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A-617

#### REPORT ON AN

## AIRBORNE MAGNETIC AND VLF-EM SURVEY RANEY AND ROLLO TOWNSHIPS PORCUPINE MINING DIVISION, ONTARIO

for

CARLSON MINES LTD.

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# RECEIVED

SEP 22 1986

### MINING LANDS SECTION

by

TERRAQUEST LTD. Toronto, Canada

August 30, 1986

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TABLE OF CONTENTS

		Page
1.	INTRODUCTION	l
2.	THE PROPERTY	1
3.	GEOLOGY	1
4.	SURVEY SPECIFICATIONS	2
	<pre>4.1 Instruments 4.2 Lines and Data 4.3 Tolerances 4.4 Photomosaics</pre>	2 3 3 3
5.	DATA PROCESSING	3
6.	INTERPRETATION	4
	<pre>6.1 General Approach 6.2 Interpretation</pre>	4 5
7.	SUMMARY	7

#### LIST OF FIGURES

Fig. 1 - General Location Map Fig. 2 - Survey Area Map Fig. 3 - Sample Record Fig. 4 - Terraquest Classification of VLF-EM Conductor Axes

#### LIST OF MAPS IN JACKET

No.	A-617-1,	Total Magnetic Field
No.	A-617-2,	Vertical Magnetic Gradient
No.	A-617-3,	VLF-EM Survey
No.	A-617-4,	Interpretation

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1. INTRODUCTION

This report describes the specifications and results of a geophysical survey carried out for Carlson Mines of 407-2 Civic Centre, Etobicoke, Ontario M9C 5A3 by Terraquest Ltd., 905 - 121 Richmond St. W., Toronto, Canada. The field work was performed on November 22, 1985 and the data processing, interpretation and reporting from November 25, 1985 to August 30, 1986.

- 1 -

The purpose of a survey of this type is two-fold. One is to prospect directly for anomalously conductive and magnetic areas in the earth's crust which may be caused by, or at least related to, mineral deposits. A second is to use the magnetic and conductivity patterns derived from the survey results to assist in mapping geology, and to indicate the presence of faults, shear zones, folding, alteration zones and other structures potentially favourable to the presence of gold and base-metal concentration. To achieve this purpose the survey area was systematically traversed by an aircraft carrying geophysical instruments along parallel flight lines spaced at even intervals, 100 meters above the terrain surface, and aligned so as to intersect the regional geology in a way to provide the optimum contour patterns of geophysical data.

#### 2. THE PROPERTY

The property is located in Raney and Rollo townships, in the Porcupine Mining Division of Ontario about 48 kilometres south southwest of Foleyet and 50 kilometres east of Chapleau. The property lies south of Ridley Lake and can be reached by floatplane from Chapleau.

The latitude and longitude are 47 degrees 53 minutes, and 82 degrees 44 minutes respectively, and the N.T.S. reference is 410/15.

The claim numbers are shown in figure 2.

3. GEOLOGY

Map References

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1. Map 43b: Swayze Gold Area. scale 1:63,360. O.D.M.1934

- 2. Map P.673: Horwood Lake Sheet. scale 1:126,720. O.D.M. 1971
- 3. Map P.675: Opeepeesway Rocky Island Lakes. scale 1:126,720. O.D.M. 1971
- 4. Map 2352: Chapleau. scale 1:250,000. O.D.M. 1976

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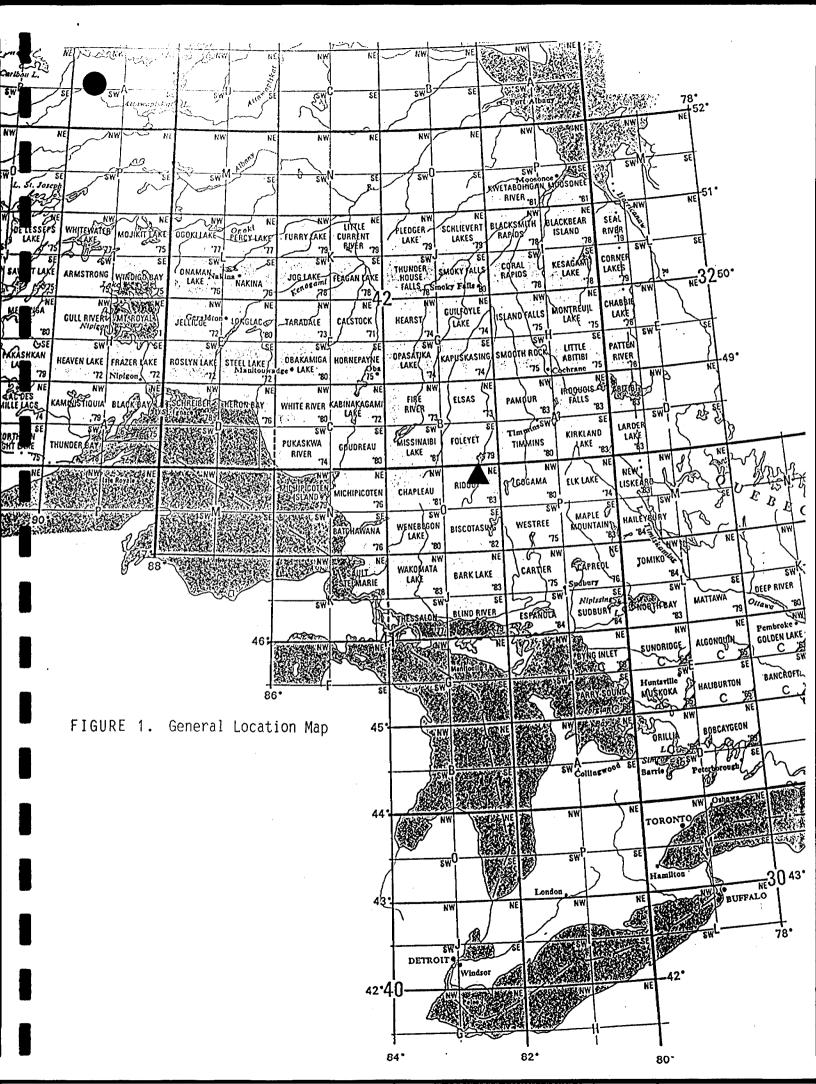


										FIGURE 2. Property Claims	Map
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The property is underlain primarily by mafic to intermediate volcanics trending to the northeast. Minor felsics and sediments occur as a narrow belt across the southern edge of the property and as a narrow wedge projecting in from the eastern boundary. A stock of biotite - hornblende granite occurs along the northern boundary and as a small plug in the centre of the property.

The Destor - Porcupine Break occurs to the east of the property and projects to the south east corner of the survey area.

#### 4. SURVEY SPECIFICATIONS

4.1 Instruments

The survey was carried out using a Cessna 182 aircraft, registration C-FAKK, which carries a magnetometer and a VLF electromagnetic detector.

The magnetometer is a proton precession type with the sensor element mounted in an extension of the right wing tip. It's specifications are as follows:

Resolution:	0.5 gamma
Accuracy:	One gamma
Cycle time:	One second
Range:	20000 - 100000 gammas in 23 overlapping
	steps
Gradient tolerance:	Up to 5000 gammas per meter
Model:	GSM-8BA
Manufacturer:	GEM Systems Inc., 105 Scarsdale Rd.,
	Don Mills, Ontario, M3B 2R5

The VLF-EM unit uses three orthoganol detector coils to measure (a) the total field strength of the time-varying EM field and (b) the phase relationship between the vertical coil and both the "along line" coil (LINE) and the "cross-line" coil (ORTHO). The LINE coil is tuned to a transmitter station that is ideally positioned at right angles to the flight lines, while the ORTHO coil transmitter should be in line with the flight lines. It's specifications are:

Accuracy:1%Reading interval:1/2 secondModel:TOTEM 2AManufacturer:Herz Industries, Toronto

The VLF sensor is mounted in the left wing tip extension.

