



41009NW0080 2.11838 FAWN

010

MINGOLD Resources INC.

REPORT ON A VLF ELECTROMAGNETIC SURVEY AND
MAGNETIC SURVEY ON THE GARNET CLAIMS
P10105018,-19,-22,-23,-24,-25,-27,-28
GARNET/FAWN TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

BY RAYMOND DAVIES

8 April 1988

Toronto, Ontario

RECEIVED

APR 15 1988

MINING DIVISION

File:l-Garnet
E-Monopros



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REPORT ON A VLF ELECTROMAGNETIC SURVEY AND MAGNETIC SURVEY
ON THE GARNET CLAIMS
GARNET/FAWN TOWNSHIPS, PORCUPINE MINING DIVISION, ONTARIO

BY Raymond Davies

8 April 1988

Mingold Resources Inc. carried out a geophysical exploration program in the fall of 1987 on eight of the Garnet group of 27 claims in Garnet and Fawn townships in the Porcupine mining division of Ontario.

The claims were located to cover the probable head of a gold particle train in glacial till which was thought to be located on the property. A cut-off point at the head or on the up-ice end of the gold particle train has not been established but if it lies on the property, it will provide a diamond drill target. The geophysical surveys will assist in the structural interpretation of the geology.

LOCATION AND ACCESS

The property lies 128 kilometers southwest of the town of Timmins. It lies on either side of a north-south logging road and straddles the boundary between Garnet and Fawn townships. Sultan, a village on the C.P.R. railway, is the nearest settlement and is 29 road kilometers to the west southwest.

File:1-Garnet.1

E-Monopros

PROPERTY AND OWNERSHIP

The property consists of the following 27 contiguous mining claims, 24 of which lie in the southeast part of Garnet township and 3 in the adjoining part of Fawn township.

CLAIM	RECORDED	CLAIM	RECORDED	CLAIM	RECORDED
P1015006	Oct. 29, 87	P1015016	Oct. 29, 87	P1015026	Oct. 29, 87
P1015007	"	P1015017	"	P1015027*	"
P1015008	"	P1015018*	"	P1015028*	"
P1015009	"	P1015019*	"	P1015029	"
P1015010	"	P1015020	"	P1033659	March 22, 88
P1015011	"	P1015021	"	P1033660	"
P1015012	"	P1015022*	"	P1033661	"
P1015013	"	P1015023*	"		
P1015014	"	P1015024*	"		
P1015015	"	P1015025*	"		

The location of the property is shown in figure 1. The claims were staked on behalf of Mingold Resources Inc. (Licence T 4617), P.O. Box 28, Toronto-Dominion Centre, Toronto, Ontario, M5K 1B8.
(* Claims on which geophysical survey was carried out).

PERSONNEL

M. Pestonji Nov. 26,27,28,29,30; Dec. 3,4,5,6
A. C. Hunter Nov, 26,27,28,29,30; Dec. 1,2,3,4,5

SCALE: 1 INCH 40 CHAINS



ACRES

40

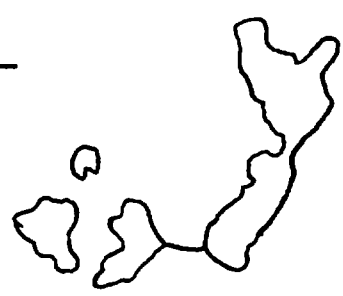
HECTARES

16

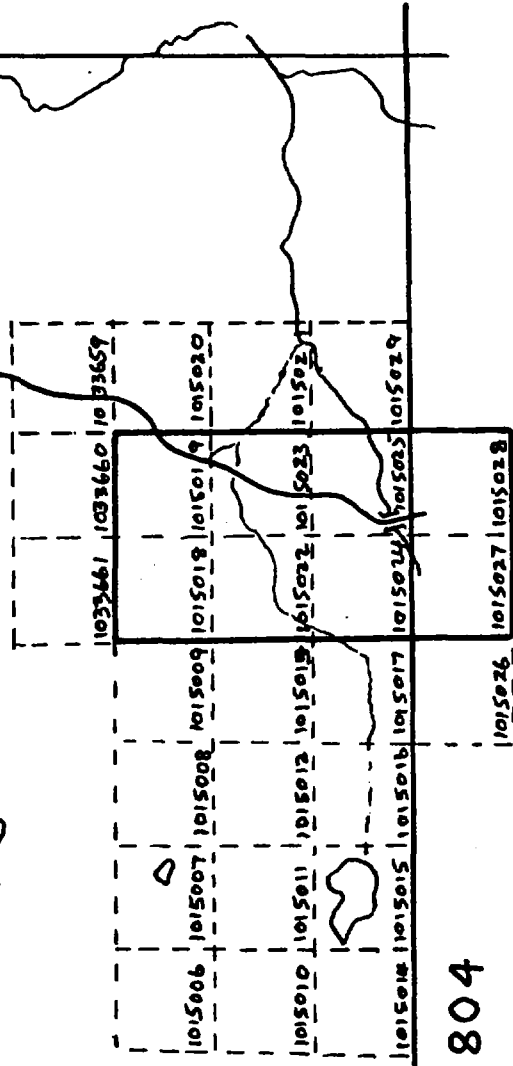
TOWNSHIP

GARNET

FAWN TR. M 804



BENTON TR. M 659



SCALE: SEE ABOVE
 DATE: 8 APRIL 1988
 GROUP: GARNET

LOOKING: PLAN
 DRAWN BY: R DAVIES
 APPROVED BY:

MINGOLD RESOURCES INC.
 FIGURE 1

PROJECT: GARNET
 PROPERTY LOCATION SHOWING
 CLAIMS COVERED BY SURVEY

GEOLOGY

Andesites and basalts with some tuffs and agglomerates underlie most of the property which is about 1/2 km north of the contact with granite and granite gneiss. Iron formation and graphitic sediments were encountered in a diamond drill hole located near the north boundary of the claims. Gabbro occurs along the south boundary of the claims.

