Kian A. Jensen
Exploration and Consulting Services

010

MAGNETIC SURVEY

for

F. ZOEBELEIN

on the

CARSCALLEN PROPERTY

in 2.12564

CARSCALLEN TOWNSHIP

PORCUPINE MINING DIVISION

DISTRICT OF COCHRANE

ONTARIO

by

Kian A. Jensen
Consulting Geologist/Geophysicist

May, 1989

Kian A. Jensen
Exploration and Consulting Services

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INTRODUCTION

During February to March, 1989, linecutting and a total field magnetic survey were completed on the 23 contiguous unpatented mining claims known as the Carscallen Property in the west central part of Carscallen Township.

A total of 23.36 miles of linecutting was completed to establish a total of 2467 magnetic readings. The survey was completed from March 11 to 21, 1989, by personnel of Laforest-Hlava Exploration Services Limited under the supervision of the author. The data reductions, drafting, interpretation and report were completed by the author from April 5 to May 30, 1989.

The project area is located approximately 4.0 miles (6.5 km) west of the junction of Highways 101 and 144, the 4.9 miles (7.9 km) northwards to south property boundary. The claims cover an area from the Whitesides - Carscallen Township boundary eastwards for 1.5 miles in the west central portion of Carscallen Township, Porcupine Mining Division, District of Cochrane, Ontario.

The purpose of the survey was to identify the lithological units, structural features and favorable areas for gold and base metal mineralization.

LOCATION AND ACCESS

The 23 unpatented mining claims cover the area between mile posts 3 and 4 on the Whitesides - Carscallen Township boundary eastward for 1.5 miles in the west central portion of Carscallen Township, Porcupine Mining Division, District of Cochrane, Ontario as shown in Figure 1.

The project area is located approximately 4.0 miles (6.5 km) west of the junction of Highways 101 and 144. An all weather gravel logging road leads northwards for 2.92 miles (4.7 km), then the west branch road is travelled for about 1.1 mile (1.8 km). At this junction, 0.87 miles (1.4 km) on the north branch road leads to the south boundary on the east part of the property while the northwest branch road intersects the south boundary on the western side about 1.4 miles (2.25 km) from the junction.

