



42A10SW1082 2.5230 MATHESON

010

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NOV 20 1982

MINING LANDS SECTION

KIDD CREEK MINES LTD.

REPORT ON GEOPHYSICAL WORK

MATHESON TWP.

N.T.S.: 42-A-10/9

CLAIMS: (1) P 528330 - P 528340

(2) P 515771 - P 515774
P 515844 - P 515845
P 525298 - P 525299
P 528386 - P 528387
P 528390
P 528392 - P 528395

(3) P 525349 - P 525351
P 528391
P 528409 - P 528412

(4) P 528379 - P 528384
P 528417 - P 528420

NOVEMBER, 1982

W. A. GASTEIGER

INTRODUCTION

During August, 1982, airborne magnetic and electromagnetic surveys were conducted over parts of Matheson and Cody Townships. In the northern half of Matheson Township, these surveys traversed 44 mining claims owned by Kidd Creek Mines Ltd. These claims are located in four blocks of contiguous claims.

The general geology of the area consists of overall East-West stratigraphy with what appears to be fold repeated sequences of sedimentary, mafic and ultramafic volcanic layers. Similar stratigraphy hosts gold occurrences in Hoyle Township to the west.

SURVEY DETAILS

The survey was conducted by Aerodat Ltd. using a helicopter borne system. An Astar 350-D helicopter was used. The magnetometer was a GEOMETRICS G-803 Proton Precession type with a 1/2 gamma sensitivity. The EM was run with an AERODAT/GEONICS AEM system consisting of 2 vertical coaxial coil pairs operating at 940 Hz and 4550 Hz and one coplanar pair operating at 960 Hz.

Mean flying height of the helicopter was 70 metres, the magnetometer bird was at 54 metres and the EM bird at 38

metres. Line spacing was approximately 200 metres. The position of the helicopter was constantly recorded using a miniranger radar positioning system.

SURVEY RESULTS

On the attached map, the in-phase and quadrature profiles of the electromagnetic response are plotted along the portions of any flight lines that traverse the claims. Flight line paths and the magnetics are plotted for the claims and surrounding area.

Block 1:

This area consists of the 11 contiguous claims on the west side of the map sheet. The northern portion of this claim group lies along the southern flank of a large E-W trending magnetic high. A weak conductive response on the north edge of claim P 528340 is likely part of a graphitic horizon that marks the contact between mafic and ultramafic volcanics to the north and sediments to the south. Most of the claim group appears to be underlain by low magnetic susceptibility sediments. No other conductors occur.

Block 2:

This 15 claim group lies in the north-central part of the map sheet. A fairly strong conductive zone strikes roughly E-W across the southern tier of claims. It starts at

the north-west corner of claim P 515845 and leaves the property in the east at the southeast corner of claim P 528393. This conductive zone is located on the north flank of the same magnetic high referred to in Block 1. Again, this zone appears to be a fairly well developed graphitic horizon marking the contact between sediments to the north and mafic and ultramafic volcanics to the south. The low magnetics over most of the property suggests a fairly uniform sequence of sediments.

Block 3:

This group of 8 contiguous claims lies due south of Block 2. The only AEM responses in this block that do not appear to be due to railways, power lines, or other cultural effects occur in claim P 528409. Here again, the conductors lie on the flank of a subtle magnetic high, this time the south side. This magnetic high comes off the larger high to the north and appears to strike through the property towards the south-west. The conductive zone is probably weakly developed graphite with mafic volcanics to the north and sediments to the south.

Block 4:

This block consists of 10 contiguous claims in the south-east portion of the map sheet; all conductive responses appear to be due to power lines. The magnetics is generally flat; most of the group appears to be underlain by

sediments. A very subtle E-W trend across claims P 528383 and P 528380 appears to be the continuation of the weak magnetic high in Block 3 and may suggest the presence of some mafic volcanics in this area. Also, claim P 528419 is located on the northern flank of a weak magnetic high. This suggests that a sedimentary volcanic contact occurs along the southern boundary of the claim group.