Other instruments are:

King KRA-10A Radar altimeter

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 UDAS-100 data processor with Digidata nine track tape recorder, manufactured by Urtec Ltd., Markham, Ontario.
 Geocam video camera and recorder for flight path recovery, manufactured by Geotech Ltd., Markham, Ontario.

#### 4.2 Lines and Data

a) Line spacing:	100 meters
b) Line direction:	360 degrees
c) Terrain clearance:	100 meters
d) Average ground speed:	156 km/hr.
e) Data point interval:	
Magnetic:	42 meters
VLF-EM:	21 meters
f) Tie Line interval:	2 kilometers
g) Channel l (LINE):	
h) Channel 2 (ORTHO):	
i) Line km over total surve	y area: 340
j) Line km over claim group	s: 313

#### 4.3 Tolerances

a) Line spacing: Any gaps wider than twice the line spacing and longer than 10 times the line spacing were filled in by a new line.
b) Terrain clearance: Portions of line which were flown above 125 meters for more than one km were reflown if safety considerations were acceptable.

c) Diurnal magnetic variation: Less than twenty gammas deviation from a smooth background over a period of two minutes or less as seen on the base station analogue record.

d) Manoeuvre noise: Approximately +/-5 gammas.

#### 4.4 Photomosaics

For navigating the aircraft and recovering the flight path, mosaics of aerial photographs were made from existing air photos.

#### 5. DATA PROCESSING

Flight path recovery was carried out in the field using a video tape viewer to observe the flight path as recorded by the Geocam video camera system. The flight path recovery was completed daily to enable reflights to be selected where needed for the following day

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Suite 905. D D C V → © © 121 Richmond Street West, Toronto, Canada, M5H 2K1, Telephone (416) 869-0010 սող հայտաներությունը, որ հետությունը, որ հետությունը, հետությունը, հետությունը, հետությունը, հետությունը, հետու بمليسين معليين بريبين اعتبرين بيريد Altimeter VLF station LF station ۸ł **C**0 C) TM 94 Magnetometer (coarse & fine scale) o ល ហ ហ υŵ CUT ы С œ οũ e U U U U U .... ក្រហ ល ។ ហ N01 LN **Fiducials**  $\sim$   $\rightarrow$   $\omega$   $\omega$   $\omega$   $\omega$   $\omega$   $\omega$   $\rightarrow$   $\omega$   $\rightarrow$   $\omega$   $\rightarrow$   $\omega$   $\rightarrow$ FIGURE 3. Sample of analogue data TERRAQUEST LTD.

The magnetic data was levelled in the standard manner by tying survey lines to the tie lines. The IGRF has not been removed. The total field was contoured by computer using a program provided by Dataplotting Services Inc. To do this the final levelled data set is gridded at a grid cell spacing of 1/10 of an inch at map scale.

The vertical magnetic gradient is computed from the total field data using a method of transforming the data set into the frequency domain, applying a transfer function to calculate the gradient, and then transforming back into the spatial domain. The method is described by a number of authors including Grant, 1972 and Spector, 1968. The computer program for this purpose is provided by Paterson, Grant and Watson Ltd. of Toronto.

The VLF data was treated automatically so as to normalize the non conductive background areas to 100 (total field strength) and zero (quadrature). The algorithms to do this were developed by Terraquest and will be provided to anyone interested by application to the company.

All of these dataprocessing calculations and map contouring were carried out by Dataplotting Services Inc. of Toronto.

#### INTERPRETATION

#### 6.1 General Approach

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To satisfy the purpose of the survey as stated in the introduction, the interpretation procedure was carried out on both the magnetic and VLF data. On a local scale the magnetic gradient contour patterns were used to outline geological units which have different magnetic intensity and patterns or "signatures". Where possible these are related to existing geology to provide a geological identity to the units. On a regional scale the total field contour patterns were used in the same way.

Grant, F.S. and Spector A. 1970: Statistical Models for Interpreting Aeromagnetic Data; Geophysics, Vol 35 Grant, F.S., 1972: Review of Data Processing and Interpretation Methods in Gravity and Magnetics; Geophysics, August 1972. Spector, A., 1968: Spectral Analysis of Aeromagnetic maps; unpublished thesis; University of Toronto, 1968.



Faults and shear zones are interpreted mainly from lateral displacements of otherwise linear magnetic anomalies but also from long narrow "lows". The direction of regional faulting in the general area is taken into account when selecting faults. Folding is usually seen as curved regional patterns. Alteration zones can show up as anomalously quiet areas, often adjacent to strong, circular anomalies that represent intrusives. Magnetic anomalies that are caused by iron deposits of ore quality are usually obvious owing to their high amplitude, often in tens of thousands of gammas.

VLF anomalies are categorized according to whether the phase response is normal, reverse, or no phase at all. The significance of the differing phase responses is not completely understood although in general reverse phase indicates either overburden as the source or a conductor with considerable depth extent, or both. Normal phase response is theoretically caused by surface conductors with limited depth extent.

Areas showing a smooth response somewhat above background (ie. 110 or so) are likely caused by overburden which is thick enough and conductive enough to saturate at these frequencies. In this case no response from bedrock is seen.

#### 6.2 Interpretation

The total magnetic field has a relief of approximately 875 gammas and shows exceptionaly clear magnetic patterns, unusually detailed for total magnetic field data. The vertical magnetic gradient data improves the resolution of the very high and the very low magnetic stratigraphy. The vertical magnetic gradient data was used to delineate the stratigraphy and structure and the total magnetic field was used to obtain the relative intensities of the magnetic units.

The mafic to intermediate volcanics (Unit 1) correlate with moderately strong magnetic responses. Areas mapped as Unit 1 probably contain minor felsic volcanics. Strongly magnetic strata (Unit 1m) occur within the mafic volcanics and are probably related to increased concentrations of mafic constituents, magnetite or sulphides, particularly pyrrhotite. Boundaries of the very strongly magnetic units are generally exaggerated beyond their true ground widths.

Diabase dykes (Unit 9) also possess a moderately strong magnetic response. They are identified primarily by their cross cutting nature. In general they cannot be resolved from the volcanics where the diabase parallels the mafic strata (Unit lm).

The felsic to intermediate volcanics (Unit 2) and metasediments (Unit 3) both correlate with moderately low magnetic responses.

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The biotite - hornblende granite (Unit 6) generally possesses a weak magnetic response common for most granites. The outline is best identified by the total magnetic field data which suggest that the granite extends southwards beneath the volcanics in the middle of the property. Strata with higher magnetic activity (Unit 6m) may be related to different granitic phases (such as increased concentrations of hornblende) or to remnant volcanic enclaves.

The area is structurally complex. The Destor - Porcupine Break represented by the northeastern trending diabase dyke (Unit 9) occurs in the southeastern corner of the property. A parallel set of faults occur throughout the survey area.

Other fault sets trend to the east, north and northwest. The northwest set is interpreted to be relatively early and may be responsible for the apparent large scale dextral displacement of the major magnetic strata. Some of these faults may have been tensional providing ground preparation for diabasic intrusives. This is suggested by the possible northwest trending dykes in the centre of the property. Alternatively, the termination of the northeast trending magnetic strata may be related to the granitic intrusive.

The east trending fault set is defined primarily by offsets in the north trending dykes,. In places these splay slightly to the north or south. This set is interpreted to be relatively young.

The interpretation of faults from magnetic data is quite subjective, many variations are possible. Reinterpretation by a different individual preferrably with ground data is often informative.

Numerous moderate to strong VLF-EM conductor axes have been identified and evaluated according to the Terraquest classification system (Figure 4). This system correlates the nature and orientation of the conductor axes with stratigraphic, structural and topographic features to obtain an association from which one or more origins may be selected. Alternate associations are indicated in parentheses.