A fair amount of outcrop occurs on the property but between outcrops and north of the claims lacustrine clays and silts make prospecting difficult. Ice flow was from the north to north northeast.

PREVIOUS WORK

Garnet township was mapped by V.B. Meen (1944) at a scale of 1" to 1 mile and by Siragusa at a scale of 1" to 1/4 mile in 1980 and at a scale of 1" to 1/2 mile in 1987.

Quaternary map S465 of the Ontario Department of Lands and Forests (1965) shows the property to be covered by silty to sandy till. Eskers on the west side of Garnet township run north-south and striations trend 185⁰ to 200⁰.

An ODM-GSC airborne magnetic and input electromagnetic survey published in 1982 shows a magnetic high on the property with a number of related electromagnetic anomalies.

Government assessment work files show three items of interest that cover the zone that may be the source of the gold anomalies in the overburden (figure 2):

- 1) In 1936 Erie Canadian Mines Limited (subsidiary of Sylvanite G.M. Limited) submitted a report on their "Garnet Gold Syndicate". Summary description states "Keewatin greenstones intruded by quartz and feldspar porphyry dykes and masses. Main vein consists of quartz stringers and veins in a 32" wide shear zone off the north nose of a syenite porphyry mass. Strike N6⁰W, dip nearly vertical. No systematic sampling."
- 2) In 1968 The International Nickel Co. of Canada drilled a hole that cut a variety of greenstones and argillite. No assays were given.
- 3) In 1971 Dome Exploration (Canada) Limited drilled a hole to test an EM anomaly. The hole encountered conductive iron formation and graphitic sediments. One sample starting at the top of the hole ran .005 oz/ton gold over 6.4'.

