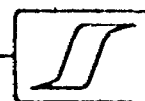
The steepness of the magnetic pattern in the N part of the area shows that the magnetic features here come closer to ground surface.

The broadband radiometric contour plan shows a low relief of about 20 cps. The areas with low counts likely reflect drift covered areas. The areas with higher counts may reflect areas with outcrops or with more granite-rich boulders in the drift cover. Most of the single anomalies show high potassium values.

Three uranium anomalies are encountered. One of these occurs within the drift covered granites (L25N). The other two occur within the sediments (L6N Lorrain formations, L16N Mississagi formations).

Kirkpatrick Lake Area (Plate 4)

The magnetic contour plan shows moderate relief and is dominated by NW and NE trending linear features rising up to 700 gammas above the general background level. These linear features reflect again near surface basic dikes intruded in the sediments of the upper Cobalt Series.



The 35 cps contour lines on the broadband radiometric contour plan approximately follows the contact between granite and sediments.

A number of uranium anomalies were located and occur mainly near the contacts between the basic dikes and the sediments (L9W and L20E). A single uranium anomaly of 20 cps (L19W) appears within the sediments.

Wakomata Lake Area (Plate 5)

The magnetic contour plan shows a generally low relief. In the NE part the long linear feature (500 gammas) reflects again one of the NW trending, basic dikes. The disturbances in the NW part of the area reflect batholithic intrusives.

The broadband radiometric contour plan shows no significant disturbances. The contours are parallel to the lakeshore.

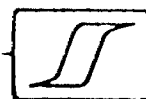
Three uranium anomalies are encountered on the main island in Lake Wakomata (Lines 10, 13 and 14) occurring within the sediments.

CONCLUSIONS AND RECOMMENDATIONS

The airborne magnetometer surveys over three areas in the Sault Ste. Marie and Sudbury Mining Divisions have revealed some linear features which are interpreted as basic dikes. The remainder of the areas show low relief over the Huronian sediments and moderate relief over the granitic intrusives.

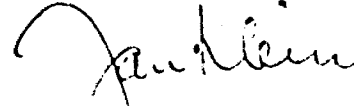
The airborne broadband radiometric contour plans show low relief. In all three areas potassium, uranium and thorium anomalies are encountered over the sediments.

The amplitude of the individual peak responses of a given source is related to its percent potassium, uranium or thorium respectively, its surface area of exposure to the airborne detector system, the elevation of the aircraft above the ground and its airspeed. Thus, in this survey, any one of the recorded anomalies could be caused by a high grade concentration over a limited sized area or alternatively, lower grade concentration over a larger area. Only ground investigation can resolve the actual significance of each individual anomaly.



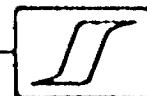
A ground follow-up program should be considered, with priority given to those anomalies with the highest uranium values.

Respectfully submitted,



Jan Klein, M.Sc., P.Eng.
Geophysicist.

Toronto, Ontario.
December 5th, 1968.





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900 ONTARIO

THE MINING ACT REPORT OF WORK

A separate form is required for each type of work to be recorded.

To the Recorder of Sault Ste. Marie Mining Division

I, Canadian Johns-Manville Co. Limited A-23294 name of Recorded Holder Miner's Licence

Exploration Dept. Drawer 610 Matheson, Ontario Post Office Address

do hereby report the performance of 1220.4 days of Airborne Geophysical type of work

not before reported to be applied on the following contiguous claims

Table with 6 columns: Claim No., Days, Claim No., Days, Claim No., Days. Includes 'SEE ATTACHED SHEET' in the middle.

All the work was performed on Mining Claim (s) (In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
For Compressed Air or Other Power Driven or Mechanical Equipment
Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
For Geological and Geophysical Survey - The names and addresses of men employed as well as dates. Type of instrument used in the case of geophysical survey. Reports and maps in duplicate must be filed with the Minister within 60 days of recording.
For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

SEE ATTACHED ASSESSMENT WORK BREAKDOWN SHEETS

Date APR 11 21 1969

CANADIAN JOHNS-MANVILLE CO. LIMITED,
Signature of Recorded Holder or Agent
F. J. Swelegh, Regional Geologist.

MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH

ASSESSMENT WORK BREAKDOWN

1. Type of Survey AGU-RADIOMETRIC
2. Township or Area 182 and 188 Townships
3. Number of Mining Claims Traversed by survey 189
101289 - 101318 incl; 101320 - 101332 incl; 102523 - 102629 incl; 102893 - 102927 incl;
 102934 - 102937 incl;
4. Number of Miles of Line Cut Flown 70.34
- X 5. Number of Stations Established continuous recording
- X 6. Make and type of Instrument Used - Sointrox GD SA-4 (4 channel gamma ray differential spectrometer)
- X 7. Scale Constant or Sensitivity - Thorium channel - 3 cps/div
Uranium " -15 cps/div
Potassium " - 9 cps/div
Broadband " -20 cps/div
8. Frequency Used and Power Output
9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Drafting, etc)

Total 8 hour Line-Cutting Days

Calculations

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{140.8}{132} = \frac{7.45}{\text{Assessment credits per claim}}$$

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: April 21, 1969

Signed:

- Notes:
- (A) X 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

ASSIGNMENT WORK PROGRESS

1. FIELD WORK

<u>Type of work</u>	<u>Name & address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Pilot and aircraft from Pegasus Airlifts, Burlington, Ontario			
Operator from Seigel Associates Limited, Toronto, Ontario			
Survey conducted during latter part of October, 1968			

2. Consultants:

<u>Name & address</u>	<u>Dates worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
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3. Draughtsman, Typing, (Other): (specify)

<u>Name & Address</u>	<u>Type of work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
J. Klein, Toronto, Ont	Geophysicist	December 1968	

4. Line Cutting:

<u>Name</u>	<u>Address</u>	<u>Dates worked</u>	<u>Number of 8 hour days</u>
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TOTAL 8 HOUR LINE-CUTTING DAYS

ASSESSMENT WORK BREAKDOWN

1. Type of Survey AERO-MAGNETIC
2. Township or Area 182 and 188 Townships
3. Numbers of Mining Claims Traversed by Survey 189
 101289 - 101318 incl; 101320 - 101332 incl; 102523 - 102629 incl; 102893 - 102927 incl;
 102934 - 102937 incl
4. Number of Miles of Line Cut Flown 70.34
- X 5. Number of Stations Established continuous recording
- X 6. Make and type of Instrument Used - Scintrex NPM-1 nuclear resonance airborne magnetometer
- X 7. Scale Constant or Sensitivity 1000 gammas
- X 8. Frequency Used and Power Output
9. Summary of Assessment Credits (details on reverse side)

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

Total 8 hour Line-Cutting Days

Calculations

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{2813.6}{189} = \frac{14.9}{\text{Assessment credits per claim}}$$

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: April 21, 1969

Signed:

- Note: (A) X 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



ONTARIO

THE MINING ACT REPORT OF WORK

A separate form is required for each type of work to be recorded.

To the Recorder of Sault Ste. Marie Mining Division

Canadian Johns-Manville Co. Limited A-23294

name of Recorded Holder Exploration Dept. Drawer 610 Miner's Licence Matheson, Ontario

Post Office Address do hereby report the performance of 3048.8 days of airborne geophysics type of work

not before reported to be applied on the following contiguous claims

Table with 6 columns: Claim No., Days, Claim No., Days, Claim No., Days. Includes 'SEE ATTACHED SHEET' in the middle.

All the work was performed on Mining Claim (s) (In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
For Compressed Air or Other Power Driven or Mechanical Equipment
Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
For Geological and Geophysical Survey - The names and addresses of men employed as well as dates. Type of instrument used in the case of geophysical survey. Reports and maps in duplicate must be filed with the Minister within 60 days of recording.
For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

SEE ATTACHED ASSESSMENT WORK BREAKDOWN SHEETS

CANADIAN JOHNS-MANVILLE CO. LIMITED,

Date April 21, 1969

Signature of Recorded Holder or Agent F. J. Evelyn, Regional Geologist.

