



31M13SE0019 2.8846 INGRAM

010

Assessment Work Report  
on the Geophysical Surveys  
for the Ingram Township Project

Claim Nos. 821614  
821615  
821616  
821617  
822222  
822223  
822224

Date: January 19, 1986

Submitted by: David Marek  
Agnico-Eagle Mines Ltd.  
Cobalt, Ontario

*David Marek  
Feb 22 1986*

**RECEIVED**

FEB 03 1986

**MINING LANDS SECTION**

### Introduction:

This report summarizes the data collected from an intergrated geophysical survey which was completed on seven claims in Ingram Township, during the 1985 field season. The seven claims had previously been owned by Foster Marshall and optioned to Agnico-Eagle, they came open in November of 1984, due to lack of assessment work and were subsequently re-staked by Foster Marshall and re-optioned by Agnico-Eagle Mines Ltd. Therefore the author has completed a geochemical and geological survey on the previous claims and has just finished a geophysical survey on the re-staked claims using the old grid system.

### Property Description:

The geophysical survey was completed from August 30 to September 24, 1985, on claims 821614 to 821617 inclusive and 822222 to 822224 inclusive, of Ingram Township, Kirkland Lake District. These claims were staked by Foster Marshall, R.R.#1 Englehart, Ontario, POJ 1H0 and optioned by Agnico-Eagle Mines Ltd., Box 140, Cobalt, Ontario, POJ 1C0.

### Location and Access:

The claims mentioned cover partly the south half of lots 9, 10, and 11 of concession VI in Ingram Township.

Access can be made by taking highway 569 east of Tomstown to the north-south concession roads. The area is covered by partial farm land and a mature pine, birch, spruce, and poplar forest with considerable undergrowth. There are several concession roads and old bush trails which provided good accessibility to the interior of the claims.

Procedure:

An integrated magnetometer and VLF survey was carried out over seven unpatented claims that were staked in November of 1984. The claims previous had been optioned to Agnico on which a geological and geochemical survey had been completed. Therefore a grid had previously been cut. The 1985 field season began with re-cutting the old grid and adding lines at every 200 feet. This was completed at the same time as the geophysical survey was done. The geophysical data was collected on a Scintrex IGS-2/MP-4/VLF-4 console using a MP-3 console as a base station. The IGS -2 measured the total field parameter at an accuracy of 0.1 nannotelsa. Cutler, Maine at 24.0 KHz was used for the VLF survey, with both magnetic and VLF readings being taken every 50 feet at lines 200 feet apart. A total of 1300 readings were taken with approximately 185 readings per claim. Control was established by using the MP-3 base station set at an arbitrary base field of 58000 gammas, with the base station set to automatically readjust over the day. This magnetic data was corrected through the base station every day. The VLF/magnetics data was filed on computer disk. The maps were produced by a computer programmed plotter owned and operated by Dataplotting Services Inc., Don Mills, Ontario. With the corrected magnetic data, they produced a total field contour mag map covering the seven claims with contour intervals at 10 gammas. They also produced a Fraser filtered VLF map, contouring the In-phase at 5% intervals and profiling the Quadrature along the lines with a vertical scale 1cm = 10%. Both maps are on a scale of 1" = 200' as is the base geology map.

## Discussion and Results:

Previous field work by Agnico-Eagle and other exploration companies have established the existence of several veins, some barren and some bearing good gold and silver assays. These veins are scattered over this claim group but all exist in the diabase. Previous geophysical work, a magnetic and gradiometer survey, was carried out in 1984 by Agnico-Eagle and although it picked out the diabase contact it seemed to be masked by the glacial debris over the western area of the claims. Therefore it was decided to carry out a more detailed and very accurate mag/VLF survey over the eastern claims where there was a greater percentage of outcrop and exposed veins.

The total field survey once corrected and contoured provided an accurate geological map showing irregular contours over the diabase with the mag contours being relatively uniform over the Huronian sediments. Therefore the contact between the Huronian and Nippissing diabase is easily picked out through mag and correlating field work. The mag does get masked with larger depths of overburden as found in the southern sections of the claim group. But this is picked out by the geological field work. The mag does not show any particular high conductor, only sporadic values due to old drill casing left in previously drilled holes.