SCALE: 1 INCH = 40 CHAINS



ACRES

40

HECTARES

16

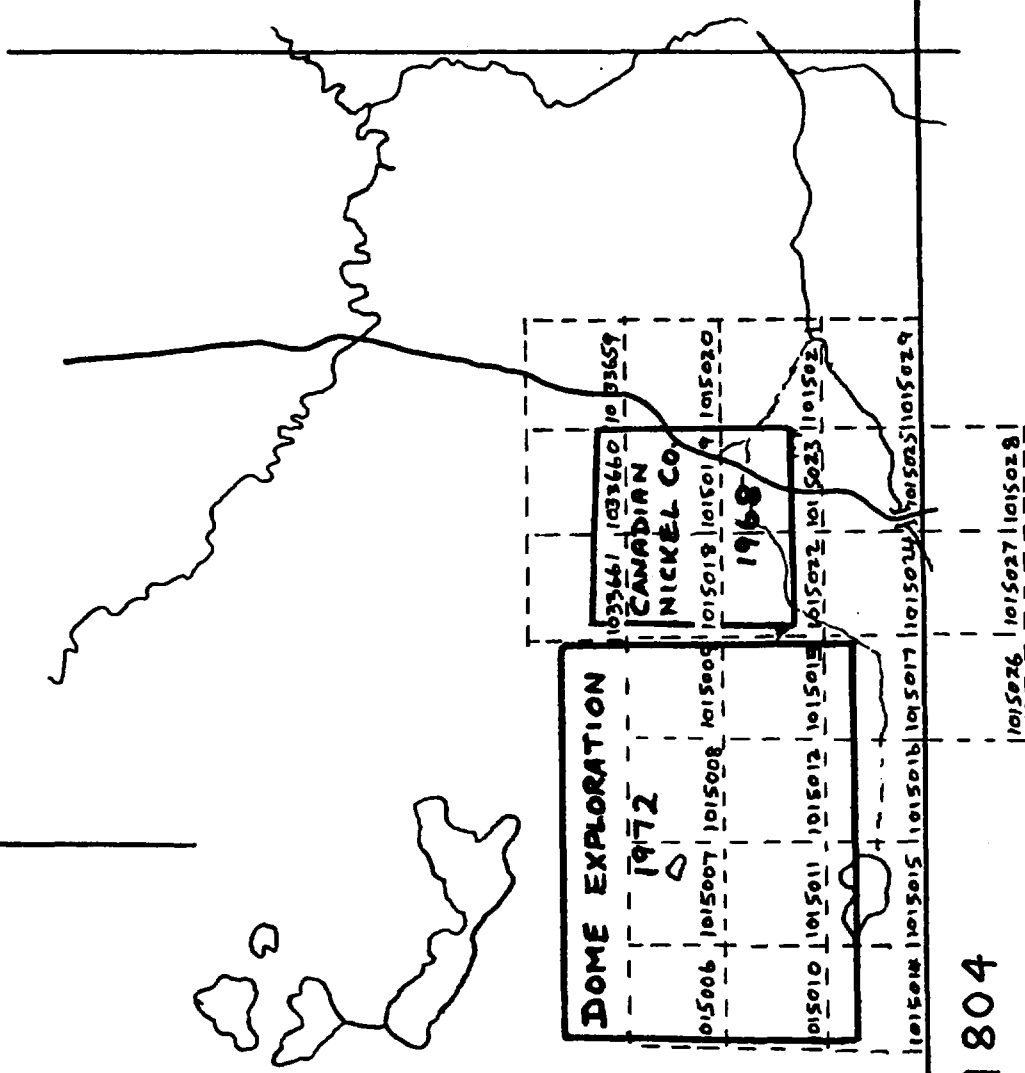
TOWNSHIP

GARNET

SYLVANITE
Gold M. L.
1936

FAWN TP. M 804

BENTON TR M 659



PROJECT: GARNET

LOCATION OF PROPERTIES COVERED
BY REPORTS IN ASSESSMENT FILES

MINGOLD RESOURCES INC.

FIGURE 2

SCALE: SEE ABOVE

DATE: 8 APRIL 1988

GROUP: GARNET

LOOKING: PLAN

DRAWN BY: R DAVIES

APPROVED BY: _____

CURRENT EXPLORATION

A grid of picket lines was cut to provide control for a magnetic survey and a VLF electromagnetic survey that was carried out on 8 of the claims.

LINECUTTING

5.8 miles of line were cut over 8 claims on the property with pickets placed at 100 foot intervals along all lines.

A baseline runs east-west along the township boundary and 6 north-south picket lines were cut at 400-foot intervals.

GROUND MAGNETIC SURVEY

A magnetic survey was carried out on the 6 north-south cut lines spaced 400 feet apart with stations at 100-foot intervals. An EDA OMNI-IV magnetometer was used with a base station. A total of 294 readings were taken. Contoured results are shown on map 1 (in pocket).

Total magnetic variation was 3842 gammas. A 2000 gamma magnetic high with an east-west trend lies 700 feet south and a 2500 gamma magnetic high with a northeast trend lies 1300 feet north of the baseline on line 0+00. A 1400 gamma magnetic high lies on the baseline at line 8+00E. The latter may be related to the high to the southwest but separated by faulting.

GROUND VLF ELECTROMAGNETIC SURVEY

A VLF electromagnetic survey was carried out at 100-foot stations on the six north-south lines spaced 400 feet apart. Transmitter NAA (Cutler, Maine) was used, with all readings recorded facing north. 5.6 Miles of survey were completed and 294 readings taken. Profiles are shown on map 2 (in pocket).

A geonics EM-16 electromagnetic instrument was used for the survey. The instrument is a very low frequency receiver which operates in the 15 to 25 kHz band and makes use of radio signals transmitted by components of a communications network operated by the United States Navy. Signals transmitted from vertical antennae produce concentric horizontal magnetic fields (the primary field) around the antennae. Under the influence of this primary field conductive bodies generate weak secondary fields which are detected by the instrument.

The EM-16 receiver consists of two receiving coils at 90° to each other and the inputs of these coils are used to measure the secondary field. When the instrument is properly oriented, the signal from the vertical coil is minimized by tilting and the percentage of tilt is recorded (in-phase reading). The remaining signal in the other coil is balanced out by a measured percentage of the signal in the other coil (out-of-phase reading), after being shifted by 90° in-phase. Normally this coil is parallel to the primary field.

Coupling of transmitter NAA (Cutler, Maine) with E-W and NW-SE striking conductors while traversing north-south lines was good.

A number of electromagnetic anomalies were detected and are numbered EM-1 to EM-10. Some are good conductors in which the out-of-phase readings either do not vary or vary in the opposite sense to the in-phase readings. These are probably massive sulphide horizons. Others are poor conductors in which both in-phase and out-of-phase readings vary in the same sense. These are probably shear zones.

The anomalies, most of which are east-west striking, are cut and displaced by a north northwest-south southeast striking fault. This fault has an electromagnetic response with characteristics of a shear zone. Anomalies EM-2 and EM-5 which both have northeast-southwest trends lie on the flanks of the two extreme magnetic highs. EM-7 which is a good conductor follows a 500 gamma high trend with a prominent 1500 gamma low on line 4+00 west.

DISCUSSION OF RESULTS

There is no reason to believe at this stage of exploration that the anomalous gold down-ice of the property is related to any particular electromagnetic anomaly on the property. However, the geology is favourable and there are several interesting geophysical targets.

Electrognanetic anomaly

EM-7 appears to be the anomaly tested by the International Nickle Co. of Canada (1968) in which case according to the drill log the conductivity of this anomaly is probably associated with an argillite (perhaps graphitic)

Anomalies EM-1, EM-2, EM-5 and EM-6 are good conductors that apparently have not previously been tested.

RECOMMENDATIONS

Overburden sampling on the property may define an anomalous gold target. Magnetic lows along conductors associated with magnetic highs are already prime geophysical targets for diamond drilling.