The Mining Act Certificate Verifying Report of Work F. J. Evelyn

MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Pilot and aircraft from Pegasus Airline, Burlington, Ontario.			
Operator from Seigel Associates Limited, Toronto, Ontario.			
Survey conducted during the latter part of October, 1968			

2. Consultants

<u>Name & 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 & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
J. Klein, Toronto, Ontario	Geophysicist	December 1968	

4. Line Cutting

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
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TOTAL 8 HOUR LINE-CUTTING DAYS

ASSESSMENT WORK BREAKDOWN

- 1. Type of Survey AER-RADIOMETRIC
- 2. Township or Area 1C, 2C and 1D
- 3. Numbers of Mining Claims Traversed by Survey 134
101114 to 101212 incl; 101219 to 101253 incl;
- 4. Number of Miles of Line Cut Flows 50.98
- X 5. Number of Stations Established continuous recording
- X 6. Make and type of Instrument Used - Scintrex QD SA-4 (4 channel gamma ray differential spectrometer)
- X 7. Scale Constant or Sensitivity - Thorium channel - 3 cps/div
Uranium " - 15 cps/div
Potassium " - 9 cps/div
Broadband " - 20 cps/div
- 8. Frequency Used and Power Output

9. SUMMARY OF ASSESSMENT CREDITS (details on reverse side)

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

Total 8 hour Line-Cutting Days

Calculation

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{2019.6}{134} = \frac{7.6}{\text{Assessment credits per claim}}$$

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: April 21, 1969

Signed:

- Note:
- (A) X 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. Type of Survey AEROMAGNETIC
- 2. Township or Area 1C, 2C and 1D
- 3. Numbers of Mining Claims Traversed by Survey 134
101114 to 101212 incl; 101219 to 101253 incl;
- 4. Number of Miles of Line Cut Flown 50.98
- X 5. Number of Stations Established continuous recording
- X 6. Make and type of Instrument Used - Scintrex MPM-1 nuclear resonance airborne magnetometer
- X 7. Scale Constant or Sensitivity 1000 gammas
- X 8. Frequency Used and Power Output
- 9. Summary of Assessment Credits (details on reverse side)

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

Total 8 hour Line-Cutting Days

Calculation

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{2039.2}{134} \div \frac{134}{\text{Number of claims}} = \frac{15.2}{\text{Assessment credits per claim}}$$

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: April 21, 1969

Signed:

- Notes:
- (A) X 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 REGARDING

1. FIELD WORK:

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Pilot and aircraft from Pegasus Airflite, Burlington, Ontario.			
Operator from Seigel Associates Limited, Toronto, Ontario.			
Survey conducted during latter part of October, 1965.			

2. Consultants:

<u>Name & Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
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3. Draftsman, Typist, Others: (specify)

<u>Name & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
J. Klein, Toronto, Ontario	Geophysicist	December 1968	

4. Line Cutting:

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
-------------	----------------	---------------------	----------------------------------

TOTAL 8 HOUR LINE-CUTTING DAYS



ONTARIO

THE MINING ACT REPORT OF WORK

A separate form is required for each type of work to be recorded.

To the Recorder of Sudbury Mining Division

I, Canadian Johns-Manville Co. Limited A-23294 Miner's Licence

Exploration Dept. Drawer 610 Matheson, Ontario

Post Office Address

do hereby report the performance of 5090.8 days of airborne geophysical type of work

not before reported to be applied on the following contiguous claims

Table with 6 columns: Claim No., Days, Claim No., Days, Claim No., Days. Includes 'SEE ATTACHED SHEET' in the middle row.

All the work was performed on Mining Claim (s) (In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations
For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core.
For Compressed Air or Other Power Driven or Mechanical Equipment
For Power Stripping
For Geological and Geophysical Survey
For Land Survey

The Required Information is as Follows: (Attach a list if this space is insufficient)

SEE ATTACHED ASSESSMENT WORK BREAKDOWN SHEETS

CANADIAN JOHNS-MANVILLE CO. LIMITED,

Date April 21, 1969

Signature of Recorded Holder or Agent P. J. Eveleigh, Regional Geologist.

MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH

ASSESSMENT WORK BREAKDOWN

1. Type of Survey AERO-MAGNETIC
 2. Township or Area Vernon and Porter Townships
 3. Numbers of Mining Claims Traversed by Survey 194

151898 - 151972 incl; 151997 - 152009 incl; 152012 - 152047 incl; 152050 and 152051;
 152057 - 152071 incl; 152087 - 152139 incl;

4. Number of Miles of Line Cut Flown 84.68

- X 5. Number of stations Established continuous recording
 X 6. Make and type of Instrument Used - Scintrex MPM-1 nuclear resonance airborne magnetometer
 X 7. Scale Constant or Sensitivity 1000 gammaeas
 X 8. Frequency Used and Power Output
 9. Summary of Assessment Credits (details on reverse side)

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

Total 8 hour Line-Cutting Days

Calculations

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{\text{3387.2}}{\text{194}} = \frac{\text{17.5}}{\text{Number of claims}} = \frac{\text{Assessment credits}}{\text{per claim}}$$

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: April 21, 1969

Signed:

- Notes: (A) X 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 & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Pilot and aircraft from Pegasus Airlifts, Burlington, Ontario			
Operator from Seigel Associates Limited, Toronto, Ontario.			
Survey conducted during latter part of October, 1968			

2. Consultants:

<u>Name & 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 & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
J. Klein, Toronto, Ont	Geophysicist	December 1968	

4. Line Cutting:

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
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TOTAL 8 HOUR LINE-CUTTING DAYS

ASSESSMENT WORK BREAKDOWN

1. Type of Survey AIR-RADIOMETRIC
2. Township or Area Vernon and Porter Townships
3. Number of Mining Claims Traversed by Survey 194
 151898 - 151972 incl; 151997 - 152009 incl; 152012 - 152047 incl; 152050 and 152051;
 152057 - 152071 incl; 152087 - 152139 incl;
4. Number of Miles of Line Cut Flown 84.68
- X 5. Number of stations Established continuous recording
- X 6. Make and type of Instrument Used - Scintrex GD 8A-4 (4 channel gamma ray differential spectrometer)
- X 7. Scale Constant or Sensitivity - Thorium channel - 3 cps/div
 Uranium " - 15 cps/div
 Potassium " - 9 cps/div
 Broadband " - 20 cps/div
8. Frequency Used and Power Output

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

Total 8 Hour Technical Days (Include Consultants, Draughting, etc)

Total 8 hour Line-Cutting Days

Calculations

$$\frac{\text{Technical}}{\text{Line-cutting}} \times 7 = \frac{1693.6}{194} = \frac{8.7}{\text{Assessment credits per claim}}$$

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: April 21, 1969

Signed:

- Note: (A) X 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 & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Pilot and aircraft from Pegasus Airlifts, Burlington, Ontario			
Operator from Seigel Associates Limited, Toronto, Ontario			
Survey conducted during latter part of October, 1968			

2. Consultants

<u>Name & 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 & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
J. Klein, Toronto, Ont	Geophysicist	December 1968	

4. Line Cutting

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
-------------	----------------	---------------------	----------------------------------

TOTAL 8 HOUR LINE-CUTTING DAYS

7 of claims situated in 182 and 188 Townships covered by aerial geophysical surveys. Note that 22.35 man days of work are herewith to be filed for assessment purposes on each of the 189 claims listed below; -

537-101289, 101290, 101291, 101292, 101293, 101294, 101295, 101296, 101297, 101298, 101299,
101300, 101301, 101302, 101303, 101304, 101305, 101306, 101307, 101308, 101309, 101310,
101311, 101312, 101313, 101314, 101315, 101316, 101317, 101318, 101320, 101321, 101322,
101323, 101324, 101325, 101326, 101327, 101328, 101329, 101330, 101331, 101332, 102523,
102524, 102525, 102526, 102527, 102528, 102529, 102530, 102531, 102532, 102533, 102534,
102535, 102536, 102537, 102538, 102539, 102540, 102541, 102542, 102543, 102544, 102545,
102546, 102547, 102548, 102549, 102550, 102551, 102552, 102553, 102554, 102555, 102556,
102557, 102558, 102559, 102560, 102561, 102562, 102563, 102564, 102565, 102566, 102567,
102568, 102569, 102570, 102571, 102572, 102573, 102574, 102575, 102576, 102577, 102578,
102579, 102580, 102581, 102582, 102583, 102584, 102585, 102586, 102587, 102588, 102589,
102590, 102591, 102592, 102593, 102594, 102595, 102596, 102597, 102598, 102599, 102600,
102601, 102602, 102603, 102604, 102605, 102606, 102607, 102608, 102609, 102610, 102611,
102612, 102613, 102614, 102615, 102616, 102617, 102618, 102619, 102620, 102621, 102622,
102623, 102624, 102625, 102626, 102627, 102628, 102629, 102893, 102894, 102895, 102896,
102897, 102898, 102899, 102900, 102901, 102902, 102903, 102904, 102905, 102906, 102907,
102908, 102909, 102910, 102911, 102912, 102913, 102914, 102915, 102916, 102917, 102918,
102919, 102920, 102921, 102922, 102923, 102924, 102925, 102926, 102927, 102934, 102935,
2936, 102937.