The VLF survey was influenced by the large amount of man-made grounded structures, such as hydro wires and grounded fences. A east-west conductor in the middle of the claims is actually a grounded fence. However conductors were found on the northwestern sections of the claims and minor conductors to the north of the claims.. This conductor corresponds to known vein fractures which have been drilled and found only in the diabase. It is the conductor found on lines 40+00 W, 38+00 W and 36+00 W

which was not previously known and will have to be investigated further.

Recommendations:

Any further exploration of this claim group will probably be done by diamond drilling. With known veins exposed on surface and with conduct picked up by geophysics, a patterned drill program would be the next step. The conductors and veins should be tested by drilling below the diabase and possibly the Huronian/Keewatin contact. Access via old bush roads and the concession roads is good and a good water supply lies to the east (Mallard Lake), along with numerous isolated wet swamps. With this new information from drilling further geophysics may be warranted.

Appendix A:

Geophysical Technical Data:

Number of Stations: 1300  
Number of readings: 1300  
Readings/claim: 185  
Station interval: 50 ft.  
Line spacing: 200 ft.  
Contour Interval: 10 gammas (total field)  
5 % (VLF IP)  
Profile scale: 1cm = 10% (VLF Q)

Intergrated Survey: MAG/VLF

Instrument: IGS-2/MP-4/VLF-4 by Scintrex  
Scale constant/accuracy: 0.1 nannotelsa  
Diurnal correction method: Via base station MP-3  
VLF frequency: Cutler, Maine 24.0 KHz

CERTIFICATE

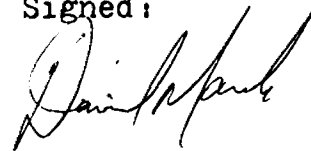
I, David E. Marek of R.R. #1, New Liskeard, Ontario, hereby certify that:

- 1) I am and have been employed since March 1983 as a geologist by Agnico-Eagle mines Ltd., Box 140, Cobalt, Ontario.
- 2) I am a graduate of Queen's University, Kingston, Ontario, with a Bachelor of Science (1982) degree in geological engineering.
- 3) I am a member of the Canadian Institute of Mining and Metallurgy.
- 4) That the information in this report and on the following maps is accurate and correct.

Dated: January 19, 1986

Place: New Liskeard, Ontario

Signed:









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

475/85

28846

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

Jan 22/86

**Mining Act**

Type of Survey(s) <b>Geophysical</b>		Township or Area <b>Ingram Twp</b>	
Claim Holder(s) <b>Foster Marshall</b>		Prospector's Licence No. <b>B 23438</b>	
Address <b>RR #1 Englehart Ont POJ 1H0</b>			
Survey Company <b>Agnico-Eagle Mines Ltd.</b>	Date of Survey (from & to) <b>30 08 85 24 09 85</b>		Total Miles of line Cut <b>11 miles</b>
Name and Address of Author (of Geo. Technical report) <b>David Marek Agnico-Eagle Mines Ltd. Box 140 Cobalt Ont P55 1C0</b>			

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
		For first survey: Enter 40 days. (This includes line cutting)
For each additional survey: using the same grid: Enter 20 days (for each)	- Magnetometer	40
	- Radiometric	
	- Other	
	Geological	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Geological	
	Geochemical	
	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	821614				
	821615				
	821616				
	821617				
	822222				
	822223				
	822224				

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DEC 1 1985  
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  ÷ 15 = Total Days Credits

Instructions  
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **7**

For Office Use Only

Total Days Cr. Recorded **420**

Date Recorded **DEC 3 1985**

Date Approved as Recorded **76.2.21**

Mining Recorder *[Signature]*

Mining Inspector *[Signature]*

Date **Nov 25**

Recorded Holder or Agent (Signature) *[Signature]*

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying  
**David Marek 40 Agnico-Eagle Mines Ltd Box 140 Cobalt Ont P55 1C0**

Date Certified **Nov 25/85**

Certified by (Signature) *[Signature]*

February 14, 1986

File: 2.8846

Foster Marshall  
R.R.#1  
Englehart, Ontario  
POJ 1H0

Dear Sir:

RE: Geophysical (Magnetometer & Electromagnetic)  
Surveys submitted on Mining Claims L 821614,  
et al, in Ingram Township

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In order to complete the above-mentioned surveys, please submit (in duplicate) a VLF plan showing raw data readings. When submitting this plan, please quote file 2.8846.