Those conductor axes that coincide with or parallel magnetic stratigraphy possess the greastest potential for bedrock origins either as graphite or sulphides. These should be followed up on the ground by EM or IP techniques. Faults identified by VLF-EM or magnetic methods may provide primary structural control for epithermal mineralization.

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FIGURE 4

### TERRAQUEST CLASSIFICATION OF VLF-EM CONDUCTOR AXES

Symbol	Correlation	Association: Possible Origins
а	Coincident with magnetic stratigraphy	Magnetic horizons: stratabound mineralogic origin or shear zone
b	Parallel to magnetic stratigraphy	Non-magnetic horizons: stratabound mineralogic origin or shear zone
С	No correlation with magnetic stratigraphy	Association not known: stratabound mineralogic origin, fault or shear zone, overburden
d	Coincident with magnetic dyke	Dyke or possible fault: mineralogic or electrolytic
f	Coincident with topographic lineament or parallel to fault system	Fault zone: mineralogic or electrolytic
ob	Total field contours conform to topographic depression	Most likely overburden: Clayey sediments, swampy mud
cul	Coincident with cultural sources	Electrical, pipe or railway lines
Index to	Relative Amplitudes of Conductor Axes	
а	- Total field conductor axis	
Α	- Strong total field conductor axis	
a	- Total field conductor axis with strong quad	rature response

#### Notes

1 - Mineralogic origins include sulphides, graphite, and in fault or shear zones gouge
 2 - Electrolytic origins imply conductivity related to porosity or high moisture content

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#### 7. SUMMARY

An airborne combined magnetic and VLF-EM survey has been done on the property at line intervals of 100 metres. The total field and vertical gradient magnetic data, VLF-EM data and interpretation maps are produced at a scale of 1:10,000.

The magnetic data has been used to modify and update the existing geology and has shown a number of new contacts and faults in considerable detail. Numerous VLF-EM conductor axes were found of which some are believed to have potential sulphide origins and have been recommended for additional investigation.

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Charles Q. Barrie, M.Sc. Geologist

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CHARLES Q P	•	21 RI	CHMOND 5.	r w. Ste	e 905	TORONTO ONTARIO
Credits Requested per Each		ight	Mining Clain	ns Traversed (I	List in nume	rical sequence)
Special Provisions	Geophysical	Days per Claim	Prefix	ng Claim Number	Expend. Days Cr.	Mining Claim Expend. Prefix Number Days Cr.
For first survey: Enter 40 days. (This	- Electromagnetic		PE	351945		851968
includes line cutting)	- Magnetometer		4	351946		851969
For each additional survey:	- Radiometric		4	351947		851970
using the same grid: Enter 20 days (for each)	- Other			351948		851971
	Geological			351949	<u>  </u>	851972
	Geochemical			351950		851973
Man Days	Geophysical	Days per Claim	1. 1. 1. 1. 1. 1.	851951		851974
Complete reverse side and enter total(s) here	- Electromagnetic		and the State	351952		851975
	- Magnetometer		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	851953		851976
	Radiometric		Contraction of the second	351954		851977
•			100 ST 124	851955		851978
	Geological			851956		
-	Geochemical		37 Star 1 Star			851979
Airborne Credits	Geochemical	Days per	2229000	851957		RECORDED
		Claim	Sector Vice in	351958		
Note: Special provisions credits do not apply	Electromagnetic	40		851959		
to Airborne Surveys.		40		351960		JUN 1 3 1986
Europeditures (expludes pour			CAR BUNCH STORE	351961		
Expenditures (excludes pov Type of Work Performed			1. F 11. S. F	351962		A AND ROHCUPINE MINING DIVISION
Performed on Christian			5-2-4-14 A	351963		MEREIWEM
Performed on Claim(s)	ويوري المدحلة وروالية			351964	ļ	
	i da anna Anna Anna Anna			351965		JUN 1 3 1986
Calculation of Expenditure Da				851966		
Total Expenditures		Total s Credits		351967		
\$	÷ 15 =					Total number of mining claims covered by this 2C
Instructions Total Dava Credits may be						claims covered by this report of work.
Total Days Credits may be a choice. Enter number of da in columns at right.				or Office Use C		
			Recorded	June 1		Manuel
Dote June 10/86	ecorded Holder or opent (	Signature)	2,800	Date Approved	es Becorded	Branch Oirictor
Certification Verifying Rep	port of Work	>		1	W and the second second second	a such that a first a state of the
I hereby certify that I have or witnessed same during ar					of Work anne	exed hereto, having performed the work
Name and Postal Address of Pe	arson Certifying		· · · · · · · · · · · · · · · · · · ·			
ROBERT "	PLATT C	ste	407 - 2	CIVIC	CEN	Certified by Gignature)
ETOBICOK	E M9C	5A3	3	JUNE	10/86	
1362 (85/9)						

