GEOPHYSICAL REPORT

for

BRAGG, NEWMAN PROJECT
Larder Lake Mining Division

for

CASAU EXPLORATION LTD.

by: R.J. Meikle

February 28, 1987

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INTRODUCTION

A program of Linecutting, Magnetometer survey, VLF-EM survey and Induced Polarization survey was carried out for Casau Exploration Ltd. on their Bragg, Newman Townships property. The work was carried out by Alquest Exploration Services.

The program was initiated to follow up a previous Airborne VLF-Mag survey flown by Terraquest for Casau Exploration Ltd. The property lies in a favourable geological environment, possibily the same horizon hosting the Golden Knight deposit in the Casa Berardi area of Quebec. With three recent gold occurences in the area by Newmont, the property warranted a full scale exploration program.

LOCATION AND ACCESSIBILITY

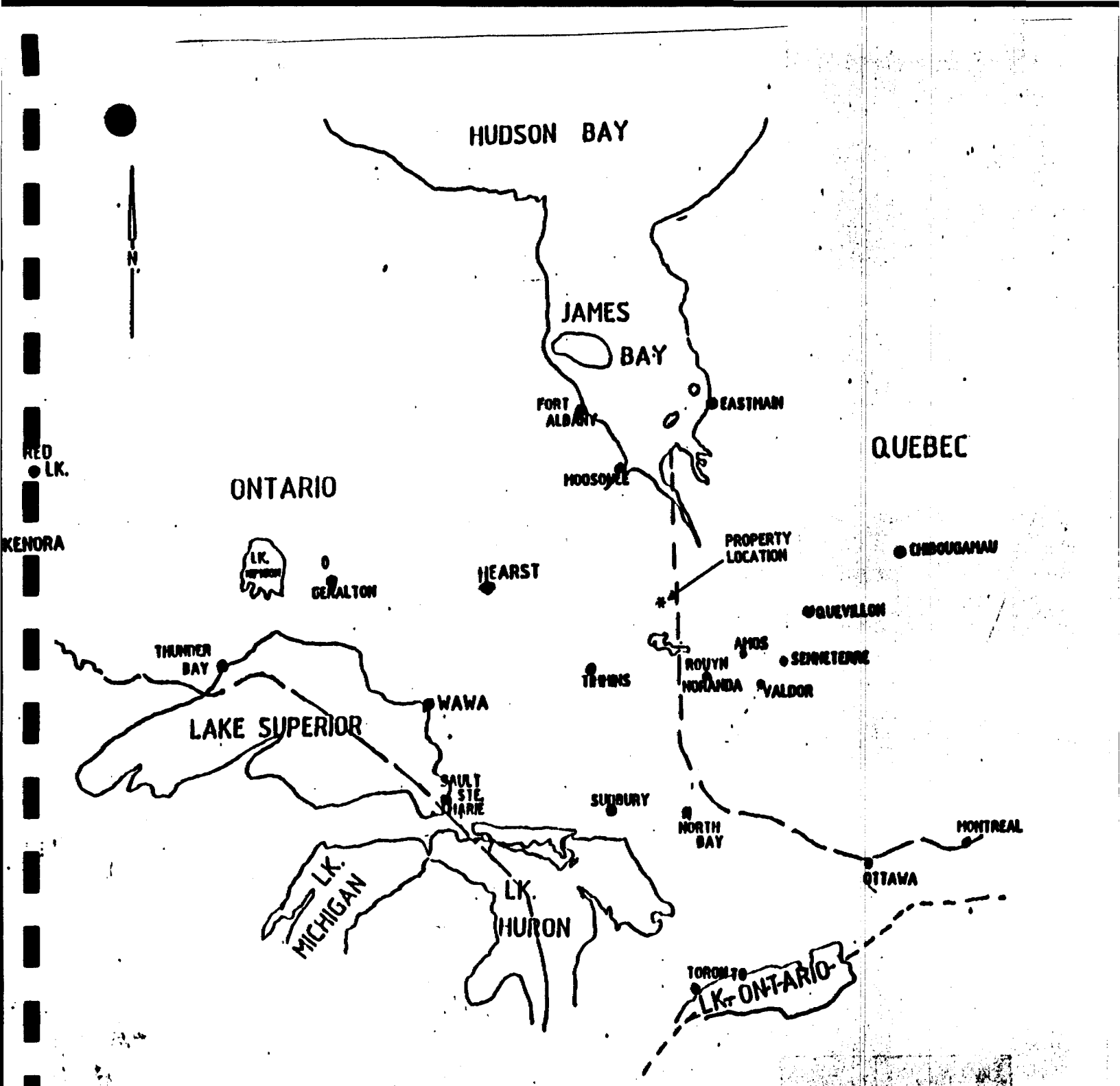
The property is located approximately 68 km NE of the town of Cochrane, Ontario. The claim group is located in the NE corner of Bragg Township and NW corener of Newman Township, Larder Lake Mining Division of Ontario.