For further information, please contact Susan Hurst at (416)965-4888.

Yours sincerely,

S.E. Yundt, Director  
Land Management Branch

Mining Lands Section  
Whitney Block, 6th Floor  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Telephone: (416)965-4888

SH/mc

cc: Mining Recorder  
Kirkland Lake, Ontario  
#475/86

D. Marek  
Cobalt, Ontario

January 27, 1986

Report of Work #475

Foster Marshall  
R.R.#1  
Englehart, Ontario  
POJ 1H0

Dear Sir:

RE: Mining Claims L 821614, et al,  
in the Township of Ingram

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I have not received the reports and maps (in duplicate) for Geophysical (Electromagnetic & Magnetometer) Surveys on the above-mentioned claims.

As the assessment "Report of Work" was recorded by the Mining Recorder on December 3, 1985 the 60 day period allowed by Section 77 of the Mining Act for the submission of the technical reports and maps to this office will expire on February 1, 1986.

If the material is not submitted to this office by February 1, 1986 I will have no alternative but to instruct the Mining Recorder to delete the work credits from the claim record sheets.

For further information, please contact Mr. Arthur Barr at (416)965-4888.

Yours sincerely,

S.E. Yundt, Director  
Land Management Branch

Mining Lands Section  
Whitney Block, 6th Floor  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Telephone: (416) 965-4888

AB/mc  
cc: David Marek  
Cobalt, Ontario  
Encl.

Mining Recorder  
Kirkland Lake, Ontario

THE TOWNSHIP OF  
OF  
**INGRAM**

DISTRICT OF TIMISKAMING  
LARDER LAKE MINING  
DIVISION

SCALE: 1 INCH TO 40 CHAINS

**LEGEND**

- PATENTED LAND ..... (P)
- CROWN LAND SALE ..... C.S. (C)
- LOCATED LAND ..... Loc.
- LICENSE OF OCCUPATION ..... L.O.
- IMPROVED ROADS ..... (Double line)
- ROADS ..... (Single line)
- RESERVED FOR GRAVEL ..... RES. (L)
- LEASES ..... (L)
- MINING RIGHTS ONLY ..... M.R.O.
- SURFACE RIGHTS ONLY ..... S.R.O.
- CANCELLED ..... C.