CONCLUSIONS AND RECOMMENDATIONS

The airborne magnetic and EM surveys performed over these claim blocks give a good guide to the stratigraphy of the area. The interpretation of the airborne information combined with ground geophysics and overburden drilling will give a detailed picture of any stratigraphy and structure that may be favourable to gold deposition. The analyses from till samples in overburden drilling may pin-point potential drill targets.



WILL GASTEIGER



42A10SW1082 2.5230 MATHESON

900

The Mining Act 2.500

in the "Expend. Days Cr." columns.
Do not use shaded areas below.

Type of Survey(s) GEOPHYSICAL (AIRBORNE E.M. AND MAG)		Township or Area MATHESON	
Claim Holder(s) KIDD CREEK MINES LTD.		Inspector's Licence No. T-1	
Survey Company BOX 1140, TIMMINS, ONTARIO		Survey Dates (linecutting to office) 20 08 82 27 09 82 Day Mo. Yr. Day Mo. Yr.	
Name and Address of Author (of Geo-Technical report) KIDD CREEK MINES LTD. W.A. GASTEIGER (as above)		Total Miles of line Cut	

Special Provisions Credits Requested

Instructions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days

Instructions	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	20
	Magnetometer	20
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed **RECONV. MINING DIVISION**
DEFENSIVE

Performed on Claim(s) **11**

SEP 27 1982

Calculation of Expenditures
Total Expenditures \$ ÷ 15 = 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.

Report Completed

Date of Report **Sept. 27/82**

Recorded Under or Agent (Signature) *W.A. Gasteiger*

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	525349	24			
	525350	24			
	525351	24			
	528379	40			
	528380	40			
	528381	40			
	528382	40			
	528383	40			
	528384	40			
	528391	40			
	528409	40			
	528410	40			
	528411	40			
	528412	40			
	528417	40			
	528418	40			
	528419	40			
	528420	40			

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OCT 19 1982

MINING LANDS SECTION

RECORDED

SEP 27 1982

Receipt No.

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

18

For Office Use Only

Total Days Cr. Recorded **720**

Date Recorded **Sept. 27/82**

Date Approved as Recorded **SEP 27 1982**

Mining Recorder *[Signature]*

Regional Branch Director *[Signature]*



Ministry of
Natural Resources

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

2.5230
#433
P-528330

The Mining Act

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

Type of Survey(s) Geophysical (Airborne EM & MAG)		Township or Area MATHESON TOWNSHIP	
Claim Holder(s) KIDD CREEK MINES LTD.		Prospector's Licence No. T-1	
Address Box 1140, TIMMINS, Ontario.			
Survey Company AERODAT LTD.		Date of Survey (from & to) 20 08 82 23 11 82 Day Mo. Yr. Day Mo. Yr.	Total Miles of line Cut --
Name and Address of Author (of Geo-Technical report) W. A. GASTEIGER, BOX 1140, TIMMINS, Ontario.			

Credits Requested per Each Claim in Columns at right

Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Main Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Airborne Credits Receipt No.	Other	Days per Claim
	Geological	
	Geochemical	
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	20
	Magnetometer	20
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
P	528330	20
✓	528331	20
✓	528332	20
✓	528333	20
✓	528334	20
✓	528335	20
✓	528336	20
✓	528337	20
✓	528338	20
✓	528339	20
✓	528340	20
✓	515771	24
✓	515772	24
✓	515773	24
✓	515774	24
✓	525298	24
✓	525299	24
✓	515844	24
✓	515845	24
✓	528392	24
✓	528393	24
✓	528394	24
✓	528395	24

Prefix	Mining Claim Number
P	528386
✓	528387
✓	528390

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NOV 25 1982

MINING LANDS SECTION

RECORDED
NOV 24 1982

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ ÷ 15 = Total Days Credits

Total number of mining claims covered by this report of work. **26**

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
11-10	Nov 24/82	<i>[Signature]</i>
	Date Approved as Recorded	Branch Recorder
	83:07:07	<i>[Signature]</i>

Date: Nov. 23, 1982

Recorded Holder or Agent (Signature): *Neil Gasteiger*

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



2/25/83

Mining Lands Comments

~~Approved~~

To: Geophysics *W.R. Barlow*

Comments

Approved Wish to see again with corrections

Date Feb 25/83

Signature *W.R. Barlow*

To: Geology - Expenditures

Comments

Approved Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments

L.D.