Access to the property in winter is via the all weather Detour Lake Mine Road to 300 meters north of the bridge crossing the Floodwood River in Tweed Township. From this point access is via snowmobile south along a drill road which follows on Esker to the south boundary of Tweed Township, and east southeast from this point to the north boundary of the property. Heavy survey equipment etc. is best brought in by helicopter, slinging from a gravel pit in the Detour road at the Floodwood River. Summer access is via helicopter and/or swamp buggy keeping in mind that there could be a couple of creeks to cross which would require some bridge work. A helicopter is available in Cochrane which is approximately 1.0 hours return ferry time.

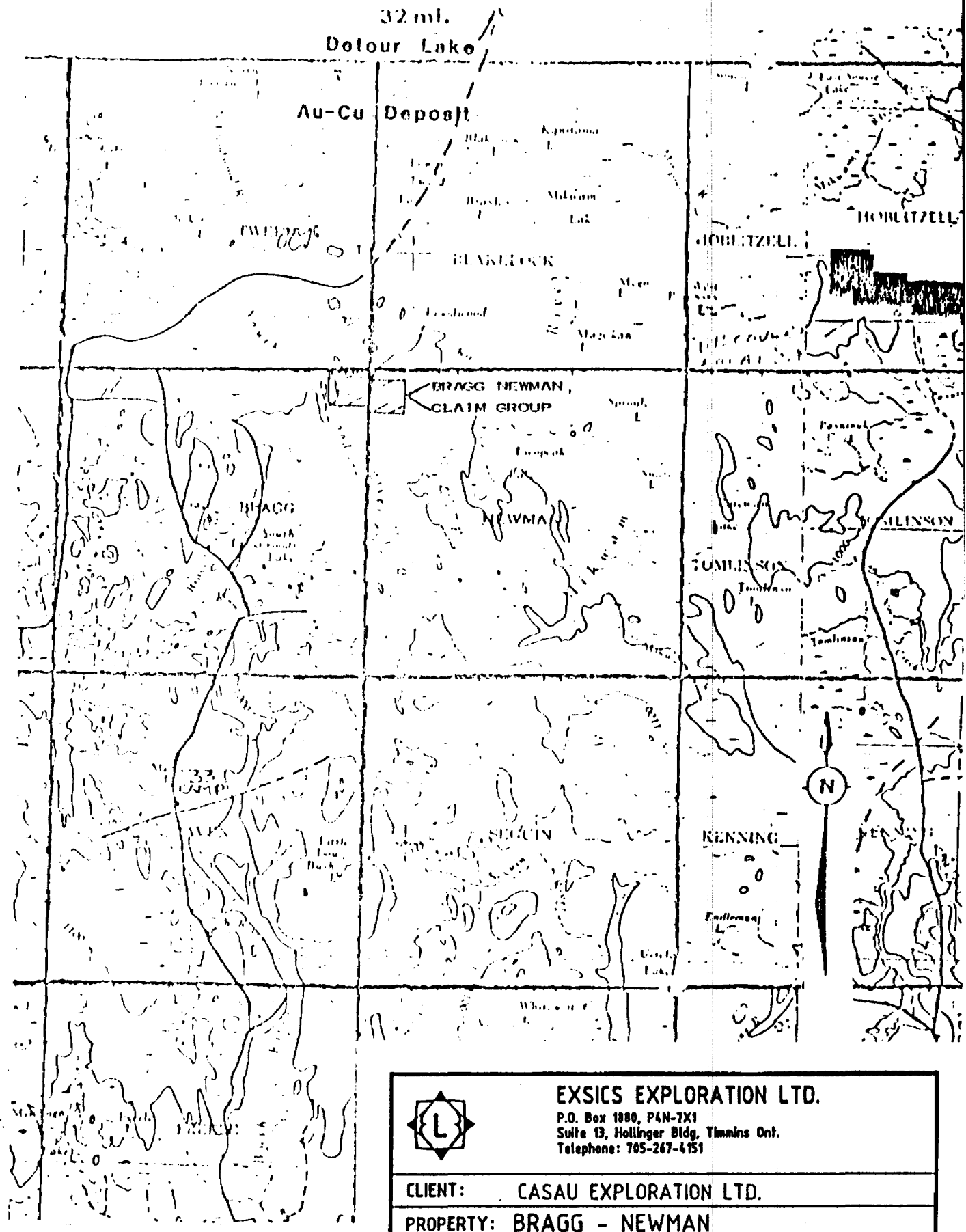
CLAIM STATUS

The Bragg, Newman property consists of a block of 40 contiguous, non-patented mining claims in the Larder Lake Mining Division of Ontario. The claim numbers are as follows: (see Figure 3).

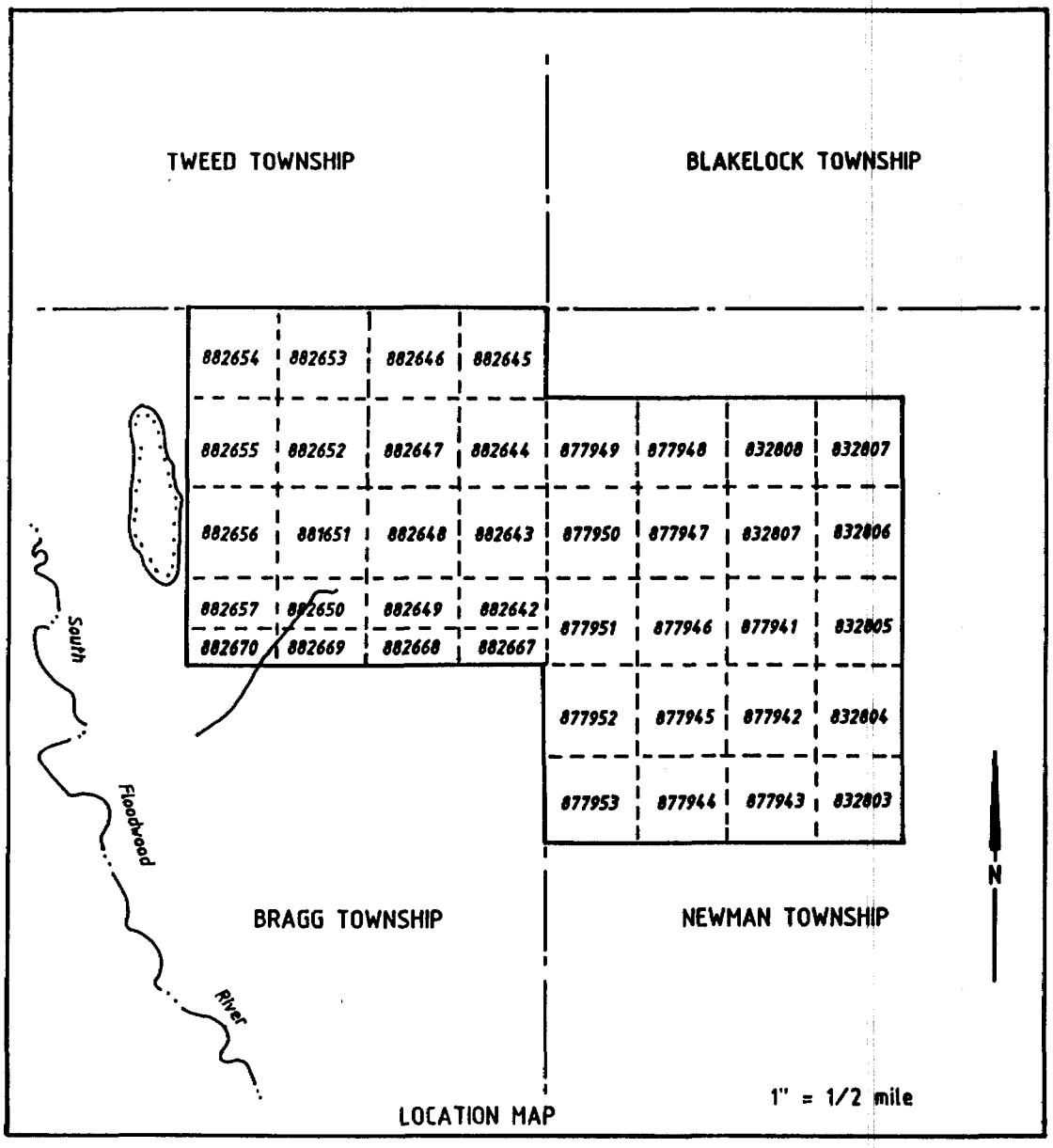
882 642 - 882 657 incl.	882 667 - 882 670 incl.
877 941 - 877 953 incl.	832 803 - 832 809 incl.