Ontario	(Geophysical, Geological, Geochemical and Expendit	ures)	And	g Note: -	exceeds space on this form, a Only days credits calculate "Expenditures" section may	ttach a ed in be enti
		Minin	BACT A		in the "Expend. Days Cr." Do not use shaded areas below	colur
Type Vey(s) AIRBO	orne ULF-EM	MAGNE	TICS	Township (		
Cinimo Holder(s)	1 (MZ1221) GEOR	•		11TA1 1 A	Prospector's Licence No.	
Address				•		
YO ANDY BOUDILE	EAU RRI AIRI	PORT ROAD	Date of Survey	15,0NT	Total Miles of line (	Cut
TERRAQ	UEST		20 // E	35 22 6.V	// 85 Mo.   Vr.	
Name and Address of Author ( CHARLES Q. B	of Geo-Technical report)	ICHMOND	ST. W. S	e 905	TORONTO ON	٢.
Credits Requested per Each			Claims Traversed (L			
Special Provisions	Geophysical Days Clai		Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix Number	Expe Days
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includes line cutting)	Magnetometer		866877		864900	
For each additional survey:	- Rediometric		866878		866901	
using the same grid: Enter 20 days (for each)	Other		866879		866902	
	Geological		866880	11	866903	
	Geochemical S2011 .11		866381	<b> </b>	866904	
Man Days	Geophysical Days		866882		866905	1
Complete reverse side and enter total(s) here	- Electromagnetic		866883		866906	
DECOR	DE Dagnesometer		866884	<u>†</u> −−−−[	366907	1
	- Radionetric		866885		365908	1
	1988 <sup>ther</sup>		866886	+	865909	1
JUN 13	Geological		866887	+	866910	1
l d	Geochemical		866888	+	G66110	
Airborne Credits	Davs Cla		866889	+	866912	
Note: Special provisions	Electromagnetic 40		866890	<del>  </del>	01.L917	+
credits do not apply	11.		211001	+	866914	
to Airborne Surveys.	Radiometric		1100001	<u> </u> ]	24 State 1	
Expenditures (excludes pov			011007	1	866916	
Type of Work Pertormed	ECENVEN		000015		<u>566511</u>	
Performed on Claim(s)			866894	┨┨	866918	
	JUN 1 3 1986		866895		866919	
_			866896		860920	
Calculation of Expenditure Da	ys Credits Total		866897		866921	
Total Expenditures	Days Cred		866898		666422	<u>·</u> ]
\$	÷ 15 =	<u> </u>			Total number of mining claims covered by this	11
Instructions Total Days Credits may be	apportioned at the claim holder				report of work.	75
	ys credits per claim selected	Total Da	For Office Use ( ys Cr. Date Recorded		Mining Theoffer	1
		Recorde	10	3 86	Wanter	
Date R	ecorded Holder or Agent Signat	ure) 3,60	Approved	Recorded	Brench Director	7
Certification Verifying Rep			2		1 Januar	
I hereby certify that I have or witnessed same during a	a personal and intimate knowle nd/or after its completion and th	dge of the facts se he annexed report	t forth in the Report is true.	of-Work annie	exed hereto, having performed t	the wo
Name and Postal Address of Po	erson Certifying		· · · · · · · · · · · · · · · · · · ·			
	LATT Ste		(IVIC Date Certified		Certified by (gignature)	
	KE M9C S	5A3	Jeme 1	0/86	1. j. j. j.	K
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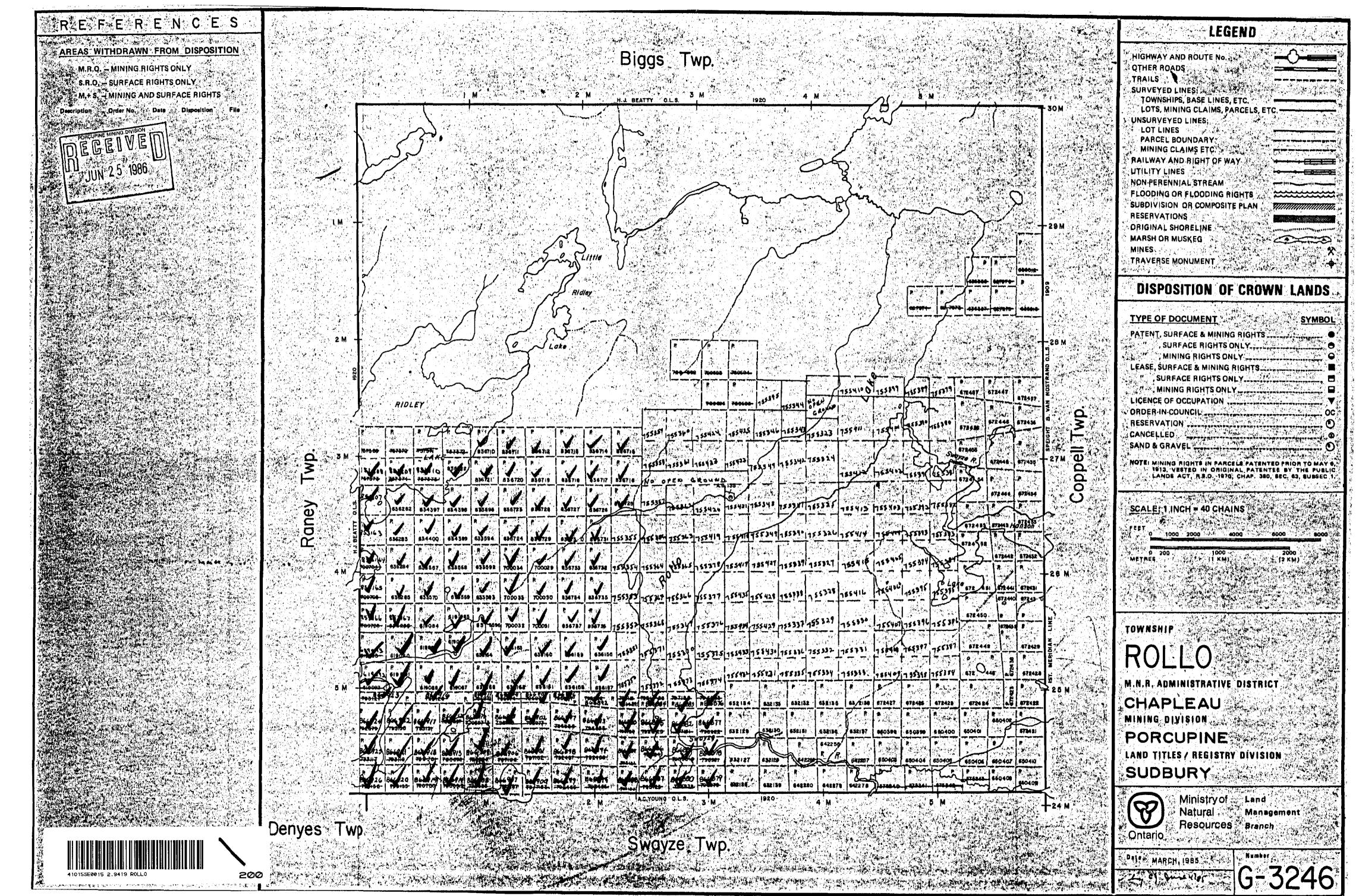
Oniario	Northern Affairs and Mines	Report of Work (Geophysical, Geolog Geochemical and Exp		# 1851	86 Ins 29419	 Note:	Please type or print. If number of mining exceeds space on this f Only days credits ca "Expenditures" section	orm, attach a list. Acculated in the may be entered
	(	••••••••••••••••••••••••••••••••••••••	··· ·	Mining A	rt	· · · ·	in the "Expend, Day Do not-use shaded areas	's Cr." columns.
Type of	SURVEY (1) AIRBO	PRNE ULF-	em, r	AGNETI	25	Township o POL		
Claim H	older(s)	BOYD	<i>J</i>	<u>.</u>		· · ·	Prospector's Licence N M 21339	o.
Address					a 11111	Carli	La contraction de la c	
Survey	70 LNGAM	AR EXPLORA	CHOIL	CEDA	Date of Survey		Total Miles c	
		AQUEST			Date of Survey 20 // Day   Mo.	S 22 1	1 85 Mo.   Yr.	
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Credits	Requested per Each (	Claim in Columns at r		Mining Clain	ns Traversed (I		rical sequence)	
Special	Provisions	Geophysical	Days per Claim	Minir Prefix	ng Claim Number	Expend. Days Cr.	Mining Claim Prefix Numbe	Expend. r Days Cr.
	first survey: inter 40 days. (This	- Electromagnetic		P 7	00029			
	ncludes line cutting)	- Magnetometer		7	00030			
	each additional survey:	- Radiometric			100031			
	g the same grid: inter 20 days (for each)	- Other		CHARLES STORES	100032			
		Geological		1463 36	100033			
		Geochemical		<b>全部的部分</b>	700034			
Man Da	Y\$	Geophysical	Days per Claim					
	plete reverse side enter total(s) here	- Electromagnetic						
1	ECORDED	- Magnetometer						
	has the the to be have the	- Radiometric						
		- Other						
1 、	JUN 13 1986	Geological			<u></u>			
	al-	Geochemical			~ .			· ·
Airborn	ne Creduts		Days per		· · · · · · · · · · · · · · · · · · ·			
Note	e: Special provisions	Electromagnetic	Claim 40					
	credits do not apply	Magnetometer	40	-				
	to Airborne Surveys.	Radiometric	40		Hig Lines			
Expend	ditures (excludes <u>now</u>				- Grands	-07107		·
Type of	Work Performed	)	m					
Perform	ned on Claim(s)		╕╫┼╢┦┥			<b> </b>		
		JUN 1-3-1986	U		· · · · · · · · · · · · · · · · · · ·			
		JUN 10 1000			<u> </u>			
ļ	tion of Expenditure Day		TO(a)					
	al Expenditures		s Credits	S. States	······	·		
\$		÷ [15] = [					Total number of mini claims covared by this report of work.	
	al Days Credits may be a	pportioned at the claim I		F	or Office Use C	Dniv		L
1	olumns at right.	ys credits per claim select			Date Recorded	- 101	Mining Baserder	1
Date	Re	corded Holder or Agent (	Signature)	480	Deta Approvod	3/0 b	Branch Director	uff
Ļ		<u></u>	In	1	16.7	-71	Not the second	175
	cation Verifying Repo	ort of Work	nowledge o	f the facts set for	th in the Report	of Work anne	xed hereto having perfo	rmed the work
or w	vitnessed same during an	d/or after its completion						
Name a	and Postal Address of Per 20RFRT P	rson Certifying	to 41	n - 7		ENTR	E COURT	
,   <u> </u>		LATT S KE MG	<u> </u>	<u> </u>	Date Certified	. 1	Certified by Bignatur	<sup>e)</sup> //
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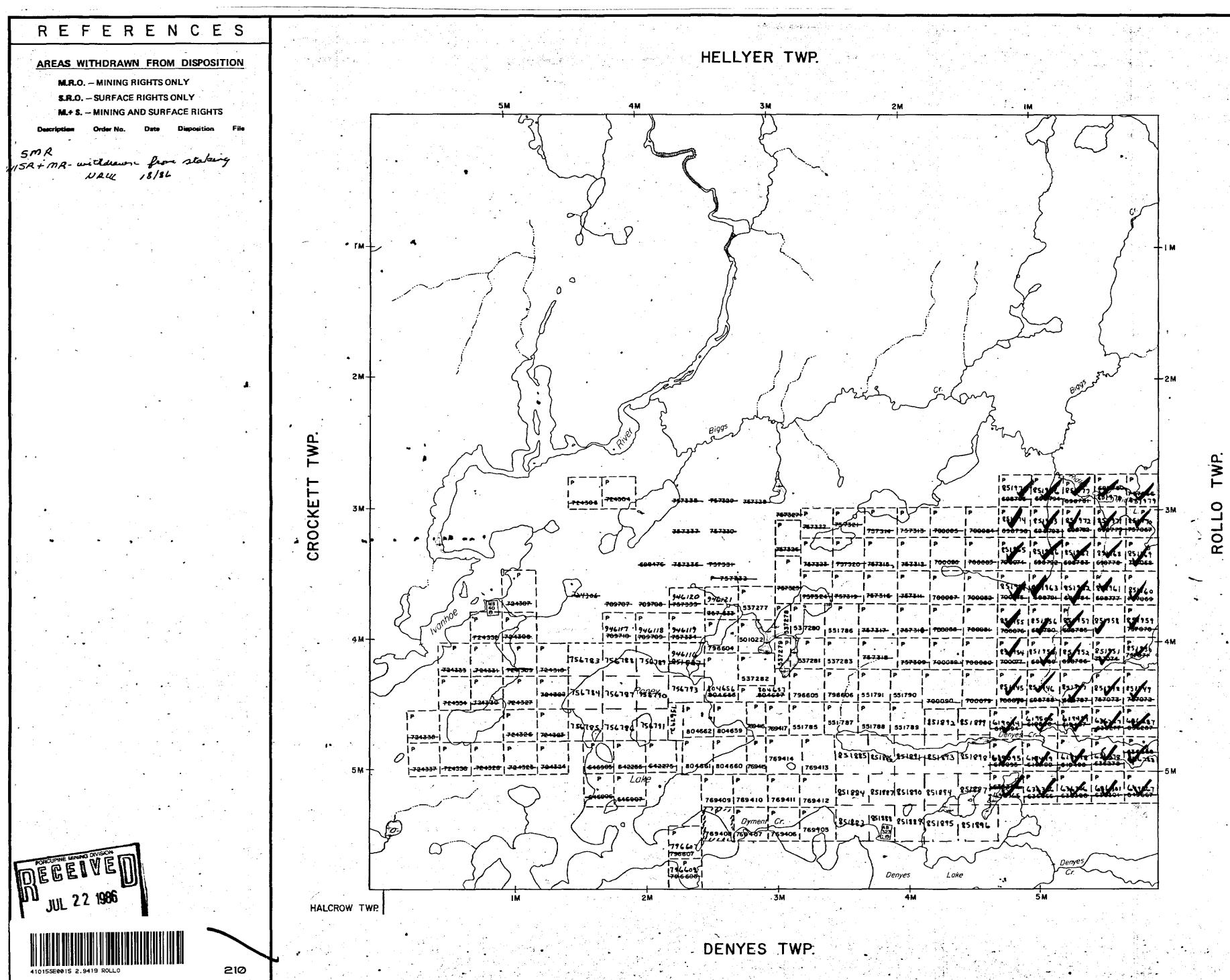
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Ontario Ministry of Northern Affairs and Mines	Report of Work (Geophysical, Geological, Geochemical and Expenditu	(res) 186/8		Note: Č	f number o xceeds space	f mining claims on this form, a credits calculate	ttach a list.
		Mining Ad	4	i	Expenditure: n the "Exp	s" section may end. Days Cr." aded areas below	be entered columns.
Type of Survey(s)		· · ·		Township or	Area	SUCU BIESS DEIOW	<u>.</u> ]
Claim Halder(a)	ORNE ULF-EM	, MAGNE		ROL	CO Prospector's	Licence No.	
DAUE :	Jones	····		<u> </u>	MZII	190	/
O IWGAM	AR EXPLORATIO	DNS CEDA	ir Hill	CONNAU	16HT	PON 1A	0/
	AQUEST		Date of Survey   20 // E Day   Mo.	from & to) 5 22. //	1,85	al Miles of line (	347
Name and Address of Author (	of Geo-Technical report)	0					
CHARLES Q. B Credits Requested per Each		RICHMOND Mining Clain	ST, ω. ns Traversed (L				τ,
Special Provisions	Geophysical Days ; Clain	ber Minir	g Claim Number	Expend. Days Cr.	the second s	ng Claim Number	Expend. Days Cr.
For first survey:	- Electromagnetic		336710		17	336733	00075 011
Enter 40 days. (This includes line cutting)	Magnetometer	Signal Free Shand	336711			336734	
For each additional survey:	- Radiometric	A PROVIDE A PROVIDE A	336712		ALL ALL ALL	336735	
using the same grid:	- Other		36713		1 dickasi	336736	
MINING LANDS .	Geological	1205 4 3 4 4	336714		19.34.71	836737	
	Geochemical	10 10 10 10	336715			351807	
Man Days	Geophysical Days ( Clair	per and z	336716			351808	
Complete reverse side	• Electromagnetic		336717			351809	
RECORDE	- Magnetometer		336718		4	351810	
¥	- Ridiometric	-	331719-	-	6	353163	
JUN 1 3 198	- Other		336720		5 2	353164	
	Geological		336721			353165	
e.	Geochemical _		836722		4	353166	
Ailborne Credits	Days ( Clair	per n	336723		- 	353167	
Note: Special provisions credits do not apply	Electromagnetic 40		336724			•	
to Airborne Surveys.	Magnetometer 40	2	336725			l.	
	Radiometric		336726				
Expenditures (excludes power of Work Performed		th g	336727				ļ]
		Щ <b>9</b>	336728				
Performed on Claim(s)	U IIIN 1 3 1986		336729				
			836730				
Calculation of Expenditure			336731				
Total Expenditures	Total Days Credit	•	336732				
\$	÷ 15 =				Total numbe claims cover		27
Instructions Total Days Credits may be a	pportioned at the claim holder's		0111-0	<u></u>	report of wo	rk.	2/
choice. Enter number of day in columns at right.	ys credits per claim selected		Date Recorded		Mining reco		
	ecorded Holder or Agent/Signatu		Date Approved	186	Branch Oiles	Vanley	4
		2,	1-+13-07		Cel f		
Certification Verifying Rep			h in the Parat	of Mork and	June of for		hework
or witnessed same during an	a personal and intimate knowledged d/or after its completion and the	•		UI WORK ADDEXE	o nereto, hav	ang pertormed t	NE WOIR
Name and Postal Address of Pe ROBERT P		IVIC CEN	MRE C	OURT	str	407 -	
	E M9C 5A3	IVIC CEN	Date Certified	101	Ste Certified by	(Signature)	7
LETORICOL 1362 (85/9)	e my dag	>	Que 1	2/86	/<	J. /	IN