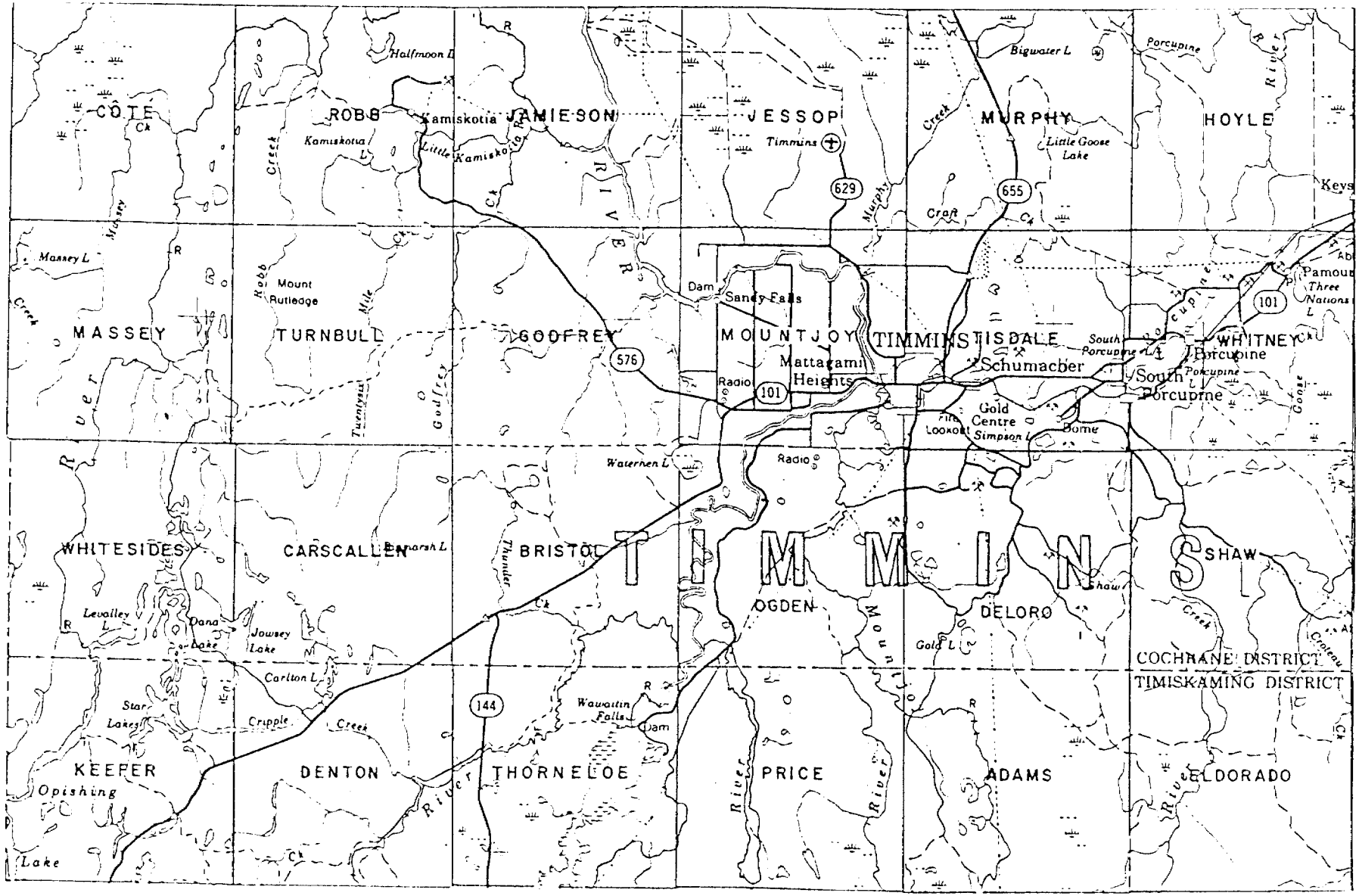

Figure 1: Location Map of the Carscallen Property, Carscallen Township, Porcupine Mining Division, District of Cochrane, Ontario. Scale 1 inch to 4 miles.

PROPERTY

The Carscallen Property of 23 unpatented contiguous mining claims are held 100% by Mr. F. Zoebelein, P.O. Box 72, King City, Ontario, L0G 1K0, as shown in Figure 2, and consists of the following mining claims and recording dates:

P-969811 to P-969814	inclusively	March 22, 1988
P-997914 to P-997916	inclusively	March 22, 1988
P-1027211 to P-1027215	inclusively	March 22, 1988
P-1033101		March 22, 1988
P-1033103 to P-1033104	inclusively	March 22, 1988
P-1033107		March 22, 1988
P-1033118 to P-1033119	inclusively	March 23, 1988
P-1033120 to P-1033122	inclusively	March 22, 1988
P-1034545 to P-1034546	inclusively	April 8, 1988

GENERAL GEOLOGY

The bedrock in the area consists of an early Precambrian intermediate to mafic located in the west central part of Carscallen Township and felsic metavolcanics in the northeastern portion of the township.

The metavolcanics have been intruded by dioritic to gabbroic dikes or sills and irregular shaped pluton which has an approximate diameter of 8 miles at the junction of Carscallen, Whitesides, Turnbull and Massey Townships.

The next intrusives in the area vary in composition but are generally felsic intrusive batholith located in the southwestern portion of Carscallen Township.

Intruding all the above lithological units are north to north-northwest trending diabase dikes.

The structure in the area appears to be dominated by north northwest trending transverse faults, several are filled by the later diabase dikes.

PREVIOUS EXPLORATION ACTIVITIES

The following is a summary of the exploration activities for the claim group and the immediate area which has been filed for assessment work at the resident geologist's office:

In the summer of 1964, Lucky Strike Exploration Limited completed a ground electromagnetic and magnetic survey the north 12 claims of their 24 claims. A total of 13 of Lucky Strikes claims are within the present property. The four drill hole completed intersected from disseminated sulphide mineralization to 117.5 feet of massive sulphides.