EXSICS EXPLORATION LTD. P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT: CASAU EXPLORATION LTD.		
PROPERTY: BRAGG - NEWMAN		
TITLE: LOCATION MAP Fig. 1		
Date: APRIL 1987	Scale: 1"=125 mile	NTS:
Drawn:	Interp:	Job No. EE-25



EXSICS EXPLORATION LTD. P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT: CASAU EXPLORATION LTD.		
PROPERTY: BRAGG - NEWMAN		
TITLE: ROAD LOCATION MAP Fig. 2		
Date: APRIL 1987	Scale: 1: 250,000	NTS:
Drawn:	Interp:	Job No. EE-25



EXSICS EXPLORATION LTD.
P.O. Box 1880, P4N-7X1
Suite 13, Hollinger Bldg. Timmins Ont.
Telephone: 705-267-4151

CLIENT: CASAU EXPLORATION LTD.

PROPERTY: BRAGG - NEWMAN

TITLE: CLAIM LOCATION MAP

Fig. 3

Date: APRIL 1987	Scale: 1"=1/2 mile	NTS:
Drawn:	Interp:	Job No. EE-25

The claims are believed to be held in the name of Casau Exploration Ltd. However, claim status has not been searched and confirmed by the author.

PERSONNEL

The following personnel were directly involved with the geophysical surveys:

R.J. Meikle,	Timmins, Ontario
P. Noel	Timmins, Ontario
A. Markov	St. Catherines, Ontario
K. Eggleston	Timmins, Ontario
E. Brunet	Timmins, Ontario

The field work commenced February 5, 1987 and finished February 25, 1987.

SURVEY PARAMETERS

Linecutting:

A total of 73 km of grid lines were established. A baseline and tieline were cut at an azimuth of 090° TN with cross lines at 360° TN. Line spacing was 100 m with a picket interval of 25m.

Magnetometer Survey:

A total of 73km of grid line was surveyed using the following parameters:

Instrument:	Scintrex MP-2 Proton Precession Magnetometer
Parameters Measured:	Earth's Total Magnetic Field
Survey Accuracy:	+/- 10 nano-teslas
Diurnals Corrected by base station looping	
Contour Interval:	200 nano-teslas
Data Presentation:	Contoured Plan Map. No. 1

VLF-EM Survey

A total of 73 km of VLF survey was conducted on the property, covering the entire claim group. The VLF method is a high frequency (relatively) EM technique which employs the use of VLF transmitting stations which operate world wide for submarine communications. The magnetic field generated from these vertical antenas is horizontal and concentric. This primary field will induce a secondary field in any conductor properly coupled with the station direction. The VLF-EM method measures the vertical component of the secondary field. Therefore a station should be chosen which is on strike with the expected strike of the conductor one is searching for. This is called Maximum Coupling and in reality stations up to 45 degrees off strike can be used. Because of the high frequency of this method, weak conductive features will be detected, including some overburden features. Therefore, interpretation of VLF data should be done

discriminately and used in conjunction with other methods. Under some circumstances structural interpretation can be ascertained if some knowledge of the bedrock is avoilable.