File: 1-Garnet.9
E-Monopros

CERTIFICATE

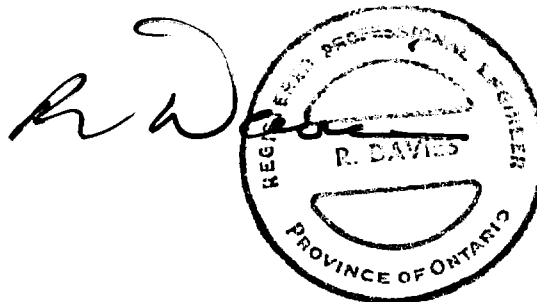
I, Raymond Davies, of the Borough of North York in the Province of Ontario hereby certify:

1. That I am a geologist employed by Mingold Resources Inc.
2. That I am a graduate of McGill University in Montreal and hold a Ph.D. degree in Geology and I am a member of the Association of Professional Engineers of the province of Ontario. I have been practicing my profession for over thirty years.

Dated at Toronto, Ontario this 8th day of April 1988.

8 April 1988

Raymond Davies, Ph.D., P. Eng.



File:l-Garnet.10
E-Monopros

BIBLIOGRAPHY

- Dome Exploration (Canada) Limited 1971 Hole No. 27-6-1, Diamond Drill Logs. Garnet Township; Ontario Assessment Work File, 3p.
- Erie Canadian Mines Limited 1936 Note on Garnet Gold Syndicate Property. Note in the Ontario Assessment Work File, 1p.
- Meen, V.B. 1941 Geology of the Garnet-Cunningham Area, Sudbury District, Ontario; Ontario Department of Mines, Preliminary Report 1941-1.
- Meen, V.B. 1941 Geology of the Cunningham-Garnet Area, Sudbury District, Ontario; Ontario Department of Mines, Annual Report, 1942, Volume 51, Part 7, 26p. with colour map 51F, scale 1 inch to 1 mile.
- OGS 1982 Airborne Electromagnetic Survey and Total Intensity Magnetic Survey, October Lake Sheet, NTS 41 0/9NW, 10NE, 15SE + 16SW, Swayze Area, Sudbury District, Ontario, by Questor Surveys Limited, OGS Geoph Map 80-542, 1/20,000, 79x73cm.
- OGS 1982 Airborne Electromagnetic Survey and Total Intensity Magnetic Survey, Woman River Sheet, NTS 41 0/9 NW + 10 NE, Swayze Area, Sudbury District, Ontario, by Questor Surveys Limited, OGS Geoph Maps 80-547, 1/20,000, 79x73cm.
- Ontario Department of Lands and Forests 1965 Algoma, Sudbury, Timiskaming and Nipissing surficial Geology; Ontario Department of Lands and Forests Map 5465, 1/506,880 or 1" = 8 miles,

File: 1-Garnet-Bib
E-Monopros

- Siragusa, G.M. 1980 Garnet Township, NTS 41 0/09NE + 10 NW, Sudbury District, Ontario; Ontario Geological Survey, Map P-2340, 1/15840, 61x61cm.
- Siragusa, G.M. 1983 Garnet Lake Area, NTS 41 0/9N+10NE, Sudbury District, Ontario; Ontario Geological Survey, Open File Report 5438.
- Siragusa, G.M. 1987 Geology of the Garnet Lake Area, District of Sudbury; Ontario Geological Survey, Report 248, 81p., with maps 2503 and 2504, scale 1:31,680.
- The International Nickel Co. of Canada Ltd. 1974 Robin Area Anomalies 5-18, 5-9, Diamond Drill Logs of Holes 61961, 61963, Garnet Township; Ontario Assessment Work File, 6p.

File: Garnet-Bib.1
E-Monopros



41009NW0080 2.11838 FAWN

900

**Mining Lands Section
3rd Floor, 880 Bay Street
Toronto, Ontario
M5S 1Z8**

Telephone: (416) 965-4888

March 13, 1989

**Your file: W8806-50140
Our file: 2.11838**

**Mining Recorder
Ministry of Northern Development and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7**

Dear Sir:

**Re: Notice of Intent dated February 14, 1989
Geophysical (Electromagnetic & Magnetometer) Survey on Mining Claims
P1015018 et al in Garnet & Fawn Township**

**The assessment work credits, as listed with the above-mentioned notice of Intent,
have been approved as of the above date.**

**Please inform the recorded holder of these mining claims and so indicate on
your records.**

Yours sincerely,

**W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division**

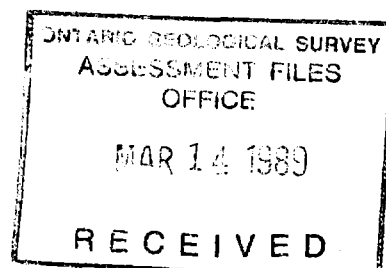
AB:jc

Encls.