134 claims situated in 10, 20 and 1D Townships covered by aerial geophysical surveys. No. of man days of work are herewith to be filed for assessment purposes on each of the 134 claims listed below: -

SSM-10114, 10115, 10116, 10117, 10118, 10119, 10120, 10121, 10122, 10123, 10124,
10125, 10126, 10127, 10128, 10129, 10130, 10131, 10132, 10133, 10134, 10135,
10136, 10137, 10138, 10139, 10140, 10141, 10142, 10143, 10144, 10145, 10146,
10147, 10148, 10149, 10150, 10151, 10152, 10153, 10154, 10155, 10156, 10157,
10158, 10159, 10160, 10161, 10162, 10163, 10164, 10165, 10166, 10167, 10168,
10169, 10170, 10171, 10172, 10173, 10174, 10175, 10176, 10177, 10178, 10179,
10180, 10181, 10182, 10183, 10184, 10185, 10186, 10187, 10188, 10189, 10190,
10191, 10192, 10193, 10194, 10195, 10196, 10197, 10198, 10199, 10200, 10201,
10202, 10203, 10204, 10205, 10206, 10207, 10208, 10209, 10210, 10211, 10212,
10219, 10220, 10221, 10222, 10223, 10224, 10225, 10226, 10227, 10228, 10229,
10230, 10231, 10232, 10233, 10234, 10235, 10236, 10237, 10238, 10239, 10240,
10241, 10242, 10243, 10244, 10245, 10246, 10247, 10248, 10249, 10250, 10251,
10252, 10253.

Rec. Recd. New York
Aug. 171



ONTARIO

THE MINING ACT REPORT OF WORK

A separate form is required for each type of work to be recorded.

To the Recorder of Sudbury Mining Division

I, Canadian Johns-Manville Co. Limited A-23294
name of Recorded Holder Miner's Licence

Exploration Dept., Drawer 610, Matheson, Ontario
Post Office Address

do hereby report the performance of 350.4 days of electromagnetic survey
type of work

not before reported to be applied on the following contiguous claims

Claim No	Days	Claim No.	Days	Claim No.	Days
B-152061	13.8	S-152088	13.8	S-281540	20
152062	13.8	152089	13.8	281541	20
152063	13.8	281536	20	281542	20
152064	13.8	281537	20	281543	20
152071	13.8	281538	20	281544	20
152087	13.8	281539	20	281545	20
				281546	20
				281547	20

All the work was performed on Mining Claim (s) AA above
(In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
- For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
- For Compressed Air or Other Power Driven or Mechanical Equipment
Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
- For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
- With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
- For Geological and Geophysical Survey - The names and addresses of men employed as well as dates. Type of instrument used in the case of geophysical survey. Reports and maps in duplicate must be filed with the Minister within 60 days of recording.
- For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

SEE ATTACHED "SPECIAL PROVISION SHEET"

CANADIAN JOHNS-MANVILLE CO. LIMITED

Date May 6th, 1971

Signature of Recorded Holder or Agent
E. J. Eylegh, Regional Geologist.

The Mining Act
Certificate Verifying Report of Work

I, E. J. Eylegh
Matheson, Ontario
(Post Office Address)

hereby certify:

- That I have a personal and intimate knowledge of the facts set forth in this report and to, having performed the work or witnessed its performance.
- That the annexed report is true.

Dated May 6th 1971

SUDBURY

MAY 20 1971

SUDBURY

RECEIVED

JUL 6 1971

THE PENALTY FOR MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH

S. 152057

ASSESSMENT WORK DETAILS

Type of Survey Geophysical
A separate form is required for each type of survey

Township or Area Porter

Chief Line Cutter or Contractor W. Foster
Name
Matheson, Ontario
Address

Party Chief R. A. Haley
Name
Matheson, Ontario
Address

Consultant P. A. R. Brown and P. J. Eveleigh
Name
Matheson, Ontario
Address

Geological field mapping by _____
Name

Address

COVERING DATES

Line Cutting ---

Field August 1st - October 25th, 1970
Instrument work, geological mapping, sampling etc.

Office October 20th - November 2nd, 1970

INSTRUMENT DATA

Make, Model and Type McPhar Dual Frequency Reconnaissance Electromagnetic Unit

Scale Constant or Sensitivity ---
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 1,308

Number of Readings Within Claim Group 1,308

Number of Miles of Line cut Within Claim Group 17.2

Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED 13.8
& 20 DAYS per claim 40 DAYS per claim Includes (Line cutting)

Geological Survey

Geophysical Survey Show Check ✓

Geochemical Survey

DATE May 6th, 1971 GENERAL

CANADIAN JOHNS-MANVILLE CO.

per: P. J. Eveleigh

Regional Geologist.

Performance and coverage credits do not apply to airborne surveys

SPECIAL PROVISION CREDITS for PERFORMANCE & COVERAGE	
MINING CLAIMS TRAVERSED List numerically	
152061, 152062, 152063,	
152064, 152071, 152087,	
152088, 152089, 13.8 days	
per claim,	
281536, 281537, 281538,	
281539, 281540, 281541,	
281542, 281543, 281544,	
281545, 281546, 281547,	
20 days per claim,	
TOTAL CLAIMS <u>20</u>	

if space insufficient, attach list

Send in Duplicate to:
 FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINES &
 NORTHERN AFFAIRS
 WHITELY BLOCK
 TYPEN'S PARK
 TORONTO, ONTARIO

*Rec. Local office
June 9 1971*

#33



ONTARIO

THE MINING ACT REPORT OF WORK

A separate form is required for each type of work to be recorded.

To the Recorder of Sudbury Mining Division

I, Canadian Johns-Manville Co. Limited Ar-23296
name of Recorded Holder Miner's Licence

Exploration Dept. Drawer 610 Asbestos, Quebec
Post Office Address

do hereby report the performance of 1,520 days of line cutting & geophysical survey
type of work

not before reported to be applied on the following contiguous claims Porter & Vernon Guy

Claim No.	Days	Claim No.	Days	Claim No.	Days
S-152061	40	S-152088	40	S-152099	40
Im No.	Days	Claim No.	Days	Claim No.	Days
52109	40	S-152120	40	S-281541	40
52110	40	S-281536	40	S-281542	40
52111	40	S-281537	40	S-281543	40
52112	40	S-281538	40	S-281544	40
52113	40	S-281539	40	S-281545	40
52118	40	S-281540	40	S-281546	40
52119	40			S-281547	40

All the work was performed on Mining Claim (s) same as above
(In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER:

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
- For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
- For Compressed Air or Other Power Driven or Mechanical Equipment - Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
- For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
- With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
- For Geological and Geophysical Survey - The names and addresses of men employed as well as dates. Type of instrument used in the case of geophysical survey. Reports and maps in duplicate must be filed with the Minister within 60 days of recording.
- For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

See attached "Special Provision" Sheet

CANADIAN JOHNS-MANVILLE CO. LIMITED

Date May 6th, 1971

[Signature]
Signature of Recorded Holder or Agent
F. J. Evesloch, Regional Geologist

The Mining Act
Certificate Verifying Report of Work

I, F. J. Evesloch
Drawer 610 Asbestos, Ontario
(Post Office Address)

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 its completion.
- That the annexed report is true.

Dated December 1970

RECEIVED
MAY 10 1971
7, 8, 9, 10, 11, 12, 13, 14, 15, 16

[Signature]
Signature

S-152057

THE PENALTY FOR MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH

ASSESSMENT WORK DETAILS

Type of Survey Geophysical - magnetic
A separate form is required for each type of survey

Township or Area Vernon - Porter Townships

Chief Line Cutter W. Foster
Name
or Contractor Matheson, Ontario
Address

Party Chief T. Wright
Name
Matheson, Ontario
Address

Consultant P. A. R. Brown and P. J. Evelegh
Name
Matheson, Ontario
Address

Geological field mapping by _____
Name
Address

COVERING DATES

Line Cutting June 18th - September 19th, 1970

Field July 20th - October 20th, 1970
Instrument work, geological mapping, sampling etc.

Office October 20th - November 2nd, 1970

INSTRUMENT DATA

Make, Model and Type Scintrex Fluxgate Magnetometer
Model MF - 1

Scale Constant or Sensitivity see photocopy brochure
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____
Number of Stations Within Claim Group 3,705
Number of Readings Within Claim Group 3,705
Number of Miles of Line cut Within Claim Group 38.7
Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED	20 DAYS per claim	40 DAYS per claim Includes (Line cutting)
Geological Survey	<input type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Show Check ✓
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE May 6th, 1971 SIGNATURE P. J. Evelegh
CANADIAN JOHNS-MANVILLE CO. LTD.
Regional Geologist.