Approved Wish to see again with corrections

Date

Signature

359, 433

1982 12 02

2.5230

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for an Airborne
(Electromagnetic and Magnetometer) Survey submitted
on Mining Claims P 528330 et al in the Township of
Matheson.

This material will be examined and assessed and a
statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch
Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1300

DW:sc

cc: Kidd Creek Mines Limited
Timmins, Ontario
Attn: W.A. Gasteiger.

MINING CLAIMS TRAVERSED

P 515771	P 528379
P 515772	P 528380
P 515773	P 528381
P 515774	P 528382
P 515844	P 528383
P 515845	P 528384
P 525298	P 528386
P 525299	P 528387
P 525349	P 528390
P 525350	P 528391
P 525351	P 528392
P 528330	P 528393
P 528331	P 528394
P 528332	P 528395
P 528333	P 528409
P 528334	P 528410
P 528335	P 528411
P 528336	P 528412
P 528337	P 528417
P 528338	P 528418
P 528339	P 528419
P 528340	P 528420

TOTAL CLAIMS = 44



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Airborne Mag & EM
Township or Area Matheson Twp.
Claim Holder(s) KIDD CREEK MINES LTD.
Box 1140, Timmins, Ontario
Survey Company AERODAT LTD.
Author of Report W. GASTEIGER
Address of Author Box 1140, Timmins, Ontario
Covering Dates of Survey Aug./82 - Nov./82
(linecutting to office)
Total Miles of Line Cut ----

MINING CLAIMS TRAVERSED
List numerically

(See attached list)

(prefix)

(number)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

- Geophysical
 - Electromagnetic _____
 - Magnetometer _____
 - Radiometric _____
 - Other _____
- Geological _____
- Geochemical _____

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

Magnetometer 20 Electromagnetic 20 Radiometric _____
(enter days per claim)

DATE: Nov. 23/82 SIGNATURE: Mill Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications 2.1798

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 44

If space insufficient, attach list

OFFICE USE ONLY

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____
(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) Airborne magnetic and electromagnetic

Instrument(s) Geometrics G-803 Proton Precession Magnetometer;

Accuracy Mag: \pm 1/2 gamma (specify for each type of survey)
EM: 1 ppm

Aircraft used ASTAR 350-D Helicopter
(specify for each type of survey)