**cc: Mr G. H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario**

**Resident Geologist
Timmins**

**Mingold Resources Inc.
Box 28
Toronto-Dominion Centre
Toronto, Ontario
M5K 1B8**





Recorded Holder Mingold Resources Inc.
Township or Area Garnet & Fawn Townships

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	P1015018-19 1015022 to 25 inclusive 1015027-28
Electromagnetic _____ 32 _____ days	
Magnetometer _____ 16 _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> insufficient technical data filed
---	--



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

DOCUMENT No. **W/8906-50140**

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

2.11838

Mining Act

Type of Work: **MAGNETIC AND VLF ELECTROMAGNETIC** Township or Area: **GARNET/FAWN**

Claim Holder(s): **MINGOLD RESOURCES INC.** Prospector's Licence No.: **T-4617**

Address: **P.O. Box 28, TORONTO-DOMINION CENTRE, TORONTO ONTARIO, M5K 1B8**

Survey Company: **MINGOLD RESOURCES INC.** Date of Survey (from & to): **26 11 87 to 6 12 87** Total Miles of line Cut: **5.8**

Name and Address of Author (of Geo-Technical report): **RAYMOND DAVIES, P.O. Box 28, TORONTO-DOMINION CENTRE, TORONTO, M5K1B8**

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
P	1015018				
	1015019				
	1015022				
	1015023				
	1015024				
	1015025				
	1015027				
	1015028				
	1015029				
	1015030				

RECEIVED

JAN 27 1989

MINING LANDS SECTION

RECORDED

OCT 25 1988

Expenditures (excludes power)

Type of Work Performed: **MAGNETIC AND VLF ELECTROMAGNETIC**

Performed on Claim(s): **OCT 25 1988**

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.

For Office Use Only

Total Days Cr. Recorded: **480** Date Recorded: **Oct 25/88** Mining Recorder: *[Signature]*

Date Approved as Recorded: **See statement** Branch Director: *[Signature]*

Date: **20 October 1988** Recorder/Holder of 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: **RAYMOND DAVIES, P.O. Box 28, TORONTO-DOMINION CENTRE, TORONTO ONTARIO, M5K 1B8**

Date Certified: **20 October 1988** Certified by (Signature): *[Signature]*

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations 294 (MAGNETOMETER) 294 (VLF) Number of Readings 294 (MAG.) 294 (VLF)

Station interval 100 FEET Line spacing 400 FEET

Profile scale 1" = 20% FOR VLF SURVEY

Contour interval 250 GAMMA FOR MAGNETIC SURVEY

MAGNETIC

Instrument EDA OMNI-IV

Accuracy – Scale constant 1 GAMMA

Diurnal correction method BASE STATION

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument GEONICS EM-16

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency CUTLER MAINE NAA 17.8 KHz
(specify V.L.F. station)