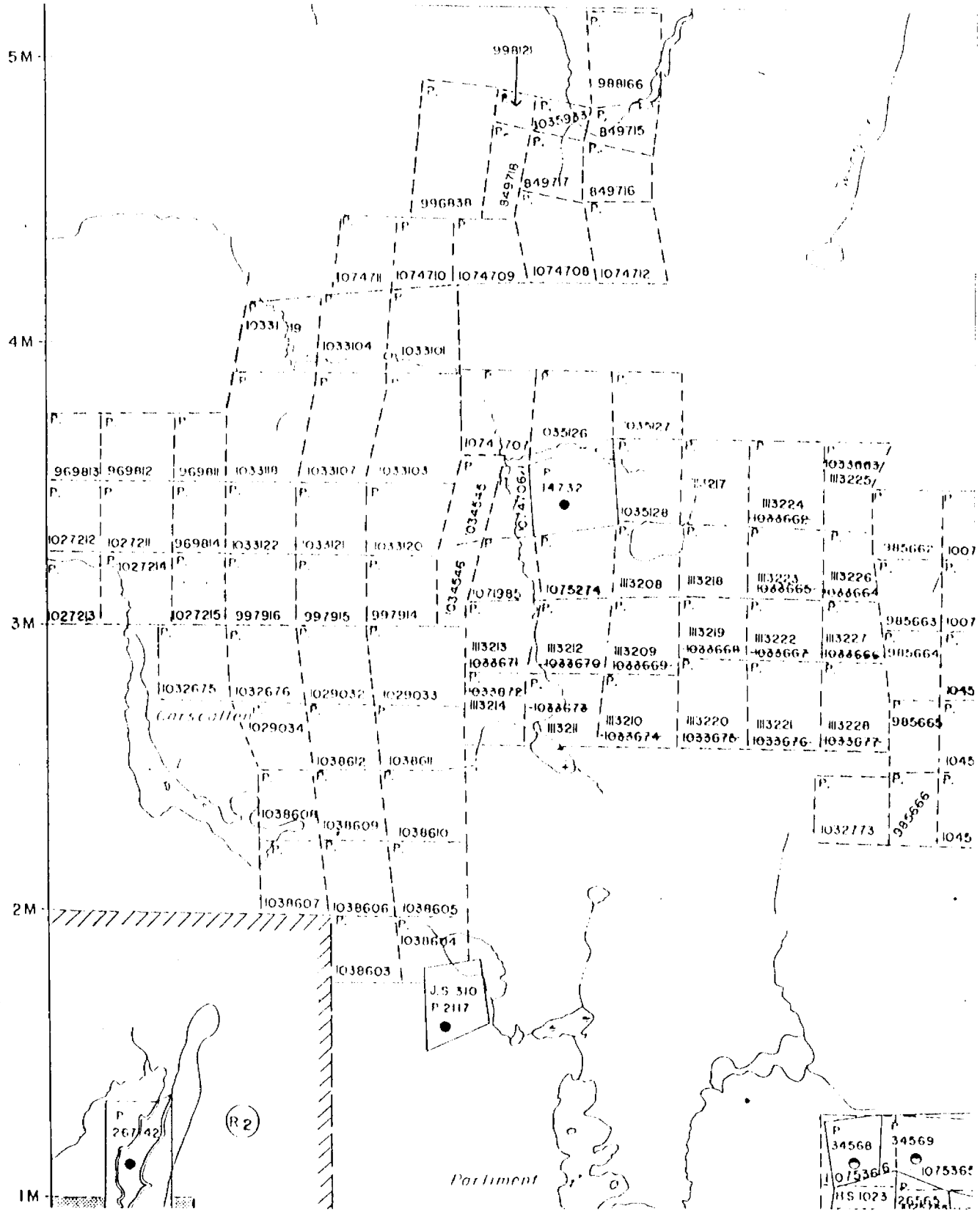

Figure 2: Claim Map and Property Location Map of the Carscallen Property, Carscallen Township, Porcupine Mining Division, District of Cochrane, Ontario.
Scale 1 inch to 1/2 mile.

During 1966, Mespi Mines Limited conducted an electromagnetic survey which identified at least 7 conductors. In 1967, Mespi diamond drilled 6 holes of which 3 holes, WC1, WC2 and WC3 are located within the Carscallen Property. Only one hole was partly assayed with results ranging as follows: Au trace to, 0.025 opt, Ag trace to 0.03 opt, Cu 0.01 to 0.04%, Zn nil, and 0.02 for Ni.

During 1969, 10 claims which are all within the present property was explored by Claw Lake Molybdenum Mines limited. They completed electromagnetic and magnetic surveys on 4 claims and drilled 4 holes.

In March 1972, Texas Gulf Sulphur Company completed and HLEM and magnetic survey on their 14 claims of which all but 4 are within the property.

During 1983 2 claims by the township boundary and within the present claim group was held by Jean Roy who excavated 3 pits about 3 feet square and about 2 feet deep. All assays were trace to nil.

GEOPHYSICAL SURVEY

INTRODUCTION:

During February to March, 1989, linecutting and a total field magnetic survey were completed on the 23 contiguous unpatented mining claims. A total of 23.36 miles of linecutting was completed to establish a total of 2467 magnetic readings.

The base line was established about 300 feet north of Mile Post 3 on the Whitesides - Carscallen Township Line and extends to 81+50 East. Tie lines were established at 28+00 North, 38+00 North and 50+00 North. The north south grid lines were established at intervals of 400 feet with pickets placed every 100 feet.

The survey was completed with a Geometric G-816 Proton Procession Magnetometer from March 11 to 21, 1989, by personnel of Laforest-Hlava Exploration Services Limited under the supervision of the author. The data reductions, drafting, interpretation and report were completed by the author from April 5 to May 30, 1989.

MAGNETIC SURVEY:

The magnetic base station was established at Line 12 East on the base line with an average base value of 58,770 gammas. The base line and all the tie lines were surveyed at 50 foot intervals in a looping fashion to establish accurate control stations for each grid line. The north-south grid lines were surveyed at 50 foot intervals.

The data was corrected for the daily drift and the tie-ins at the control stations. A base level of 58,000 gammas has been removed from all the observed readings.

The corrected data was plotted on a base map with a scale of 1 inch to 200 feet (1:2400). The data was contoured at 100 gamma intervals wherever possible as shown in Figure 3.

INTERPRETATION:

To assist in the explanation of the interpretation of the magnetic survey, a compilation map and interpretation map is shown in Figure 4:

The survey area is dominated by 2 magnetic highs. The anomaly with the most extreme values is located in the central portion trending about east-west then to the southeast in the eastern portion. This has been identified on the extreme western portion of the anomaly as several bands sulphide phase iron formation with varying thickness.

The northern magnetic high is located about 45+00 north and trending to the southeast. This appears to be a narrow band of sulphide mineralization within the intermediate to mafic tuff to tuffaceous fragmental.

The magnetic high trending in a northwesterly direction are probably due to a diabase dike. As shown in Figure 4, there are numerous dikes which appear to have filled some of the fault or shear zones.