Performance and coverage credits do not apply to airborne surveys

SPECIAL PROVISION CREDITS
for
PERFORMANCE & COVERAGE

MINING CLAIMS TRAVERSED
List numerically

- 8-152061, 152062, 152063,
- 152064, 152071, 152087,
- 152088, 152089, 152093,
- 152094, 152095, 152098,
- 152099, 152100, 152105,
- 152106, 152107, 152108,
- 152109, 152110, 152111,
- 152112, 152113, 152118,
- 152119, 152120, 281536,
- 281537, 281538, 281539,
- 281540, 281541, 281542,
- 281543, 281544, 281545,
- 281546, 281547,

TOTAL CLAIMS 38

Send in Duplicate to:
FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES &
NORTHERN AFFAIRS
WHITNEY BLOCK
DUNCAN'S PARK
TORONTO, ONTARIO

If space insufficient, attach list

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS
AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

**SPECIFICATIONS OF
FLUXGATE MAGNETOMETER
MODEL MF-1**

Ranges:	Plus or minus -- 1,000 gammas f. sc. 3,000 " 10,000 " 30,000 " 100,000 "
	Sensitivity 20 gammas/div. 50 " 200 " 500 " 2,000 "
Meton:	Taut-band suspension 1000 gammas scale 1 7/8" long — 50 div. 3000 gammas scale 1 11/16" long — 60 div.
Accuracy:	1000 to 10,000 gamma ranges ± 0.5% of full scale 30,000 and 100,000 gamma ranges ± 1% of full scale
Operating Temperatures:	—40°C to +40°C —40°F to +100°F
Temperature Stability:	Less than 2 gammas per °C (1 gamma /°F)
Noise Level:	Total 1 gamma P-P
Long Term Stability:	± 1 gamma for 24 hours at constant temperature
Bucking Adjustments: (Latitude)	10,000 to 75,000 gammas by 9 steps of approximately 8,000 gammas and fine control by 10 turn potentiometer. Convertible for southern hemisphere or ± 30,000 gammas equatorial.
Recording Output:	1.7 ma per oersted for 1000 to 100,000 gamma ranges with maximum termination of 15,000 ohms.
Response:	DC to 5 cps (3db down)
Connector:	Amphenol 91-MC3F1
Batteries:	12 x 1.5V-flashlight batteries "C" cell type) (AC Power supply available)
Consumption:	50 milliamperes
Dimensions:	Instrument — 6 1/2" x 3 1/2" x 12 1/2" 165 x 90 x 320 mm Battery pack — 4" x 2" x 7" 100 x 50 x 180 mm Shipping Container — 10" dia x 16" 254 mm dia. x 410 mm
Weights:	Instrument — 5 lbs. 12 oz. 26 kg. Battery Pack — 2 lbs. 4 oz. 1.0 kg. Shipping — 13 lbs. 6.0 kg.



SCINTREX LIMITED

79 Martin Ross Avenue, Downsview, Ontario, Canada

105
19
Air

April 22, 1969

DEPARTMENT OF MINES
APR 23 1969
TO: F. J. E.

Mr. K. M. Hallock
Mining Recorder
Sudbury, Ontario

Dear Sir:

Enclosed find Mining Act Report of Work form and Assessment Work Breakdown sheets covering aerial magnetic and radiometric surveys completed during 1968 on the 194 mining claims listed on the attached sheet. These claims are situated in the Townships of Vernon and Porter. Assessment work is equivalent to 26.2 man days per claim.

The report and maps covering this work will be forwarded to Mr. R. V. Scott in Toronto within the allotted sixty days.

Yours very truly,

F. J. Eveleigh,
Regional Geologist.

→ cc: Mr. R. V. Scott,
Chief, Mining Lands Branch
Ontario Dept. of Mines
Parliament Buildings
Toronto 2, Ontario

Mr. H. K. Conn - Asbestos

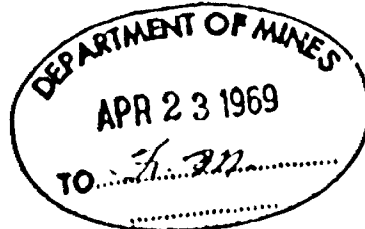
file

Encls

PROJECTS SECTION
TORONTO
RECEIVED
APR 23 1969
7.8.9.10.11.12.13
J. E.

105
17
Air

April 22, 1969



Mr. K. M. Hallock
Mining Recorder
Sudbury, Ontario

Dear Sir:

Enclosed find Mining Act Report of Work form and Assessment Work Breakdown sheets covering aerial magnetic and radiometric surveys completed during 1968 on the 194 mining claims listed on the attached sheet. These claims are situated in the Townships of Vernon and Porter. Assessment work is equivalent to 26.2 man days per claim.

The report and maps covering this work will be forwarded to Mr. R. V. Scott in Toronto within the allotted sixty days.

Yours very truly,

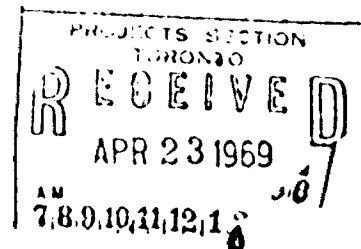
F. J. Eveleigh,
Regional Geologist.

→ cc: Mr. R. V. Scott,
Chief, Mining Lands Branch
Ontario Dept. of Mines
Parliament Buildings
Toronto 2, Ontario

Mr. H. K. Conn - Asbestos

file

Encls





63.2517

PROJECTS SECTION
TEL: 416-365-6918

ONTARIO
DEPARTMENT OF MINES
Mining Lands Branch

PARLIAMENT BUILDINGS
TORONTO 2, ONTARIO

October 23, 1969

Mr. K.M. Hallock, Mining Recorder,
118 Cedar St.,
Sudbury, Ont.

Dear Mr. Hallock:

The geophysical and radionetric 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,

Fred W. Matthews,
Supervisor.

cc: Canadian Johns-Manville Co. Ltd.,
Drawer 610, Matheson, Ontario
Attention: Mr. P.J. Eveleigh,
Regional Geologist.

cc. K. Card, Act. Res. Geologist,
1349 La Salle Blvd.,
Sudbury, Ont.

P.S. Mr. Card:

As this file also contains Townships 1C, 1D, 2C, 182
and 188 the duplicate file has been sent to Sault Ste.
Marie Resident Geologist.

Assessment Work Credits

Name: Canadian Johns-Manville Co., Limited

Township or Area: Porter and Vernon Township

Number of Assessment work days per claim:

Geophysical -

Geological -

Magnetometer 17.5 days per claim
(Airborne)

Geochemical -

Mining Claims:

Radiometric - 8.7 days per claim
(Airborne)

151898 to 151972 incl. *Vernon* 152087 to 152133 incl.
151977 to 152009 incl. *Vernon*
152012 to 152047 incl. *Vernon (152029-152047 in Porter)*
152050, 152051 *Porter*
152057 to 152072 incl. *Porter* ~~151468-151472 - Vernon~~

151848-151967 incl. - Porter
151968-151972 incl. - Vernon

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 - 60; Geological - 40; Geochemical - 40; Radiometric - 20

Received in full.

Oct. 23/69

THE MINING ACT

FILE: 63.2517

Assessment Work Credits

Name: Canadian Johns-Manville Co. Limited

Township or Area: 1C, 1D, 2C township

Number of Assessment work days per claim:

Geophysical -

Geological -

Magnetometer 15.2 days per claim
(Airborne)

Geochemical -

Mining Claims:

Radiometric - 7.6 days per claim
(Airborne)

SSM 101114 to 101212 incl.
101219 to 101253 incl.

Sheet 31 - 100000

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; Radiometric - 20

Assessment Work Credits

Name: Canadian Johns-Manville Co. Limited.

Township or Area: Twp. 182, 188

Number of Assessment work days per claim:

Geophysical -	Geological -
Magnetometer 14.9 days per claim (Airborne)	Geochemical -
Mining Claims:	Radiometric - 7.45 days per claim (Airborne)

- 101249 to 101318 incl.
- 101320 to 101332 incl.
- 102523 to 102629 incl.
- 102893 to 102927 incl.
- 102934 to 102937 incl.