Parameters measured IN-PHASE AND OUT-OF-PHASE

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

Instrument _____

Method Time Domain Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

INDUCED POLARIZATION RESISTIVITY

FAWN

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

Scale - 40 Chains 1-Inch

GARNET

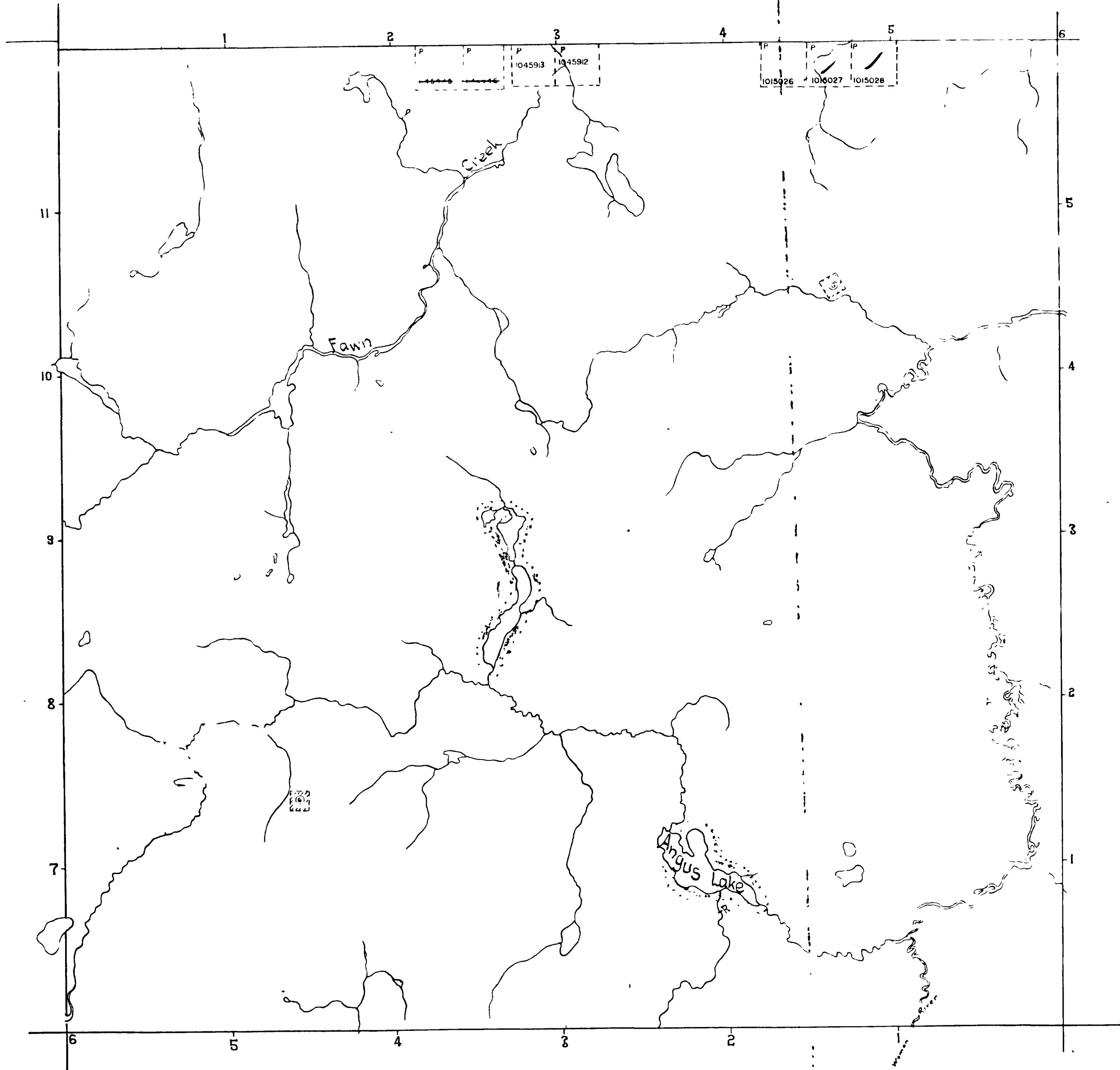
NOTE

400' Surface Rights Reservation
around all Lakes and Rivers.

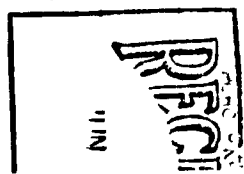
© QUARRY PERMIT

TWP. 21

ESTHER



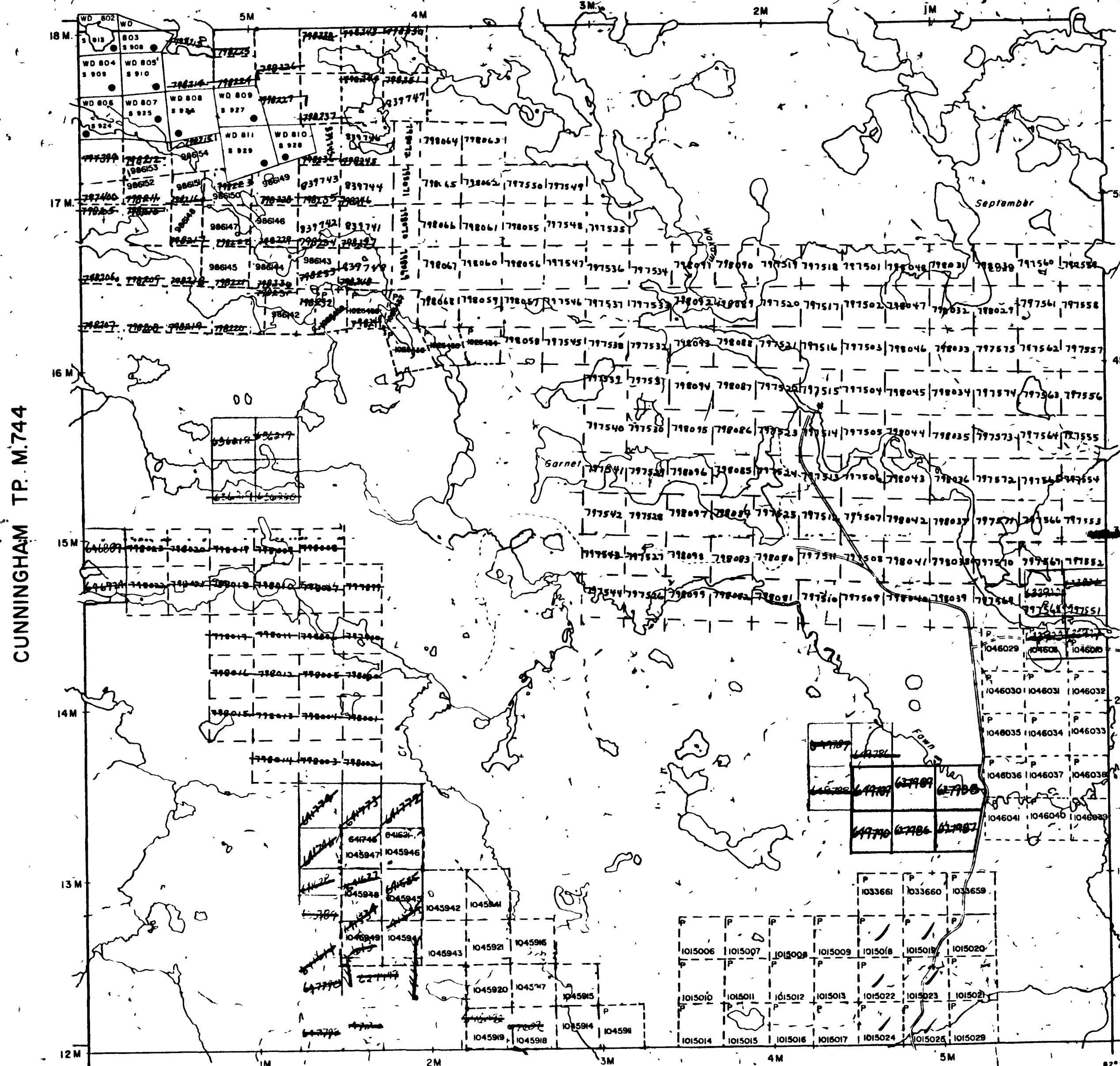
TWP. 18



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

F.O.I. Filed Only Application (file 839762)