	Report of Work		= 1871	86. In	structions: -	Please typ	be or print.	Augr
	(Geophysical, Geolog	lical,	•	o gulla		exceeds sp	r of mining elaim pace on this form, a vs credits calculat	ittach a list.
Ontario	Geochemical and Exp	penditures)		<i>k</i> '	Note: -	"Expendit	ures" section may Expend. Days Cr.	be entered
Type of Survey(s)			Minin	g Act			e shaded areas below	v.
	RNE VLF-	EM, N	IAGNE	TICS	ROLL	0		
Claim Holder(s)	ON MINES	•				· ·	r's Licence No. 1226	
Address						A		
Ste 401 - Survey Company	- 2 CIVIC	(EN-	TRE C	Date of Survey	E 10BIC	oke	MYC SI Total Miles of line	A 3 Cut
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Nome and Address of Author (c CHARLES @			ICHMON	ND ST. W.	Ste 90	5 TO	RONTO OF	٣.
Credits Requested per Each (		ight	Mining C	laims Traversed (I	ist in nume	rical seque	ence)	
Special Provisions	Geophysical	Days per Claim	Prefix	Aining Claim Number	Expend. Days Cr.	N Prefix	lining Claim Number	Expend. Days Cr.
For first survey: Enter 40 days. (This	Electromagnetic		P	634397				
includes line cutting)	- Magnetometer			634398				
For each additional survey:	- Radiometric		1	634399				
using the same grid: Enter 20 days (for each)	- Other		· ···	634400				
	Geological			633567				
	Geochemical		د ور فرقو م فرو بر	633568				
Man Days	Geophysical	Days per Claim		633569			·	
Complete reverse side	- Elactromagnetic			633570				
	Magnetometer			633592				1
	Radigmetric			633593		RE	· · · · ·	
JUN 131	186- Other			633594		- <b>4</b> ,	- v - h	
JUN IJI	Geological					$-\mu_{M}$	0	
DA DA	Geochemical			633595				
Airborha Greats		Days per	200 2004-00	633596	("	I'G LA	DS SECTION	
Note: Special provisions	Electromagnetic	Claim		619084	<b> </b>		- SECTION	
credits do not apply		LT		619085			، ۲	
to Airborne Surveys.	Magnetometer	24		636282			·	
Expenditures (excludes pow	Rádiometric			636283				· · ·
Type of Work Performed			]	636284				
Performed on Claim(s)				636285				-
Ferformed on Claim(s)					<b></b>	•		_
	<u>- JUN 1-3-19</u>	80	they the fu		ļ	and the second s		
Calculation of Expenditure Day	s.Credits							
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S	÷15 =						mber of mining	19
Instructions Total Days Credits may be a	positioned at the claim b					report of		( /
choice. Enter number of day in columns at right.			Total Day	For Office Use C		Minnart	eusder	1
	$\sim$		Recorded	June	13/86	10	Janley	1
Date Re	corded Holder or Agent (	Signature)	910	Dete Approved	SU,	XBranch D	rector	57
Certification Verifying Repo	prt of Work	<u>'`&gt;</u>	L	A lost		1/ /	way and and strong	
I hereby certify that I have a	personal and intimate k				of Work anne:	xed hereto,	having performed t	he work
Or witnessed same during an Name and Postal Address of Per		and the ann						
ROBERT P	ATT	Ste 4	07 -	2 CIVIC Date Certified June 1	CENT	RE -	Coul T	)
ETOBICOK	E M9C	SA3		June 1	0/86		by (Signature)	IN
1362 (85/9)		<u>_</u>						