In the extreme northeast, it appears to be underlain by part of the gabbroic complex.

The remainder of the property is underlain by intermediate to mafic metavolcanic with minor felsic metavolcanics.

The dominant structural features of the property is the northerly trending faults. Additional faulting or shearing appears to occur in the northeast to east-northeast and the northwest to west-northwest directions.

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CONCLUSIONS

The magnetic survey was a limited success in locating lithological units. The anomalies due to the diabase dikes has made the interpretation certain areas difficult in locating and tracing geological contacts between the mafic and felsic units.

The most prominent structural feature of the area appear to be the northerly trending diabase dikes and the easterly to southeasterly trending iron formation in the central portion of the property.

Some of the magnetic lows may be due in part to carbonatization of the metavolcanics and may be a favorable target for further investigation.

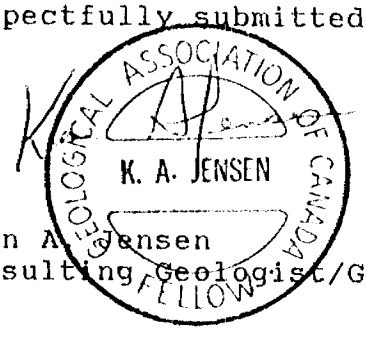
RECOMMENDATIONS

Based upon the results of the present survey and the available information, the author recommends an electromagnetic survey and geological mapping of the property. The areas of importance for gold mineralization is in the vicinity of the magnetic lows in areas of suspected carbonatization and/or shear zones. The larger portions of the iron formation may be host to base metal mineralization.

Based upon the results of the recommended work, minor trenching may be warranted and a limited diamond drilling program.

Dated at Timmins, Ontario
May 30, 1989

Respectfully submitted,



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Consulting Geologist/Geophysicist

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Exploration and Consulting Services

CERTIFICATE

With reference to my report on the Magnetic Survey on the Carscallen Property for Mr. F. Zoebelein date May 30, 1989.....

I, Kian A. Jensen, of the City of Timmins, Ontario, do hereby certify the following to be true and accurate to the best of my knowledge:

1) That I received an Honor B.Sc. degree in Earth Science, Geology Major, from the University of Waterloo,

2) That I have been employed as a geologist and/or geophysicist by various exploration companies and consulting companies since 1978,

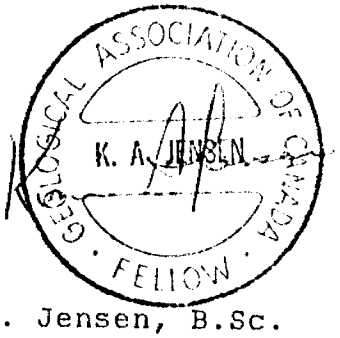
3) That I have been and still am a member in good standing in the following associations:

a) Society of Exploration Geophysicists - Associate, 1981
b) Geological Association of Canada - Fellow, 1983

4) That I am the author of the corresponding report, and have been actively exploring and prospecting in the Timmins area since 1981,

5) That I have no interest directly or indirectly in the mining claims comprising the property described in this report or in the shares of any company or companies in this joint venture on this property or the surrounding properties, nor do I expect to receive any directly or indirectly.

Dated this 30th of May, 1989
Timmins, Ontario



Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

3. Observe measurement readings. Each reading should repeat to ±1 gamma. (A slow shift may occur over several minutes due to a diurnal change in the earth's field.)

4. Place the suspected article at the distance from the sensor expected during actual survey operation.

5. Cycle magnetometer several times and note the readings.

6. Remove the article and repeat steps 2 and 3 to check for diurnal shifts in the earth's field. If a diurnal shift is present, repeat entire test.

7. If the readings obtained in step 5 differ by more than ±1 gamma (± one count) from those obtained in steps 3 and 6, then the article is magnetic.

IF THE ARTICLE IS HIGHLY MAGNETIC, OR IF THE SENSOR IS INSIDE OR NEAR A BUILDING OR VEHICLE, THE PROTON PRECESSION SIGNAL WILL BE LOST, GIVING COMPLETELY ERRATIC READINGS AND LOSS OF ± 1 COUNT REPEATABILITY.

The magnetometer should not be operated in areas that are known sources of radio frequency energy, power line noise (transformers), in buildings or near highly magnetic objects. The sensor should always be placed on the staff above the ground, or in the "backpack." The sensor will NOT operate properly when placed directly on the ground.