DORE TP. M.763



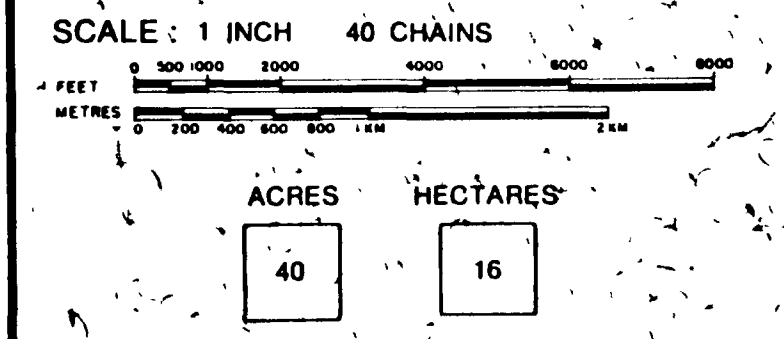
LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	

F.O.I. - Filed Only - see file 839762 04/19/85

DISPOSITION OF CROWN LANDS

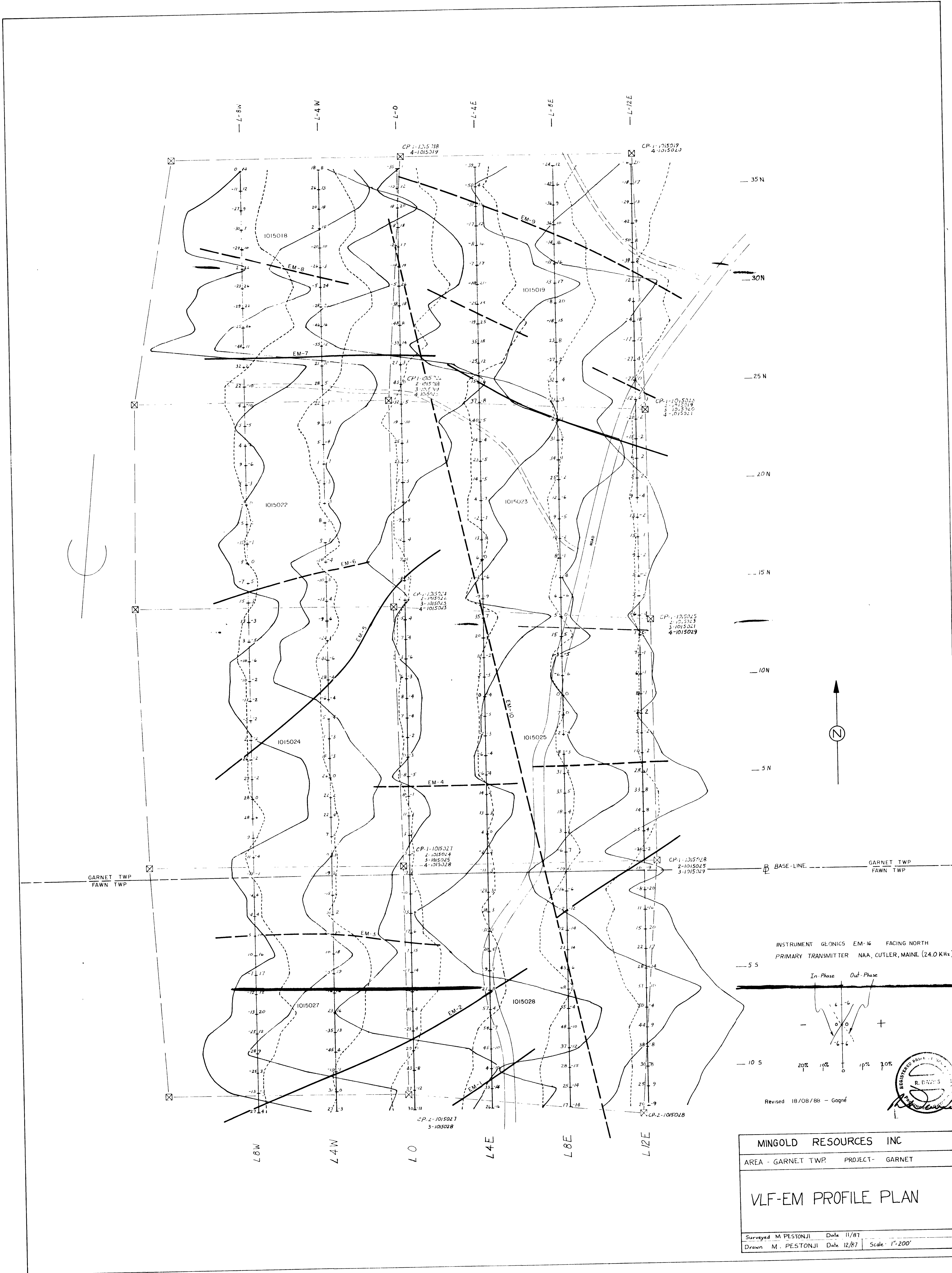
TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
CROWN LAND SALE	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	