Sensor altitude Mag: 54 metres EM: 39 metres

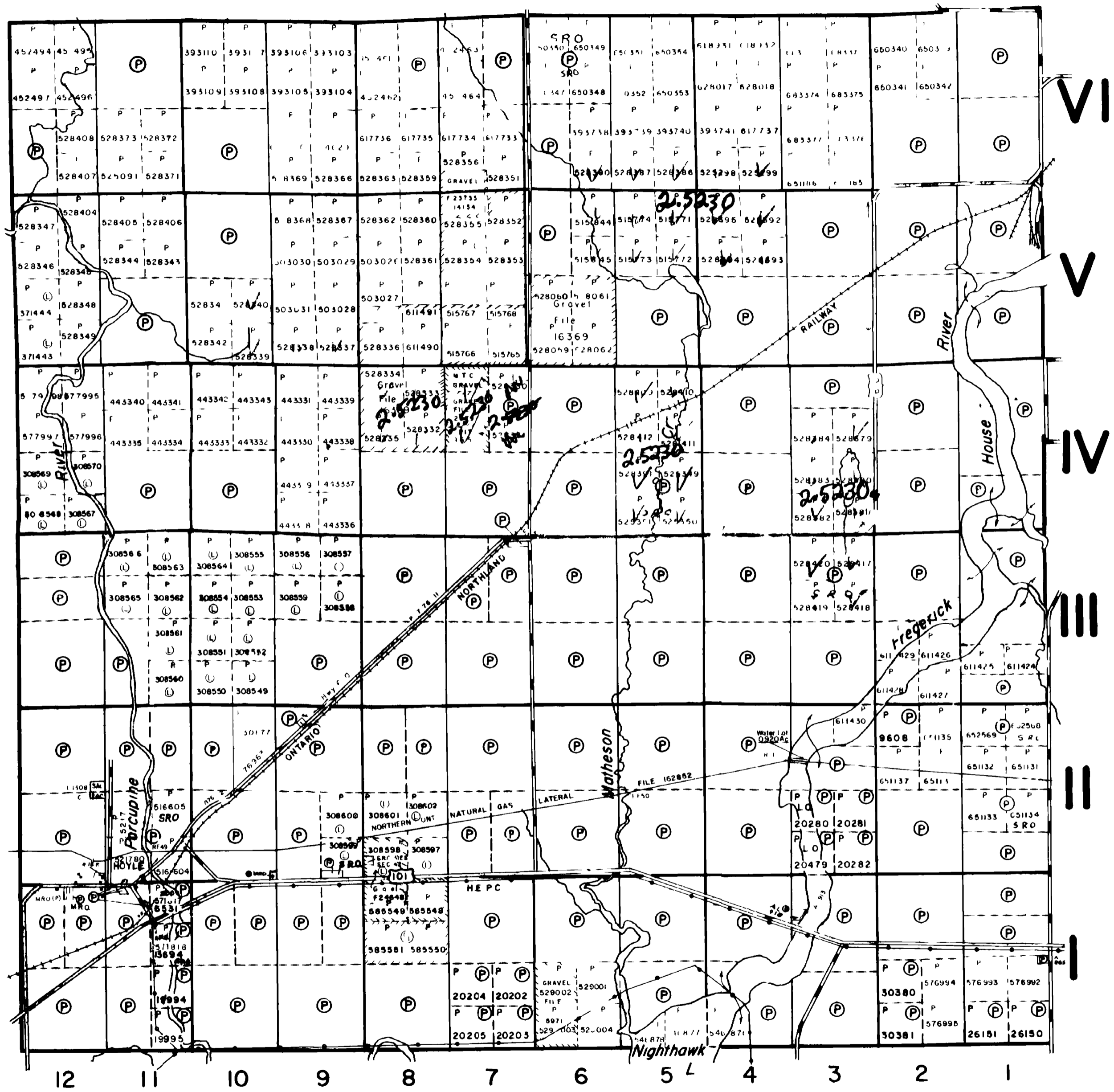
Navigation and flight path recovery method Position of aircraft constantly monitored
digitally using a mini-ranger radar positioning system.

Aircraft altitude 70 metres Line Spacing 200 metres

Miles flown over total area 350 miles Over claims only 22 miles

Hoyle Twp

German Twp.



LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (S) or (CS)
- LEASES (L)
- LOCATED LAND (Loc)
- LICENSE OF OCCUPATION (LO)
- MINING RIGHTS ONLY (MRO)
- SURFACE RIGHTS ONLY (SRO)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

NOTES

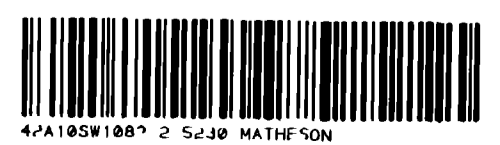
- Reserve Flooding Rights to 903' Contour to HEPC on Frederick House River
- 400 Surface rights reservation around all lakes & rivers
- This township lies within the Municipality of CITY of TIMMINS
- RESERVATIONS