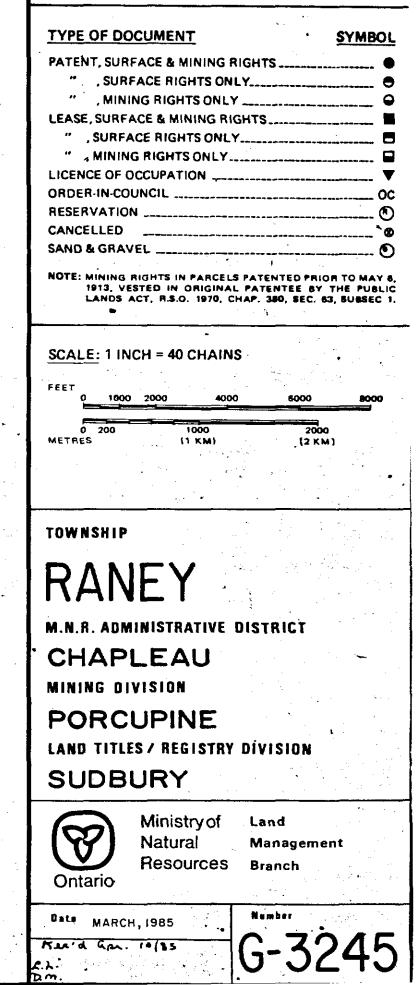
-						Instructions	- Please type or print.
	ort of Work		\$	120	0/01		- If number of mining claims traversed
Resources Geochemical and Expenditures)			30	886	Note: -	exceeds space on this form, attach a list. - Only days credits calculated in the	
Ontario					2.94	49 :	"Expenditures" section may be entered in the "Expend. Days Cr." columns.
				Mining	Act		<ul> <li>Do not use shaded areas below.</li> </ul>
Type of Survey(s)						Township	
Claim Holder(s)	VE MAG	AND	2	LF	<u>E_1</u>	Koul	Prospector's Licence No.
	MINES						T1-122.6
Address							
5.1178 41:7 - 2 Survey Company	CIVIC CER	TRE C	0.	125			
					Date of Sur	vey (from & to)	Total Miles of line Cut
Name and Address of Author (o	TD				Day Mo.	Yr. Day	Mo.   Yr.
		:n	. /		۳ ر. در	<b>-</b>	
CHARLES BARRIE Credits Requested per Each C	Claim in Columns at ri	<u>-/////</u> .oht	<u>тел</u> М	<u>4,,, 1</u> inino C	aims Traversei	d (List in num	nerical sequence)
Special Provisions	Geophysical	Days per	Ē		lining Claim	Expend.	Mining Claim Expend,
For first survey:		Claim	- H	Prefix	Number	Days Cr.	Prefix Number Days Cr.
Enter 40 days. (This	- Electromagnetic			<i>:</i> ر	619092	80	
includes line cutting)	- Magnotometer				614093	5 80	RECEIVED
For each additional survey:	- Radiometric			к. н. т. т.			
using the same grid:	• Other				619094		03 1986
Enter 20 days (for each)	- Utiler	<b> </b>			619093	- 80	
19	Geological			N	619 497	80	
	Geochemical			••	619748		HANDS SECTION
Man Days	Geophysical	Days per	.	and second as			
Complete reverse side	Geophysical	Claim	1	1	619-199		
and enter total(s) here	- Electromagnetic			••• •• •• •	614500	170	RECORDED
	- Magnetometer				636277	1 8 8 1	
	Radiometric			6. 1. 1. j. 1.	636278	i i i i i i i i i i i i i i i i i i i	
	- Other			•- ··· •			-SEP-29-1986
∲ ₩		·			636287	2 49	
	Geological	· *	1		636288	8 8 2	1. J.
	Geochemical			анананан 1919 - Аланан 1919 - Аланан	636301		
Airborne Credits		Days per	а.				
		Clairn	- K	ц.:	636300		
Note: Special provisions credits do not apply	Electromagnetic	40			636367		
to Airborne Surveys.	Magnetometer	70		•	636366	80	
	Radiometric			- -	679667		
Expenditures (excludes pow	er stripping)	<u></u>			0 1700 1		
Type of Work Performed							
							SEP 2 9 1096
Pertormed on Claim(s)				•			
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Certification Verifying Repo		nowletine of	the f	acts set	Orth in the Ren	ort of Work ann	exed hereto, having verformed the work
or witnessed same during and	l/or after its completion	and the ann	exed	report i	true.	ULL OF THURK GIRE	, end in the second sec
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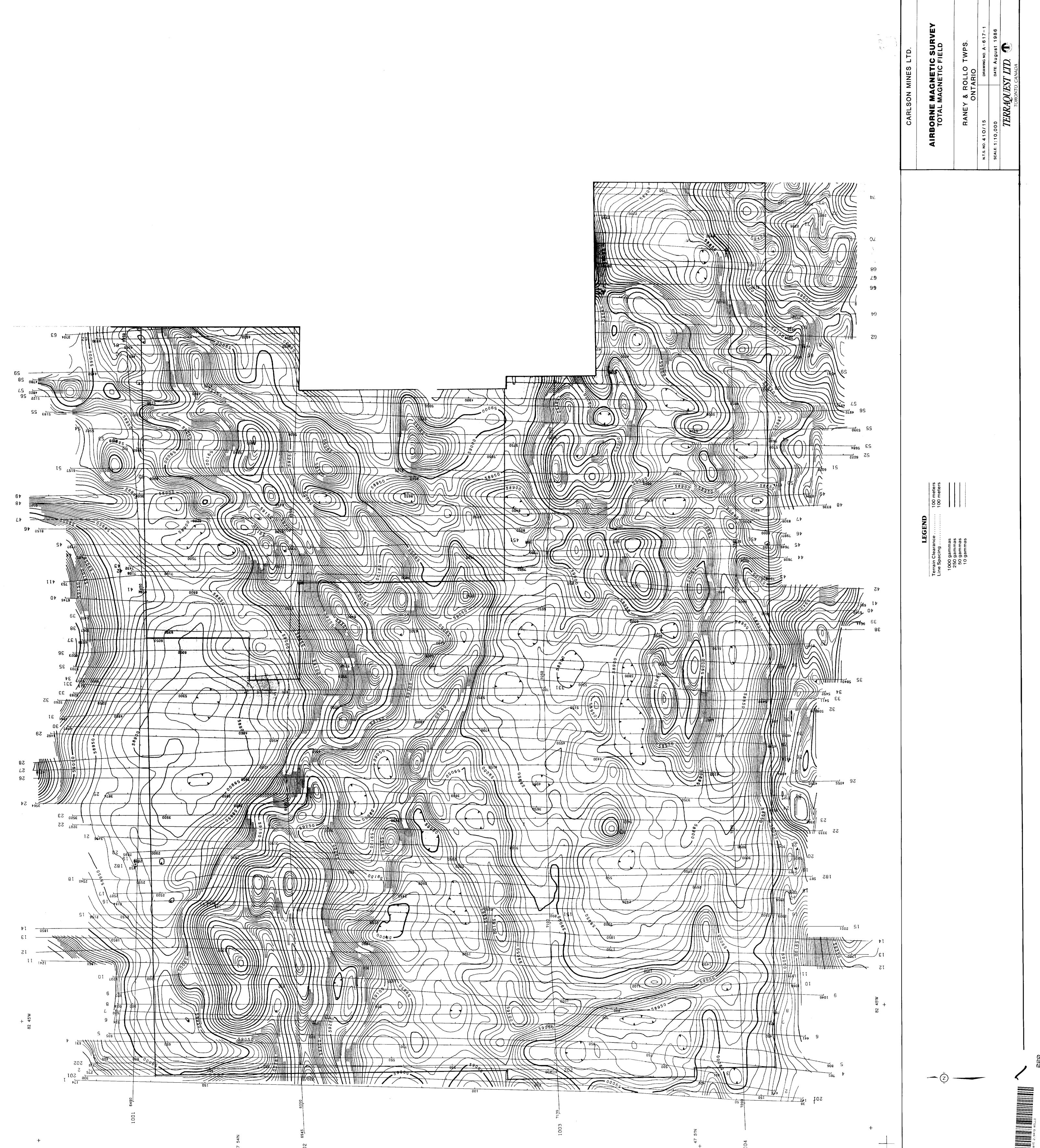