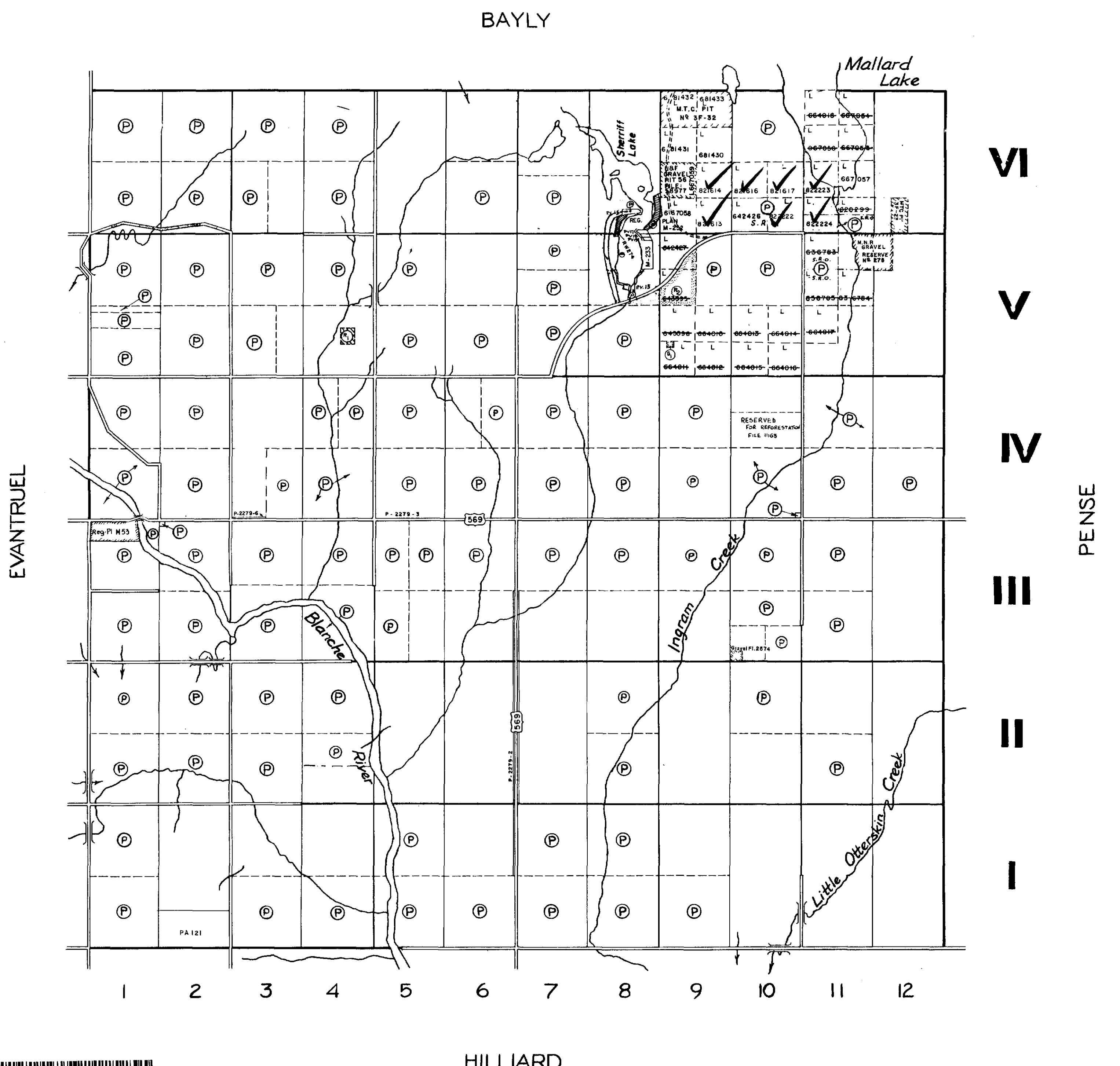
**NOTES**

400' Surface Rights Reservation around all Lakes and Rivers.

Areas withdrawn from staking under Section 43 of the Mining Act. (R.S.O. 1970).