1.3 SPECIFICATIONS

Sensitivity:	±1 gamma throughout range
Range:	20,000 to 90,000 gammas (worldwide)
Tuning:	Multi-position switch with signal amplitude indicator light on display
Gradient Tolerance:	Exceeds 800 gammas/feet

Sampling Rate:	Manual push button, one reading each six seconds.
Output:	Five digit numeric display with readout directly in gammas.
Power Requirements:	Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.
Temperature Range:	Console and sensor: -40° to +85° C. Battery pack: 0° to +50° C (limited use to -15° C; lower temperature battery belt operation — optional).
Accuracy (Total Field):	±1 gamma through 0° to +50° C temperature range.
Sensor:	High signal, noise cancelling, mounted on staff or attached to backpack.
Size:	Console: 3.5 x 7 x 11 inches (9 x 18 x 28 cm) Sensor: 3.5 x 5 inches (9 x 13 cm) Staff: 1 inch diameter x 8 ft. length (3 cm x 2.5m)

Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
	11.5	5.2

Ministry of Northern Development and Mines
Ontario

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

2

42A05NE0308 2.12564 CARSCALLEN

900

(W8906-0254)

Type of Survey(s): MAGNETIC AND ELECTROMAGNETIC SURVEY

Township or Area: CARSCALLEN TWP

Claim Holder(s): FRANK ZOEBELEIN

Prospector's Licence No.: A-49486

Address: P.O. BOX 72, 166 KINGCROSS DRIVE, KING CITY, ONTARIO LOG 1KO

Survey Company: KIAN A. JENSEN EXPLORATION SERVICES

Date of Survey (from & to): 15 02 89 (Day Mo. Yr.) 21 03 89 (Day Mo. Yr.)

Total Miles of line Cut: 23.36 miles

Name and Address of Author (of Geo-Technical report)

Credits Requested per Each Claim in Columns at right

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

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

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed: (1) TRENCH SEC.

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.

Date: April 13/89

Recorded Holder or Agent (Signature): Kian A Jensen

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	1034545	
	1034546	
	1033118	
	1033119	
	1033104	
	1033107	
	1033101	
	1033103	
	1033120	
	1033121	
	1033122	
	997916	
	997915	
	997914	
	969811	
	969812	
	969813	
	969814	
	1027211	
	1027212	
	1027213	
	1027214	
	1027215	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAY 15 1989
MINING LANDS SECTION

RECORDED
APR 20 1989

Total number of mining claims covered by this report of work: 23

For Office Use Only

Total Days Cr. Recorded: 920

Date Recorded: APRIL 20/89

Date Approved as Recorded: 12 July 89 K.M.

Mining Recorder: S. White

Branch Director: A. Olsen

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: KIAN A. JENSEN P.O. BOX 37, SOUTH PORCUPINE, ONTARIO P0N 1H0

Date Certified: April 13/89.

Certified by (Signature): Kian A Jensen.

1362 (85/12)

Purolator

BILL OF LADING NOT NEGOTIABLE
CONNAISSEMENT NON NÉGOCIABLE

627659600

CANADA'S LARGEST COURIER SERVICE - LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

ACCOUNT NO / NO DE COMPTE

TYPE OF SERVICE / MODE DE TRANSPORT
VIA GROUND / VOIE TERRESTRE [ ] 1 VIA AIR / VOIE AÉRIENNE [ ] 2

06 MO. | 16 DY./JR | 89 YR./AN

CHECK ONE / COCHER
PREPAID / PORT PAYÉ [ ] 3 COLL / PORT DÛ [ ] 4

CONSIGNOR (FROM) / EXPÉDITEUR (DE)

STREET ADDRESS / ADRESSE (NO ET RUE)

CITY / VILLE PROV. POSTAL CODE / CODE POSTAL

SHIPPER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR

CONSIGNEE (TO) / DESTINATAIRE (À)

MINISTRY OF NORTHERN DEVELOPMENT & MINES

STREET ADDRESS / ADRESSE (NO ET RUE)

880 BAY STREET, 3rd FLOOR

CITY / VILLE TORONTO PROV. ONT. POSTAL CODE / CODE POSTAL M5S 1Z8

COURIER SIGNATURE / SIGNATURE DU TRANSPORTEUR

DATE Jun 16 TIME / HEURE 1401

DECLARED VALUE / VALEUR DÉCLARÉE (6)
$

DELIVERY / LIVRAISON

LIMITATION OF LIABILITY IMPORTANT, PLEASE READ

The amount of any loss or damage for which the carrier may be liable shall not exceed $2.00 per pound ($4.41 per kilogram) computed on the total weight of the shipment unless a higher value is declared on the face of the bill of lading by the consignor, and it is further agreed as a special agreement, and notwithstanding any disclosure of the nature or extraordinary value of the goods, the amount of any loss or damage, including without limitation consequential, incidental or indirect damages including loss of earnings or profits, in any manner resulting, whether or not from negligence or gross negligence, from loss of or damage to the goods and/or misdelivery, failure to deliver or delay in delivery of the goods, for which carrier may be liable to the consignor, owner, consignee and/or any third party, whether in contract, tort or otherwise, shall in no event exceed (i) in the case of fundamental breach by carrier, the greater of an amount equal to carrier's maximum liability aforesaid and the amount of all freight and other charges paid hereunder, and (ii) in any other case, an amount equal to carrier's maximum liability aforesaid.

N.B. NOTE CAREFULLY CONDITIONS ON BACK HEREOF INCLUDING LIMITATIONS AND EXCLUSIONS OF CARRIER'S LIABILITY, WHICH ARE HEREBY ACCEPTED

LIMITATION DE RESPONSABILITÉ IMPORTANT, LISEZ S.V.P.