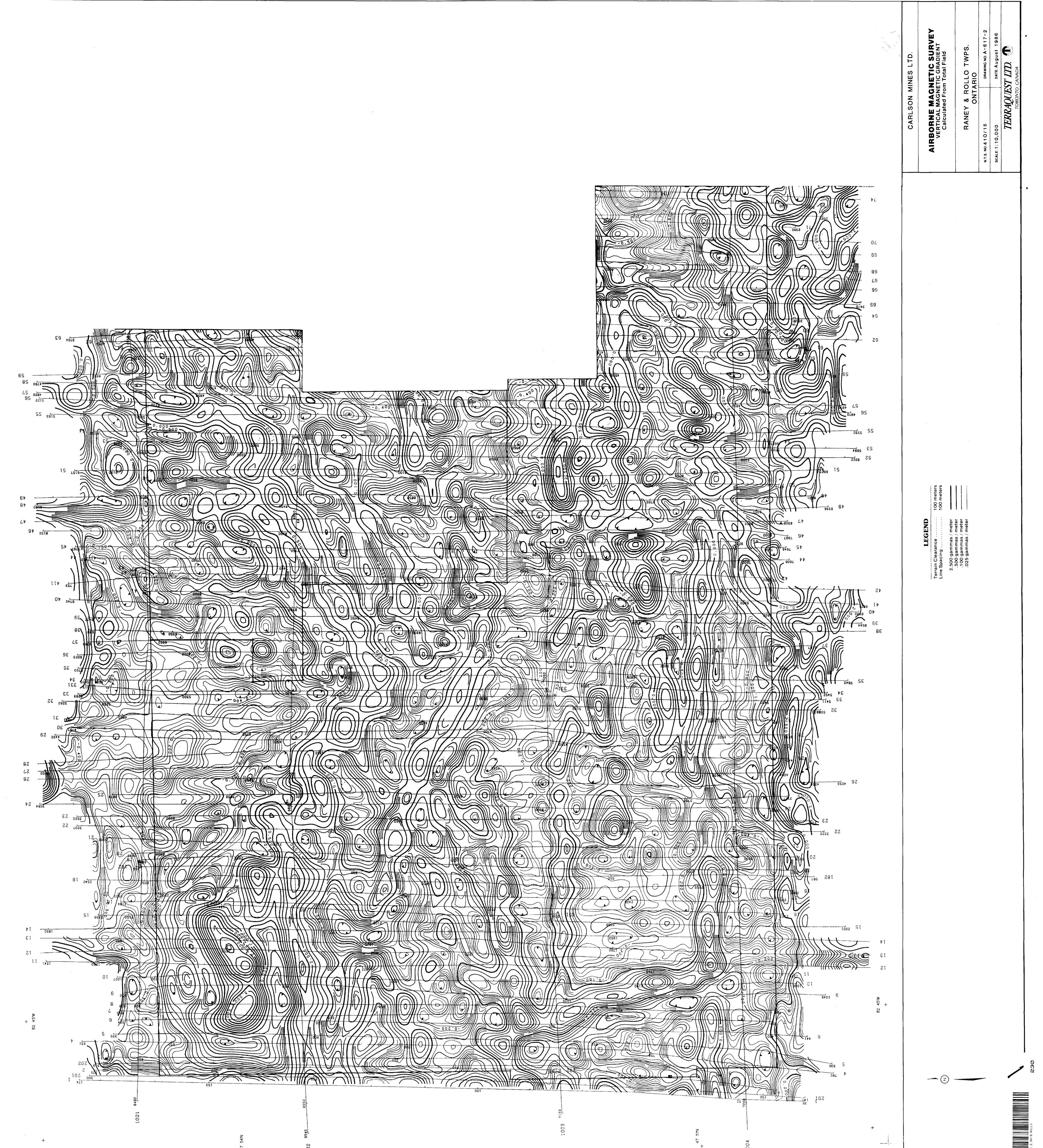
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LOTS, MINING CLAIMS, PARCELS, ET	°C. ———
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# **DISPOSITION OF CROWN LANDS**