Limit the number

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; Radiometric - 20

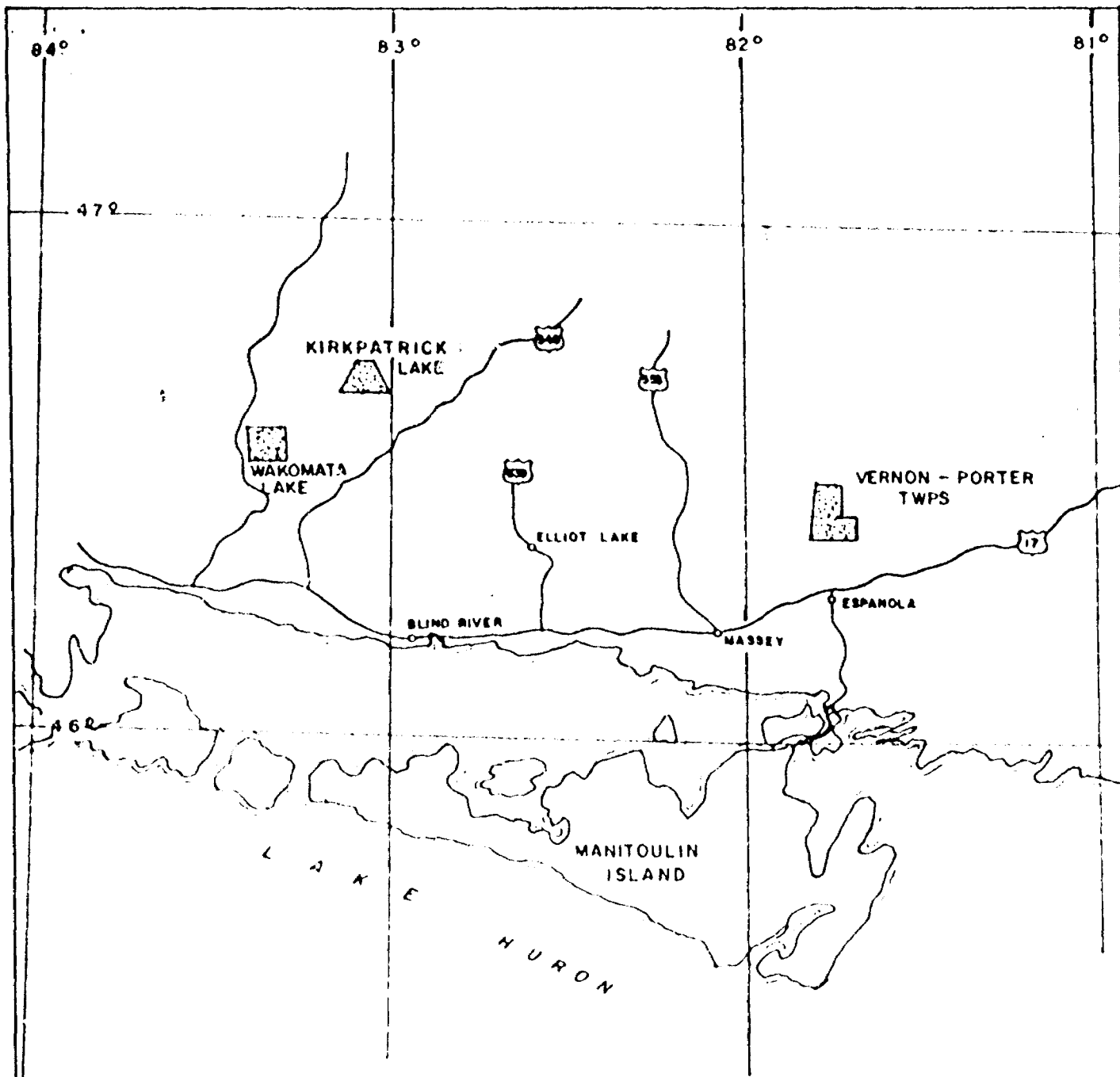


FIG. 1

CANADIAN JOHNS-MANVILLE CO., LIMITED

AIRBORNE GEOPHYSICAL SURVEYS

LOCATION PLAN

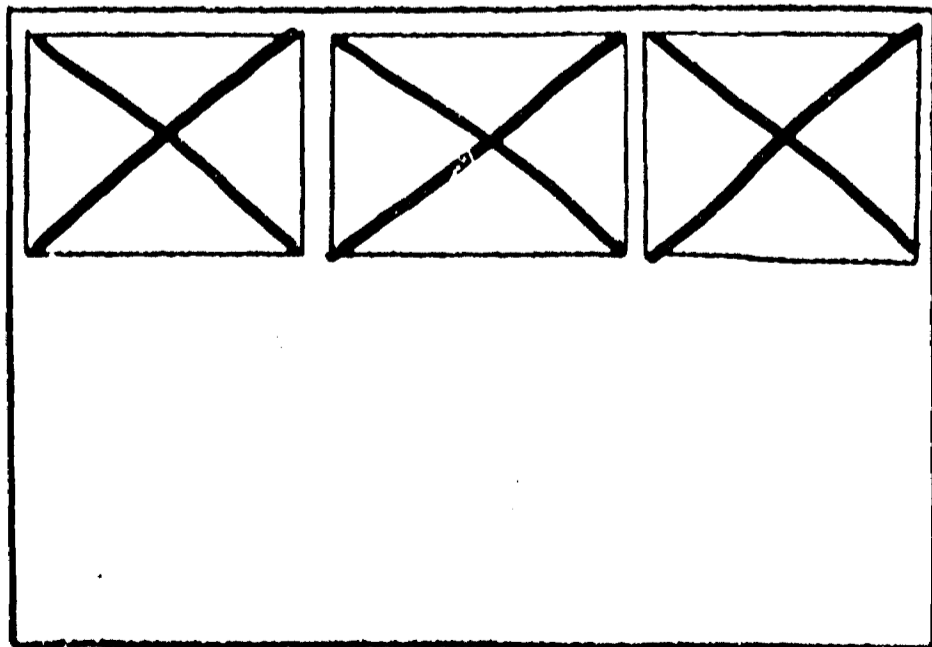
SCALE : 1" = 20 MILES.

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS
PORTER-0022-#1

#2

#3

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



TOJARO HOLDINGS LIMITED

GENERAL GEOLOGY

OF
PORTER TOWNSHIP PROPERTY
SUDBURY MINING DIVISION, ONT.

A. C. A. HOWE INTERNATIONAL LTD

Scale: 1" to 1000 ft.

INTRUSIVE ROCKS

5a Diorite, Gabbro

SEDIMENTARY GROUP

4a Greywacke, argillite, siltstone

4c Sericite Schist

4d Argillaceous limestone

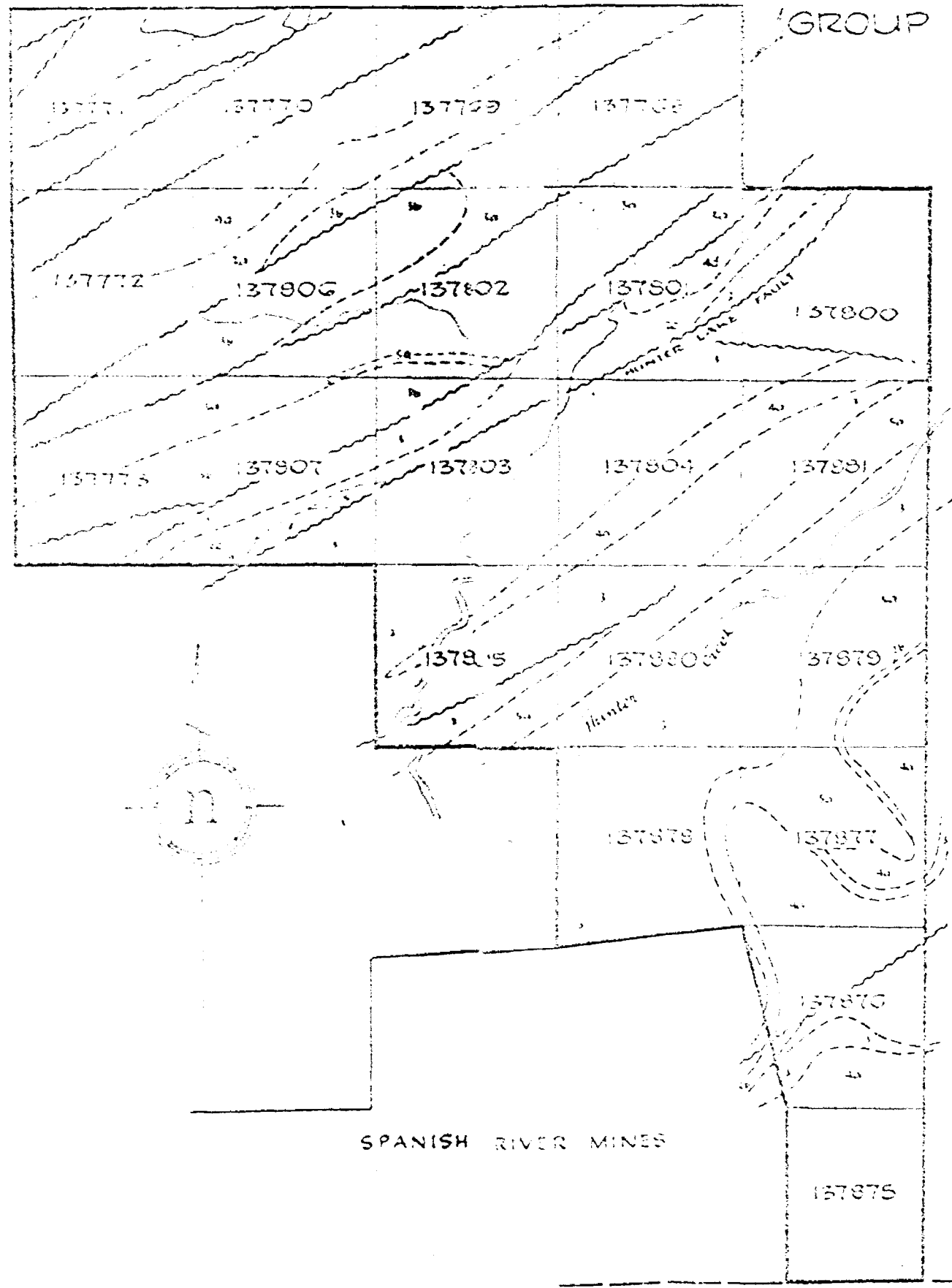
5 Coarse to medium grained felspathic quartzite