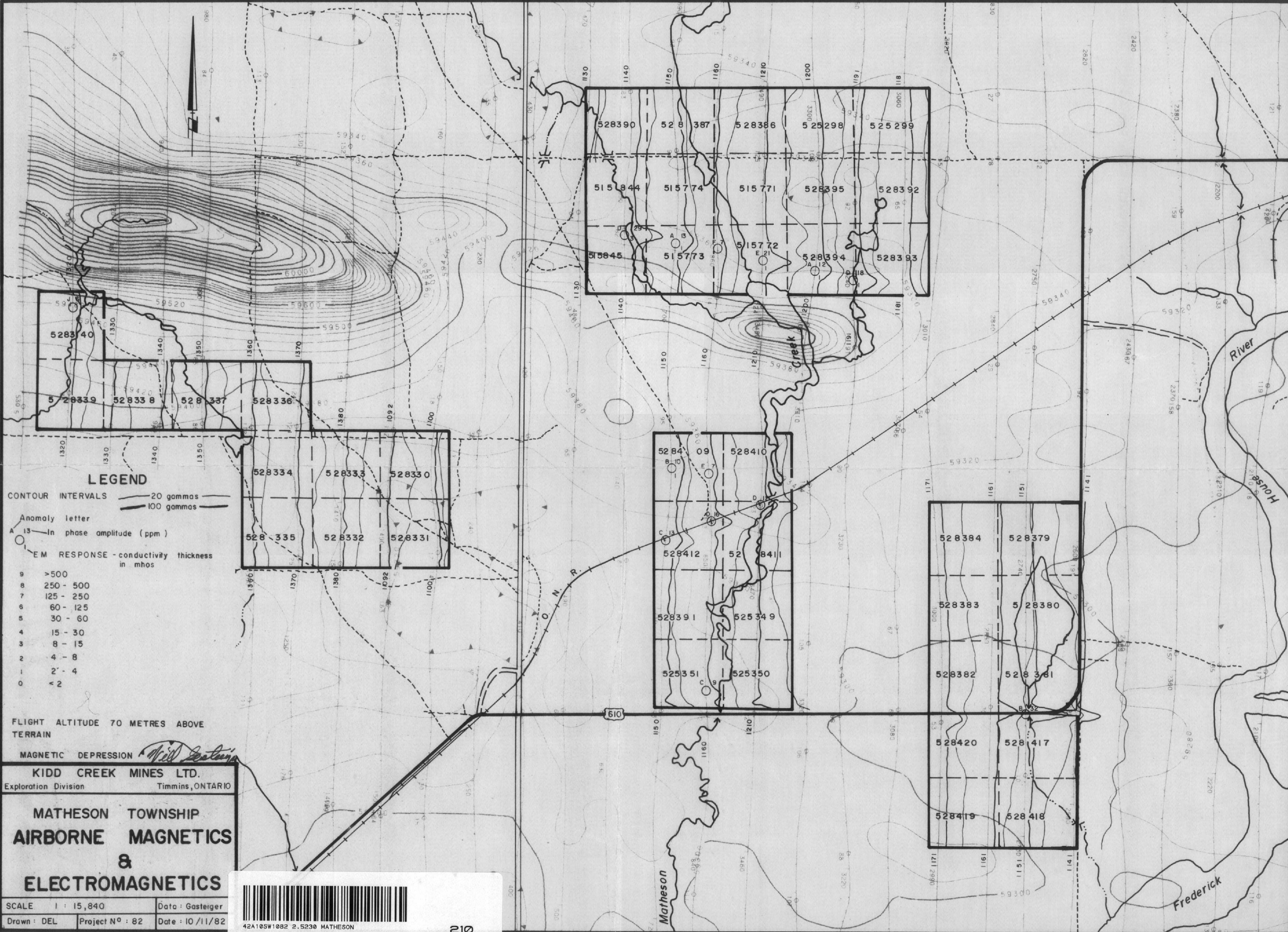
SAND AND GRAVEL

- (1) QUARRY PERMIT
- (2) MNR OF 211 REVEVE FILE 24648

DATE OF ISSUE

PLAN NO - M-297





LEGEND

- CONTOUR INTERVALS — 20 gammas
 — 100 gammas
- Anomaly letter
 A 13 — In phase amplitude (ppm)
- EM RESPONSE - conductivity thickness in mhos
- | | |
|---|-----------|
| 9 | > 500 |
| 8 | 250 - 500 |
| 7 | 125 - 250 |
| 6 | 60 - 125 |
| 5 | 30 - 60 |
| 4 | 15 - 30 |
| 3 | 8 - 15 |
| 2 | 4 - 8 |
| 1 | 2 - 4 |
| 0 | < 2 |

FLIGHT ALTITUDE 70 METRES ABOVE TERRAIN

MAGNETIC DEPRESSION *Will Gasterger*

KIDD CREEK MINES LTD.
 Exploration Division Timmins, ONTARIO

**MATHESON TOWNSHIP
 AIRBORNE MAGNETICS
 &
 ELECTROMAGNETICS**

SCALE 1 : 15,840 Data : Gasterger
 Drawn : DEL Project N° : 82 Date : 10 / 11 / 82