Le montant de toute perte ou dommage dont le transporteur pourrait être responsable ne doit pas excéder $2.00 la livre ($4.41 le kilogramme) calculé sur le poids total de l'expédition, à moins qu'une valeur supérieure ne soit déclarée au recto du connaissement par l'expéditeur. Il est de plus convenu à titre d'entente spéciale que, malgré toute divulgation de la nature ou de la valeur extraordinaire des marchandises, le montant de toute perte ou dommage, y compris les dommages indirects, accessoires ou incidents comprenant la perte de revenus ou de profits, provenant de la perte ou d'un dommage aux marchandises, d'une erreur de livraison, de défaut ou d'un retard dans la livraison des marchandises ou encore d'une autre source, par suite d'une négligence ou d'une faute lourde, dont le transporteur pourrait être tenu responsable, contractuellement, délictuellement ou autrement, envers l'expéditeur, le propriétaire, le destinataire ou un tiers, ne doit en aucun cas excéder (i) dans le cas de violation fondamentale du contrat par le transporteur, soit un montant égal à la responsabilité maximale précitée du transporteur, soit le montant de tous les frais de transport et autres frais payés en vertu des présentes, selon le plus élevé des deux, et (ii) dans les autres cas, un montant égal à la responsabilité maximale précitée du transporteur.

N.B. VEUILLEZ PRENDRE CONNAISSANCE DES CONDITIONS AU VERSO, Y COMPRIS LES LIMITATIONS ET EXCLUSIONS DE RESPONSABILITÉ DU TRANSPORTEUR, QUI SONT ACCEPTÉES PAR LES PRÉSENTES

NO. OF PIECES / NO DE COLIS	DESCRIPTION	WEIGHT / POIDS
		lb [ ] kg [ ]
TOTAL	SPECIAL AGREEMENT / DISPOSITIONS PARTICULIÈRES	TOTAL WEIGHT / POIDS TOTAL

RECEIVED IN GOOD ORDER EXCEPT AS NOTED.
REÇU EN BON ÉTAT APPARENT SAUF MENTIONS CI-DESSOUS

CONSIGNEE / DESTINATAIRE

PER :
PAR :