2c Polymictic boulder conglomerate

VOLCANIC GROUP

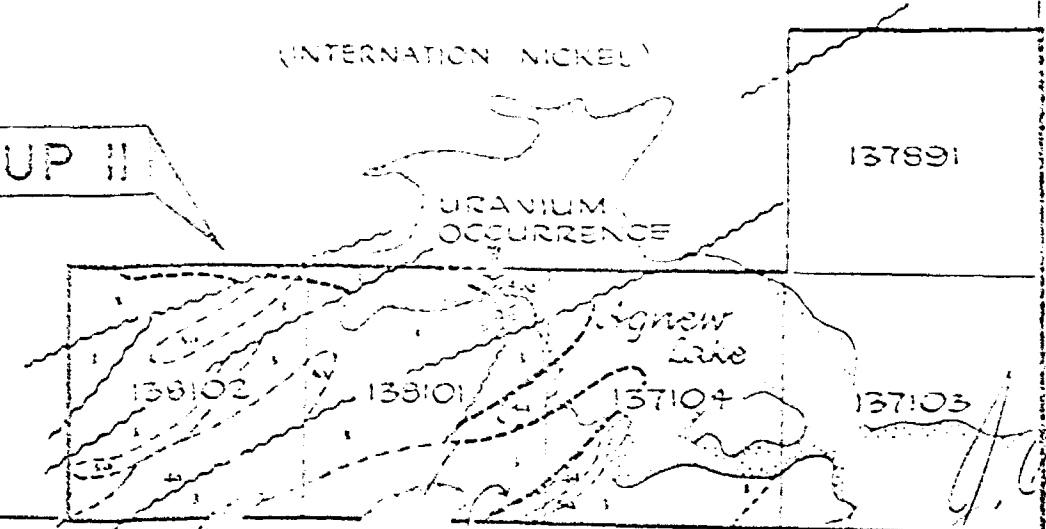
4b Para-amphibolite

Interpreted trace of uranium bearing bed



KERR-ADDISON

GROUP II



Interpreted trace of uranium bearing bed

SPANISH RIVER MINES

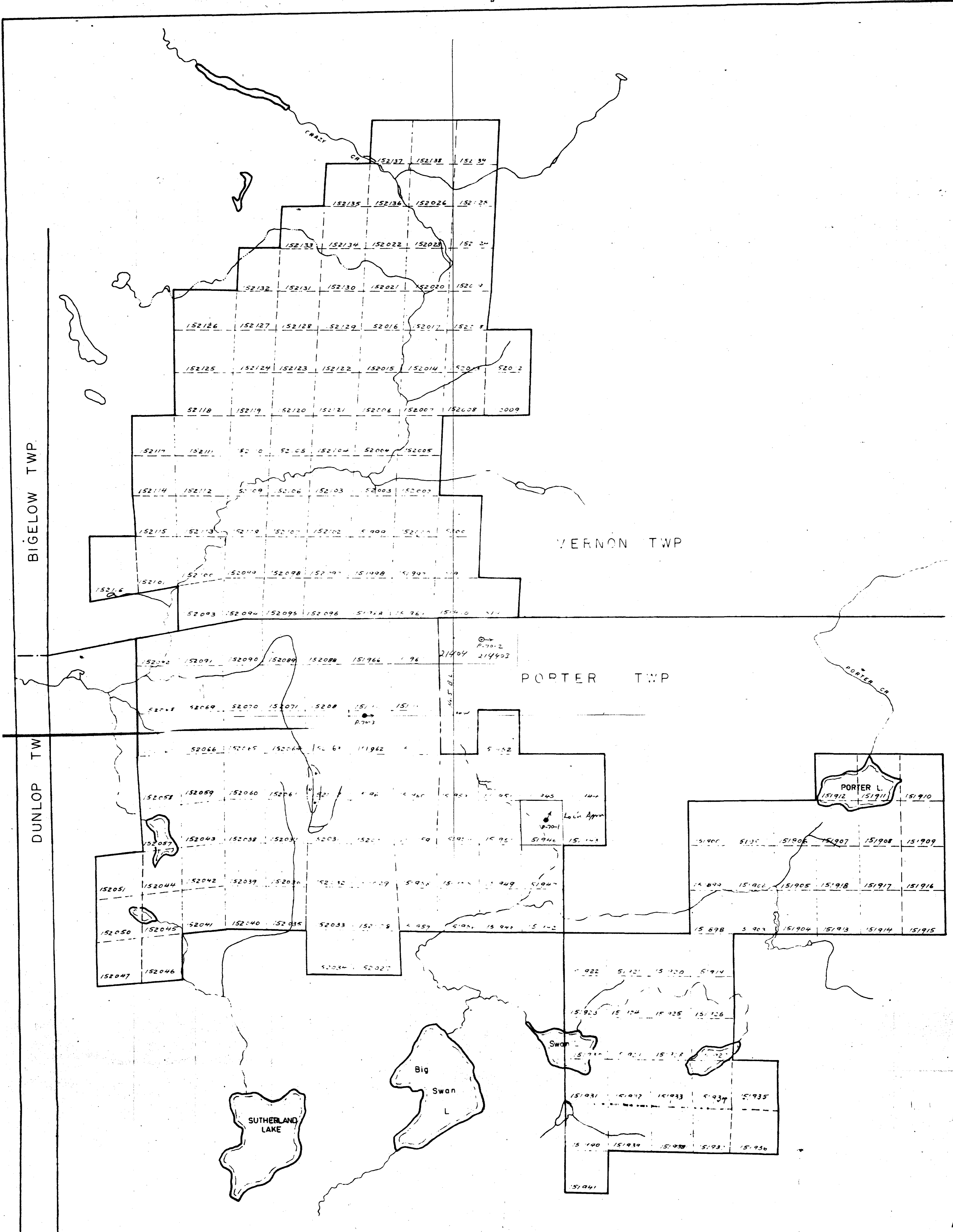
(INTERNATIONAL NICKEL)

URANIUM OCCURRENCE

Wigney Lake

SALDWIN TOWNSHIP

BY YMAN TOWNSHIP



BIGELOW TWP

VERNON TWP

PORTER TWP

DUNLOP TWP

PLATE I

CANADIAN JOHNS-MANVILLE CO., LIMITED

VERNON - PORTER AREA, ONTARIO

AIRBORNE GEOPHYSICAL SURVEY

CLAIM MAP

SCALE: 1" = 1320' APPROX.

SURVEY BY SEIGEL ASSOCIATES LTD.