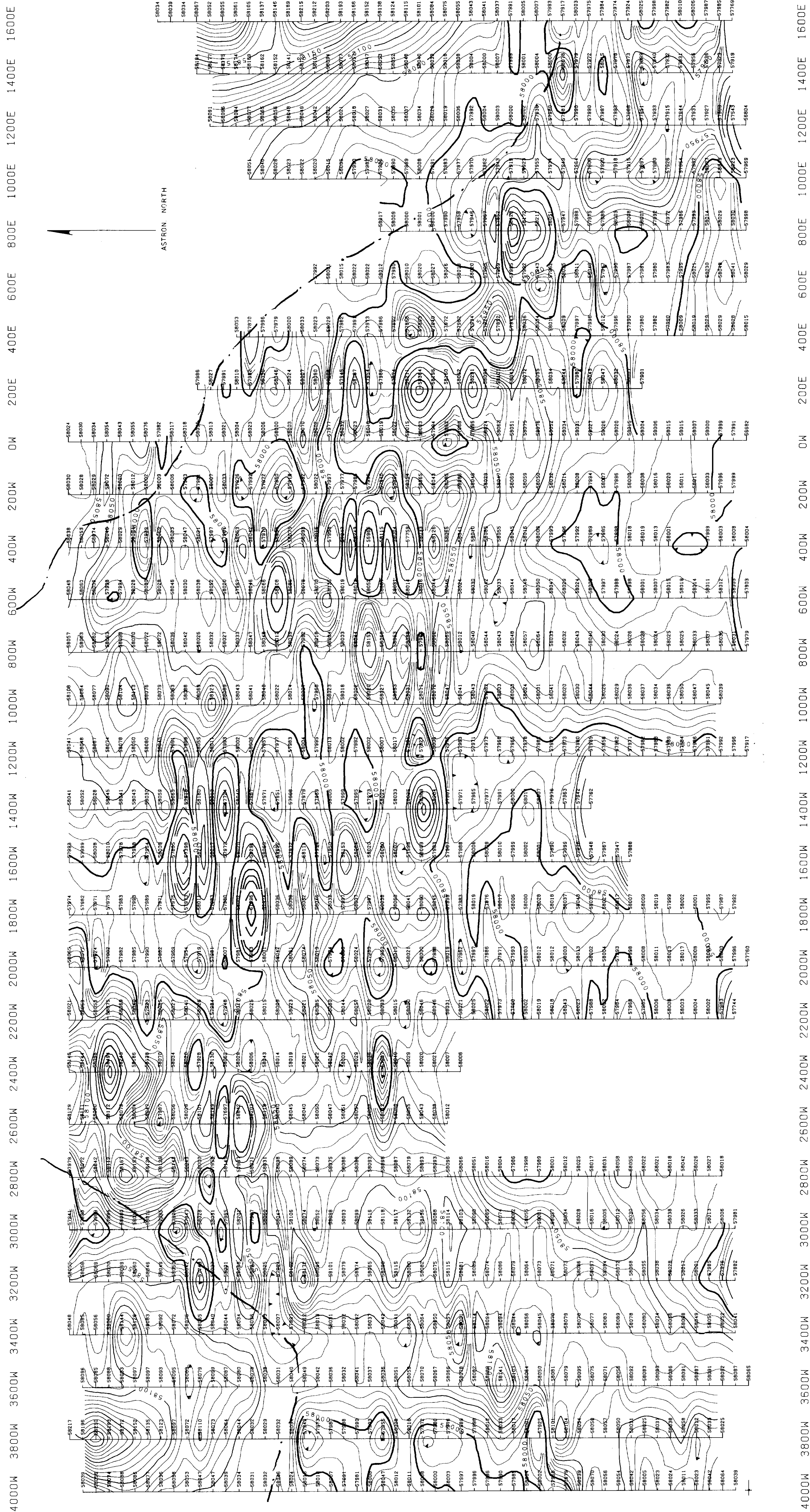
Order No.	File	Date	Disposition
NR W.18/79	23162	1970	S.R.O.
		20/2/79	S.R.O.