DATE

TIME / HEURE

PRINTED IN CANADA / IMPRIMÉ AU CANADA

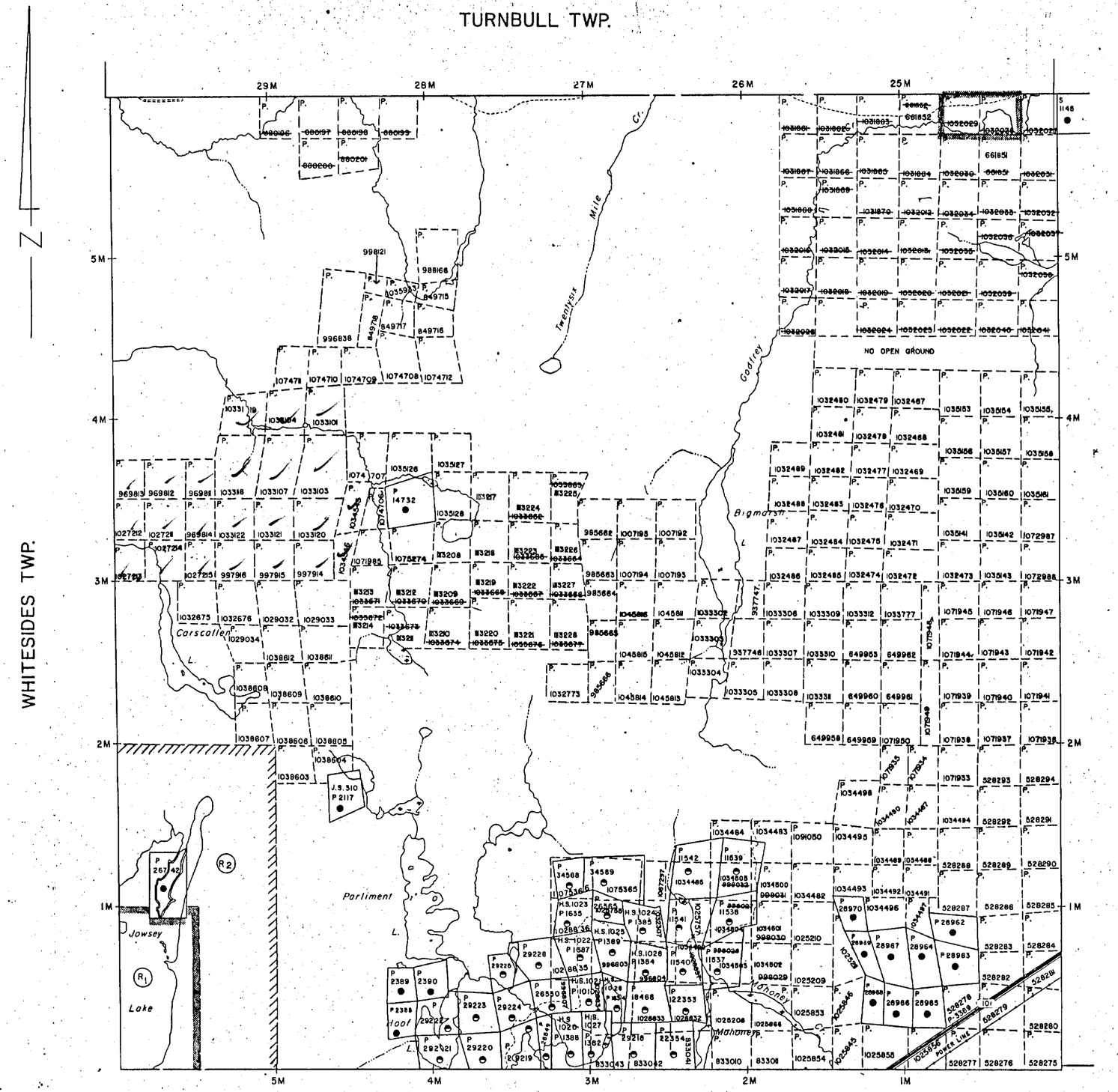
0-104 REV. 04/86

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

	Description	Order No.	Date	Disposition	File
R1	SEC. 42 (R.S.O. '60)		FEB. 3/66	M. & S.	171506
R2	DANA AND JOESEY LAKES PARK RES.			S.R.O.	171506
	SEC. 36/80	W66/83	NOV.8/83	M.R.O.	



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 OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

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	▼
ORDER-IN-COUNCIL	OC
RESERVATION	Ⓡ
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

CARSCALLEN

M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ontario Ministry of Natural Resources — Land Management Branch