632517



200

HW-7 1988 68-115-0

PORTER-0022

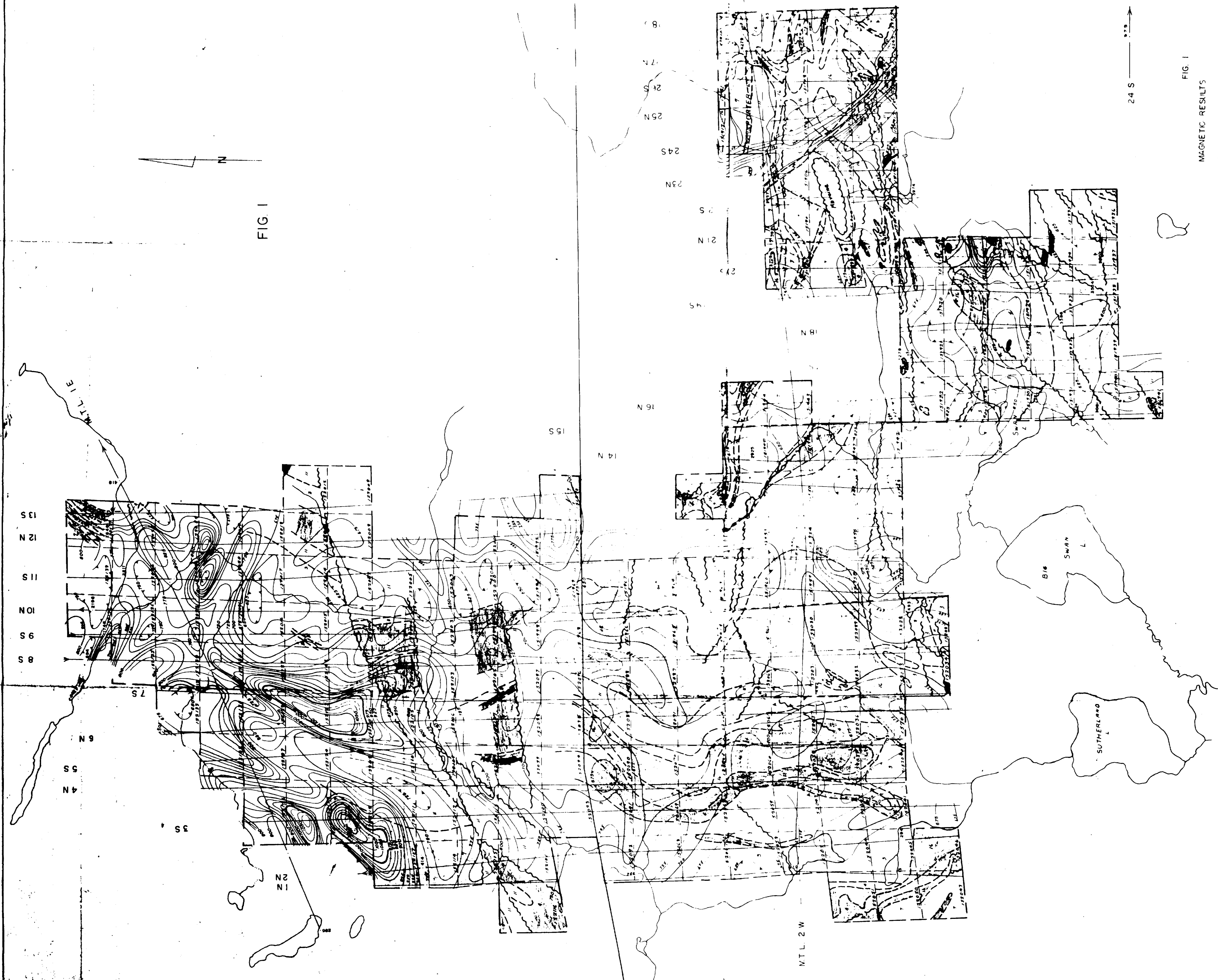


FIG. 1

FIG. 1
 MAGNETIC RESULTS
 1000 GAMMA ISOMAGNETIC CONTOUR INTERVAL
 100
 25
 BASE VALUE 59000 GAMMAS

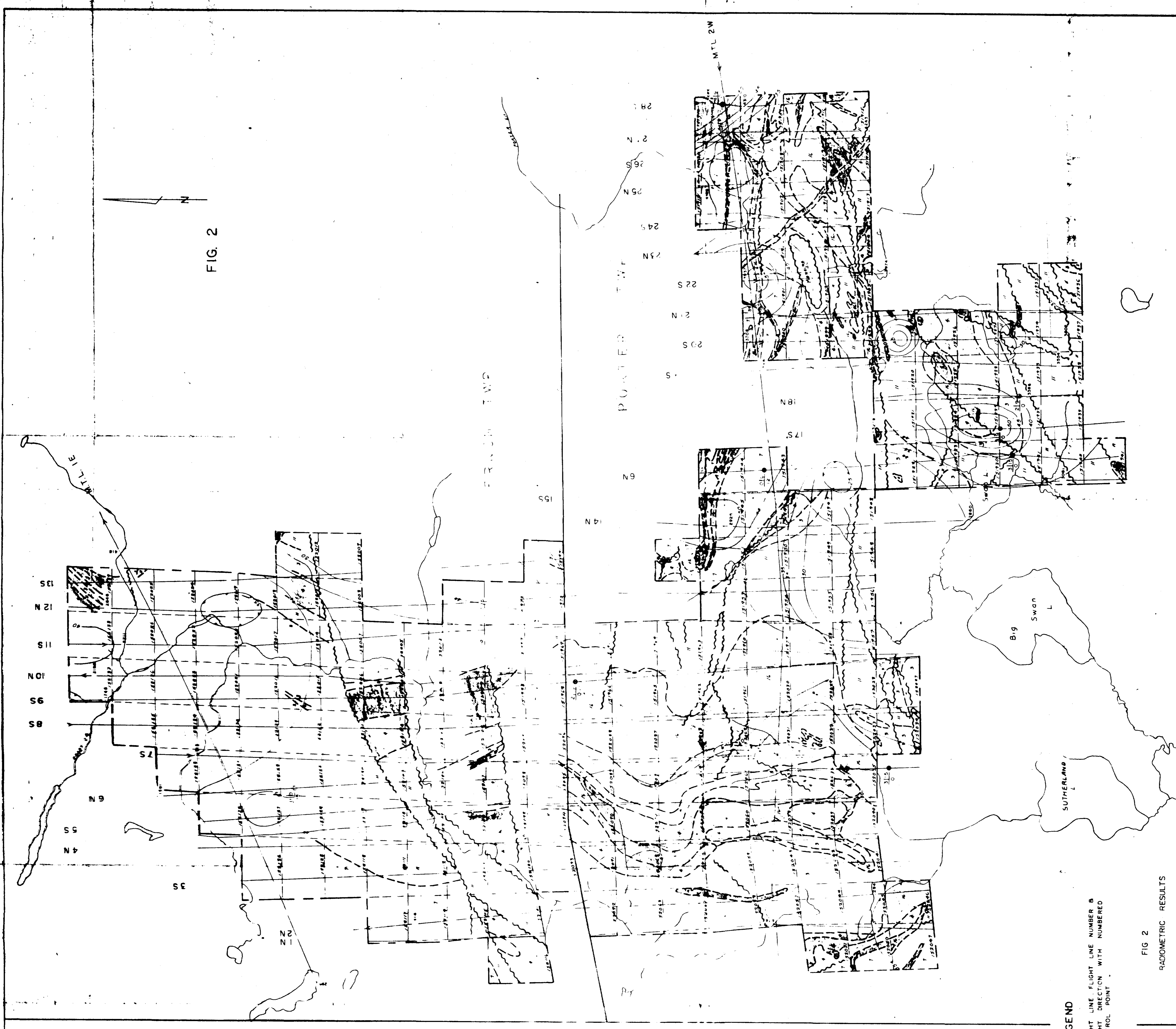


FIG. 2

FIG. 2
 RADIOMETRIC RESULTS
 5 COUNTS PER SECOND BROAD BAND
 RADIOMETRIC CONTOUR INTERVAL
 ANOMALY DISTRIBUTION
 TYPICAL 2%
 UNIFORM 1%
 VALUES IN COUNTS PER SECOND ABOVE BACKGROUND

LEGEND
 24 S → 21 W
 FLIGHT LINE FLIGHT NUMBER & FLIGHT DIRECTION WITH NUMBERED CONTROL POINT

PLATE 3

CANADIAN JOHNS-MANVILLE CO., LIMITED
 VERNON-PORTER AREA, ONTARIO
 AIRBORNE GEOPHYSICAL SURVEYS
 SCALE: 1" = 1320' APPROX.
 SURVEY BY SEIGEL ASSOCIATES LTD.
 FLOWN & COMPILED OCT. - NOV. 1968
 MEAN FLIGHT ALTITUDE 200'
 MEAN FLIGHT LINE SPACING 1000'