**SAND and GRAVEL**  
MNR GRAVEL RESERVE 3625





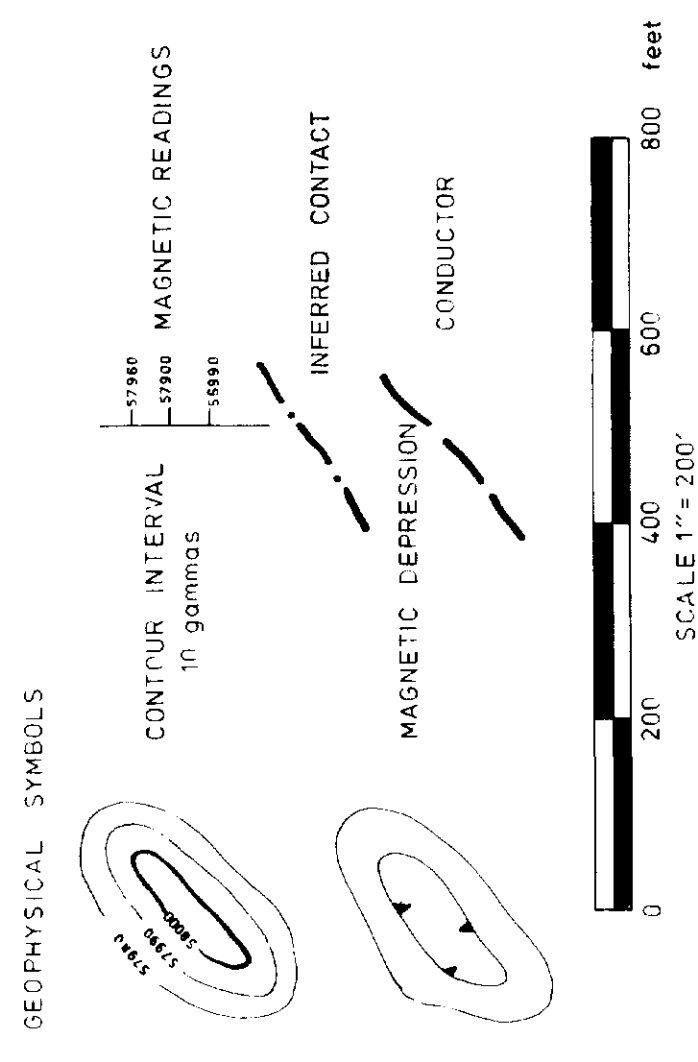




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AGNICO - EAGLE MINES LTD.  
INGRAM TWP. PROJECT

LEGEND



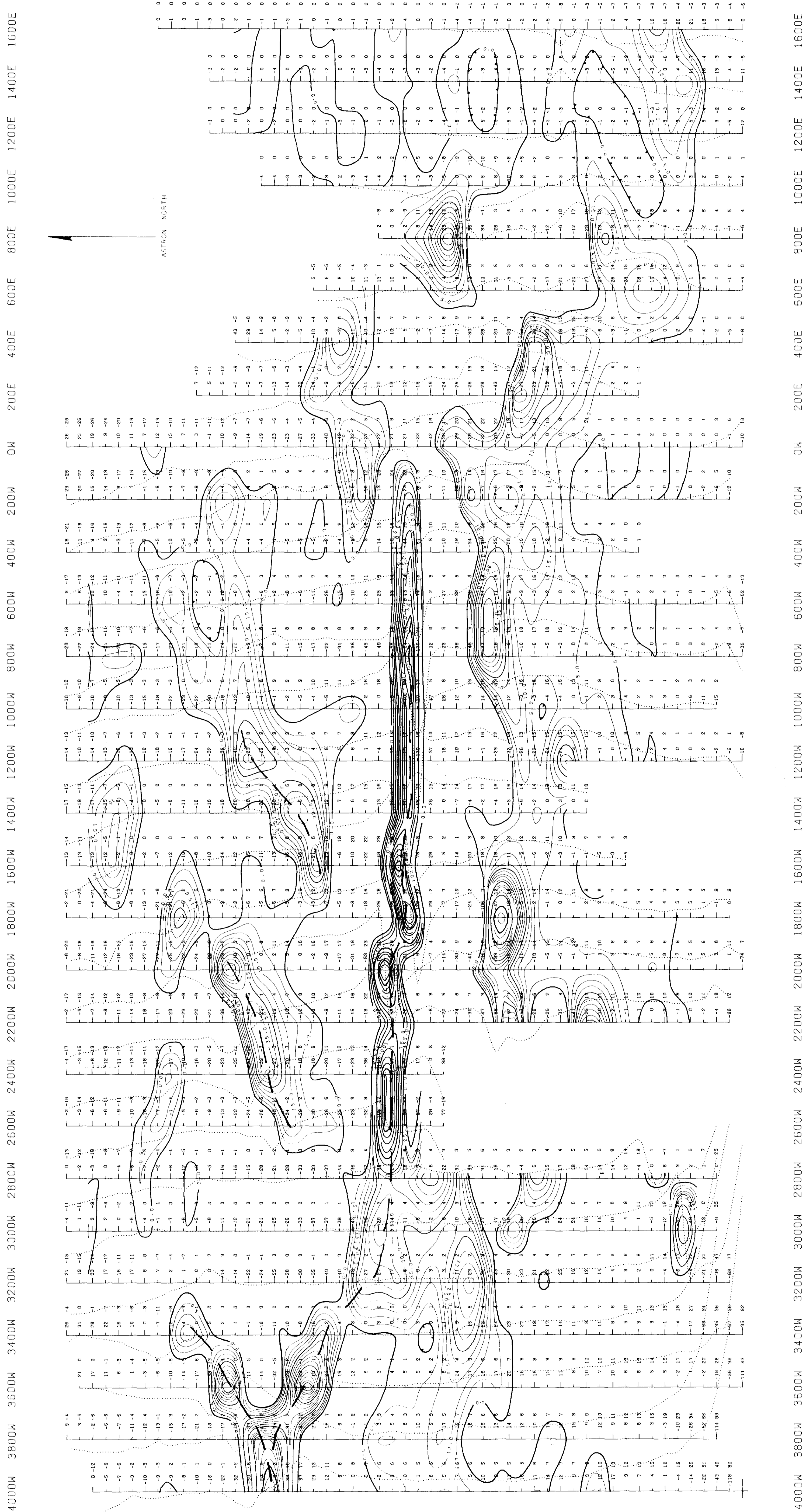
INGRAM TWP. PROJECT  
TOTAL FIELD MAGNETIC CONTOUR MAP