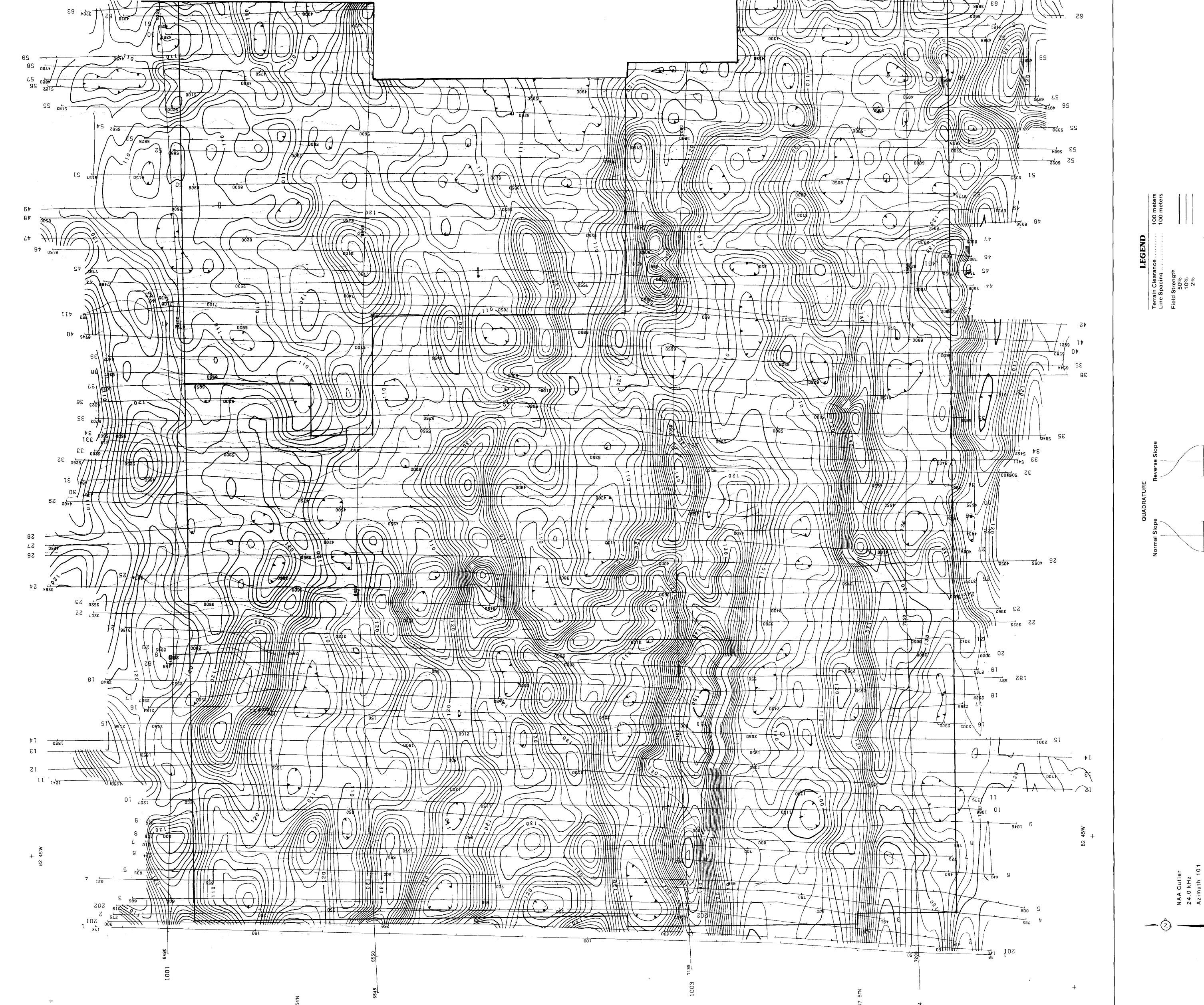






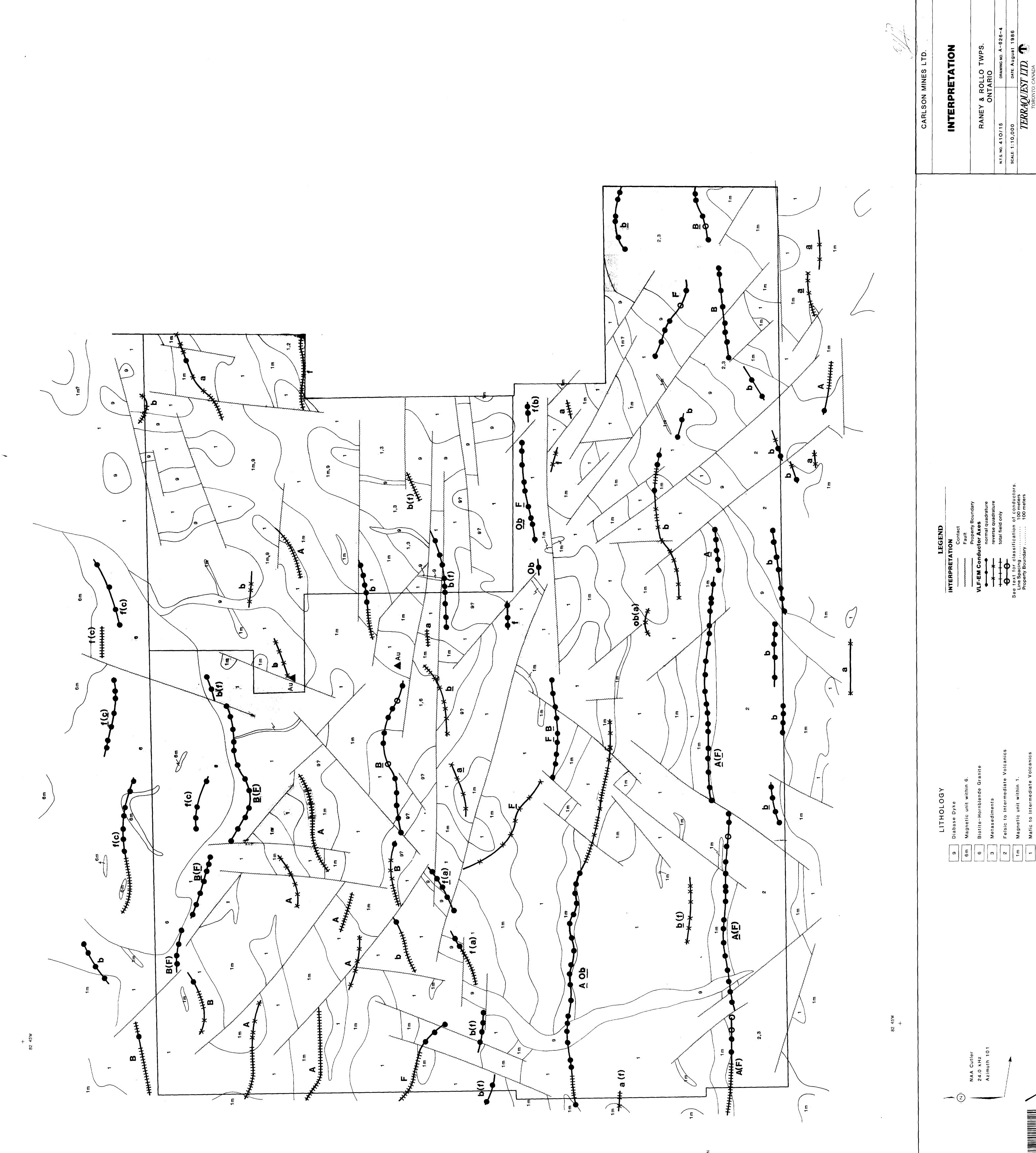


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