Partel-0012-#2
 63-2517
 68-115-03



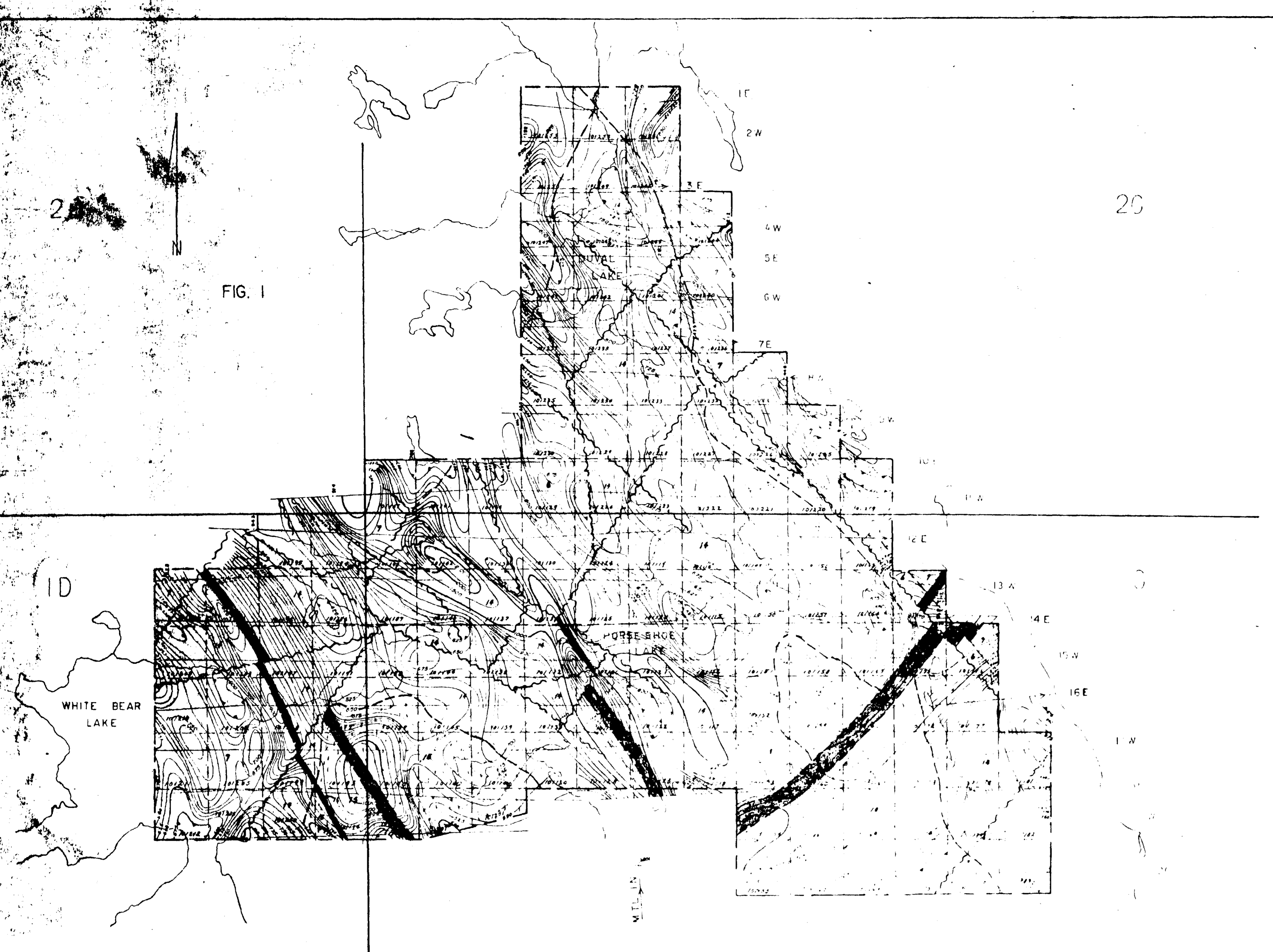


FIG. 1

25

LEGEND:
 FLIGHT LINE
 DIRECTIONS WITH NUMBERS
 CENTER POINT

FIG. 1
 MAGNETIC RESULTS
 1000 GAMMA BOMAGNETIC CONTOUR INTERVAL
 100
 25
 BASE VALUE 59,000 GAMMAS

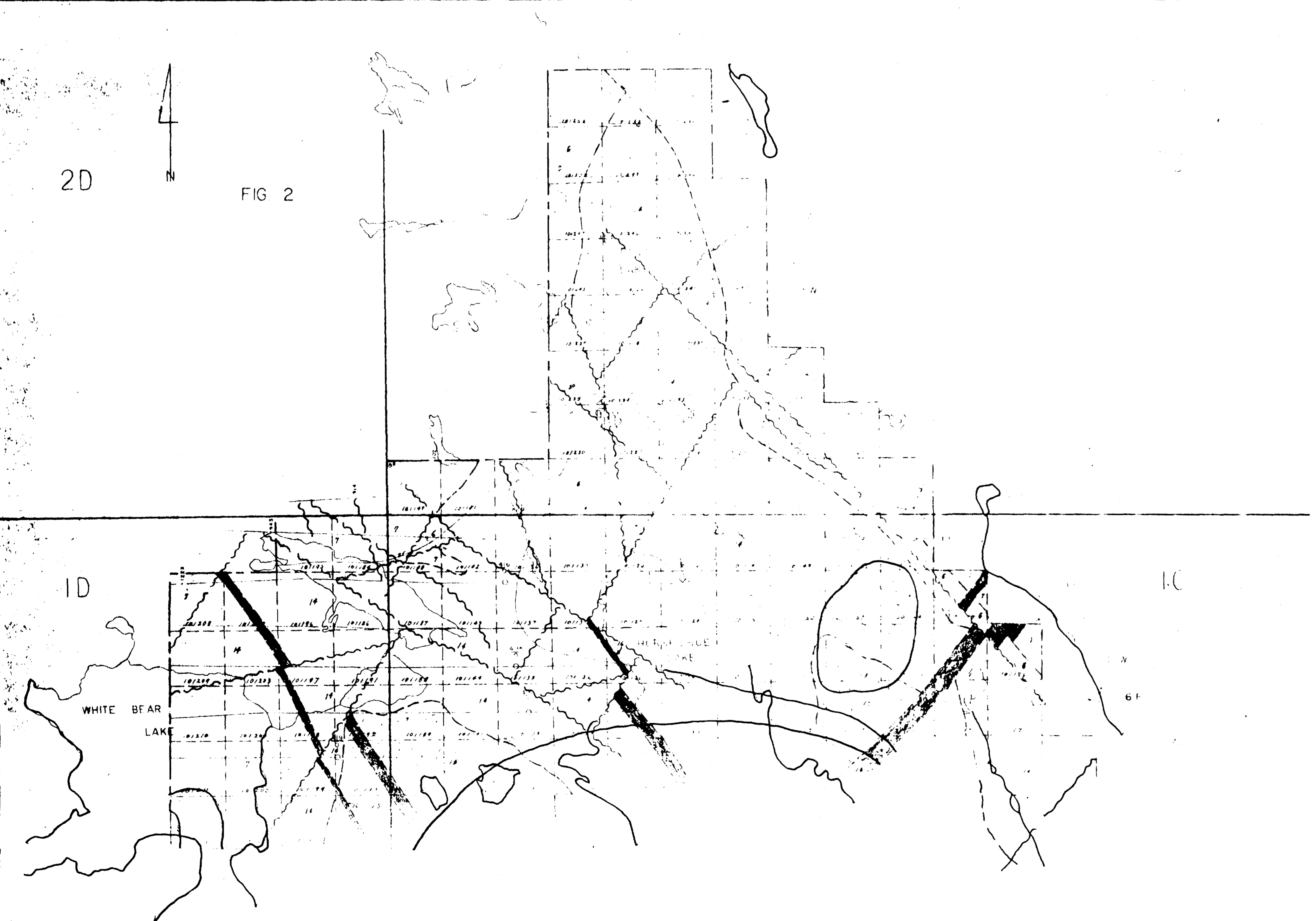


FIG. 2

20

RAD RESULTS
 6 COUNTS PER 2nd broad band
 RADIOLOGIC CONTOUR INTERVAL
 ABNORMAL DISTRIBUTION
 TRENCH
 VELOCITY
 VALUES IN COUNTS PER SECOND
 ABOVE BACKGROUND
 ABNORMAL EXTENT

Kirkpatrick Lake Area
 Post-Huronian Rocks
 16 Diabasic Gabbro
 15 Hornbl. Quartzite
 14 Gneiss - undifferentiated
 Granite and granite gneiss
 Amphibolite gneiss

PLATE 4
 CANADIAN JOHNS-MANVILLE CO., LIMITED
 KIRKPATRICK LAKE AREA, ONTARIO
 GEOPHYSICAL SURVEYS
 1" = 1320'

NOV 1968



PORTER-0022 #3