3 114 284611 3 8846 INGRAM

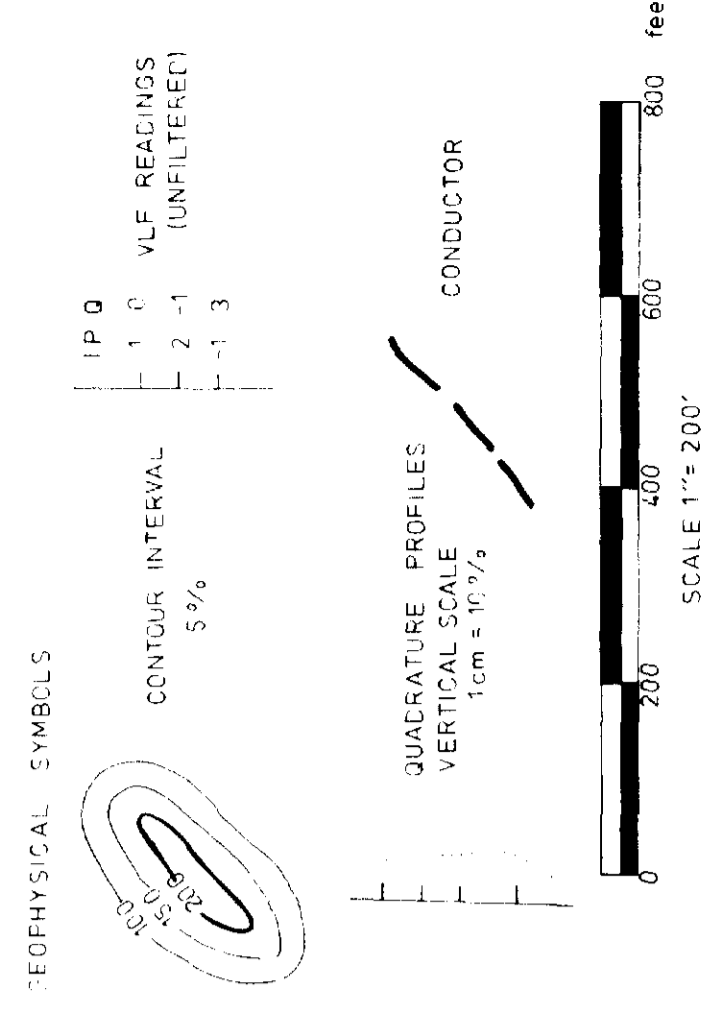
DRAWN BY:  
DATAPLOTTING SERVICES  
Corynne Dyke: May 30 & Sept 24, 1985  
Author: Don Macdonald  
DATED:  
DEC 10/85





AGNICO-EAGLE MINES LTD.  
INGRAM TWP. PROJECT

LEGEND



INGRAM TWP. PROJECT  
VLF CONTOUR MAP 24.0 KHZ  
FRASER FILTERED



DRAWN BY: *[Signature]*  
DATE: DEC 10/85  
COVERING DATE: Aug 30 to Sept 04, 1985  
Author: *[Signature]*