TOWNSHIP
GARNET
DISTRICT
SUDBURY
MINING DIVISION
PORCUPINE
Received Jan 4/80

Ontario Ministry of Natural Resources
Surveys and Mapping Branch
Date April 27th, 1973
Whitney Block Queen's Park, Toronto
Plan No. **M.829**





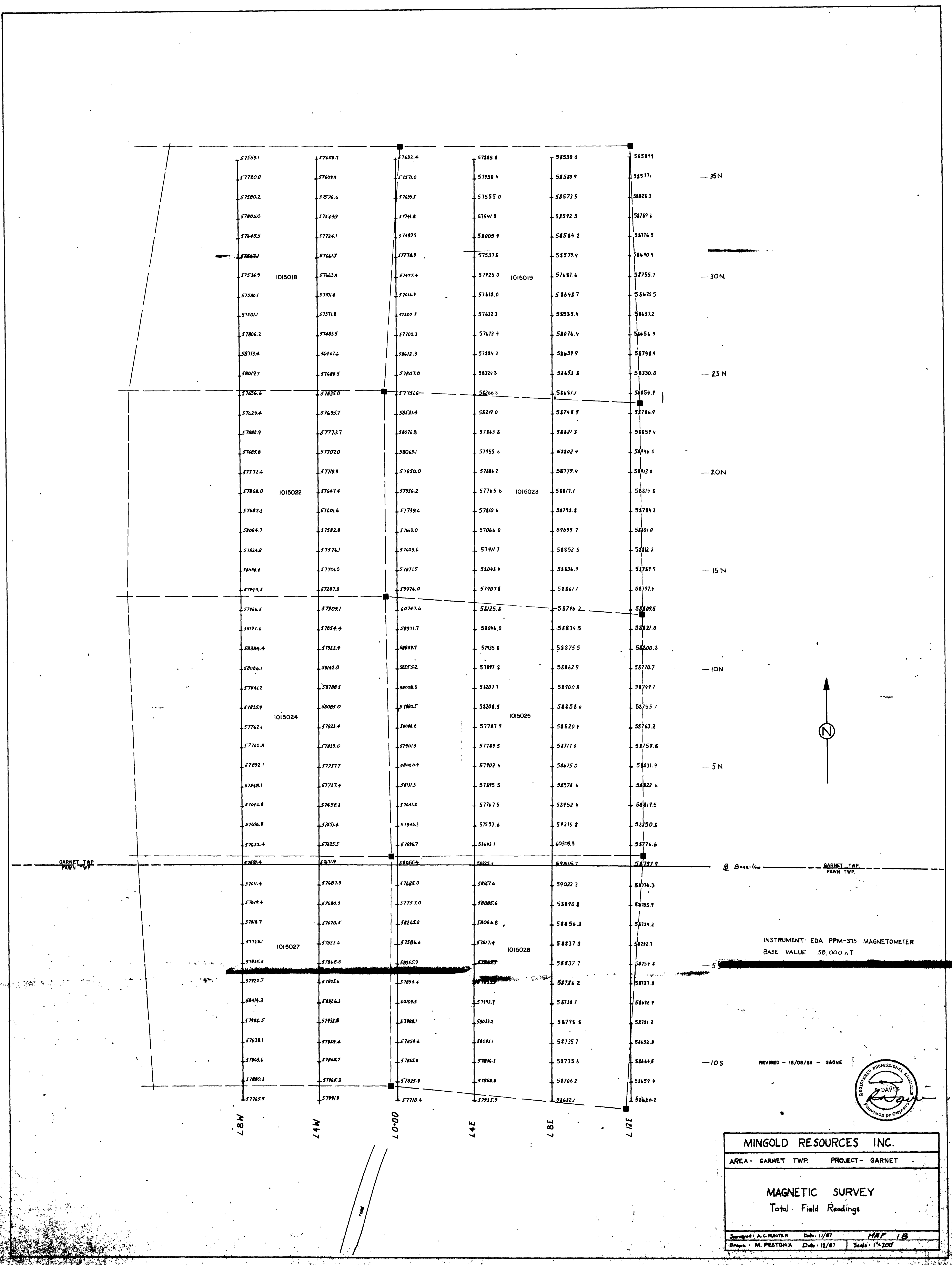
INSTRUMENT GEONICS EM-16 FACING NORTH
 PRIMARY TRANSMITTER NAA, CUTLER, MAINE (24.0 KH+)

Revised 10/08/88 - Gagné

MINGOLD RESOURCES INC	
AREA - GARNET TWP	PROJECT - GARNET
VLF-EM PROFILE PLAN	
Surveyed M. PESTONJI	Date 11/87
Drawn M. PESTONJI	Date 12/87 Scale: 1"=200'

2.11838





— 35N
— 30N
— 25N
— 20N
— 15N
— 10N
— 5N



GARNET TWP
FAWN TWP

GARNET TWP
FAWN TWP

INSTRUMENT: EDA PPM-375 MAGNETOMETER
BASE VALUE: 58,000 nT

REVISED - 10/08/88 - GAONE



MINGOLD RESOURCES INC.	
AREA - GARNET TWP.	PROJECT - GARNET
MAGNETIC SURVEY Total Field Readings	
Surveyed: A.C. HUNTER	Date: 11/87
Drawn: M. PESTONJA	Date: 12/87
MAP 1B Scale: 1"=200'	