Date SEPTEMBER, 1984
Number G-3040

IN SERVICE NOV. 28/88

GABBRO

Iron Formation

Diabase

FAULT OR SHEAR ZONE

GEOLOGICAL CONTACT

ANTICLINE AXIS

AIRBORNE ELECTROMAGNETIC ANOMALY

INTERPRETATION **2.12564**

GEOLOGICAL ASSOCIATION OF CANADA
K. A. JENSEN
FELLOW

▲ BASE STATIONS
BASE LEVEL 58,000 GAMMAS
GEOMETRICS G-816

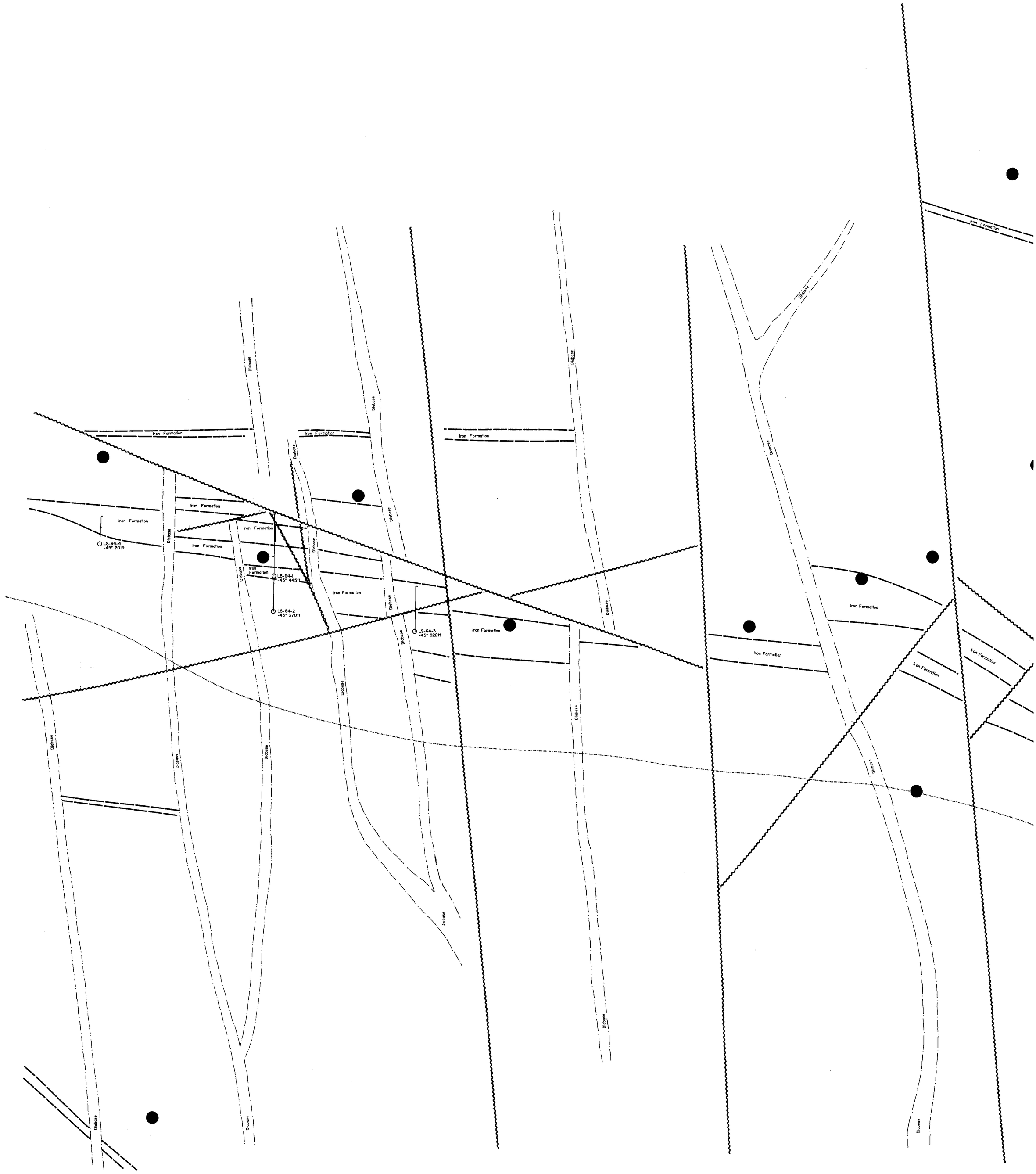
MAGNETIC SURVEY

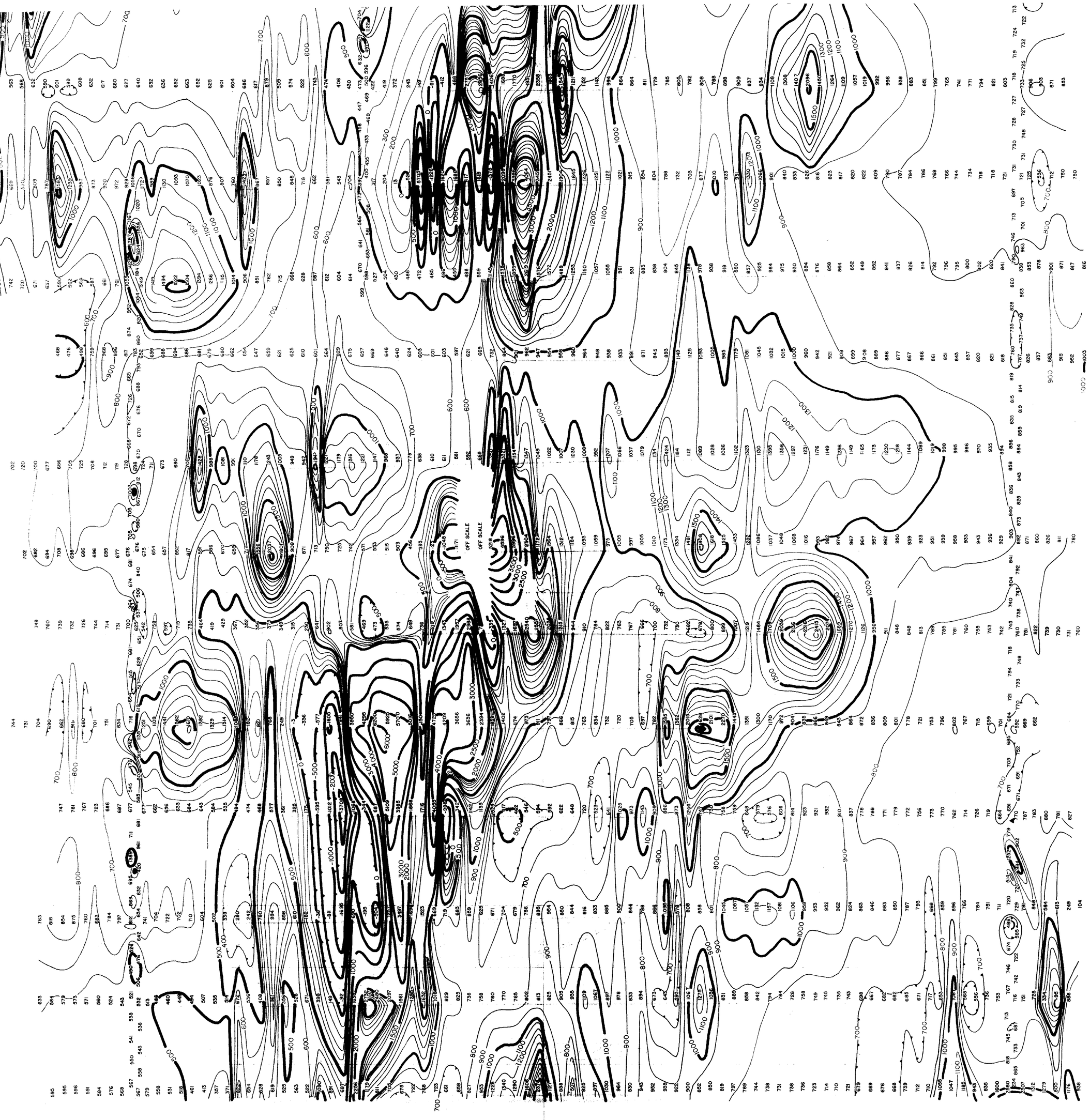
2.12564

M.CARON

MARCH 11 TO 21, 1989

GEOLOGICAL ASSOCIATION OF CANADA
K. A. JENSEN
FELLOW




OFF SCALE
OFF SCALE