The VLF-EM survey was carried out using the following parameters:

Instrument	- Crone Radem, VLF Receiver
Parameters Measured	- In-phase "Dip Angle" (degrees)
Transmitter Station #1	- Cutler Maine, (NAA)
Frequency	- 24.0 KH2
	- Azimuth 113 degrees true north
Transmitter Station #2	- Annapolis Maryland (NSS)
Frequency	- 24.8 KHz
	- Azimuth, 178 degrees true north
Data Presentation	- Map No. 2 - Cutler Maine
	- Plan form, profiled
	Map No. 3 - Annopolis Maryland
	- Plan form, profiled
	- 1:2500

Induced Polarization Survey:

There are many papers on the theory of Induced Polarization. Basically, the ground is energized by applying a voltage across two grounded electrodes. This voltage is interrupted every 2 seconds. Upon termination of the voltage the remaining voltage across two separate measuring electrodes is measured. The rate at which this voltage disintegrates in the off cycle time is a

measure of the chargeability of the averaged volume of rock and overburden between the measuring probes. A high sulphide content of the bedrock, for example, tends to block the disintegration of the remaining voltage and the volume averaged acts as a capacitor. This capacitor is caused by the sulphide grains being polarized.

The method of measuring this capacitance used for this survey was the "Time domain Method". In this method the voltage is pulsed on a 2 second on 2 second off cycle. The remaining volgtage at pre selected time windows on the decay curve is measured. this measurement is called the "chargeability" and is expressed in MV/volt or milliseconds for convenience sake. The second part of an IP survey is the "Apparent Resistivity", which is an average of overburden and rock between the two measuring electrodes. Therefore it is not a true resistivity of the homogenious bedrock.

The "Apparent Resistivity" is calculated from ohms law, Resistivity = Voltage divided by Amperage. However, a "k" factor constant must be multiplied to the value to take into account the geometric array of the electrode lay out.

A gradient electrode array was used for this survey. In this array, one electrode (C1) is placed off the end of a survey line with the other electrode (C2) placed off the other end of the line. A voltage is applied across the two electrodes and a continuous 2 second on 2 second off pulse is maintained. A receiver dipole of 50 meters is moved along the C1-C2 lines as well as adjacent parallel lines until the signal is insufficinet to read. The plot point is the middle of the potential dipole.

The gradient array generates one Chargeability reading and one apparent Resistivity ready every 50 meters. The results are plotted in plan form and contoured. A conductive sulphide zone would yield high chargeability - low resistivity anomaly while an altered, silicified, mineralized (disseminated) zone would yield a high chargeability - high resistivity signature.

Approximately two thirds of the property was covered by the IP survey.

The IP survey was conducted using the following parameters:

Method:	Time Domain
Electrode Array:	Gradient
Receiver:	Crone N-1V ("Newmont Type")
Transmitter:	Scintrex IPC-7, 2.5 kw
Pulse Time:	2 second on, 2 second off
Delay Time:	900 milliseconds
Integration Time:	450 milliseconds
Charge & Receiver electrodes:	Stainless Steel
Data Presentation:	Chargeability - Contoured Plan form Map 4 1:2500
	Apparent Resistivity - Contoured Plan form Map 5 1:2500

RESULTS

Magnetometer Survey

Generally, the magnetometer results show an EW trend with several N-S trending anomalies which are thought to be dikes. There is one distinct high in the NW corner of the property. There does not appear to be any magnetic correlation with the other surveys.

The period in which the magnetic survey was conducted proved to be one of unusually high diurnal variation. This was also detected by the National Observatory. As a consequence, there are some lines which are felt to be somewhat unreliable due to bad tie ins. These lines are marked as such on the map.

VLF EM Survey

The VLF survey outlined several EW trending anomalies on the Cutler Maine map. No significant anomalies were observed using the Annapolis Maryland stations. The VLF method may have had problems seeing through the conductive overburden in this area and thus the anomalies are thought to be of low priority.

IP Survey

The apparent resistivity is rather low throughout the survey area with the exception of the SE corner where it rises to approximately four times background. There is noteably less VLF anomalies in this area. The higher resistivity could reflect less overburden and/or a geological rock type change.

Lines 0-4E (incl.) were read with an 'a' = 25m. A change to 50m for the rest of the grid was necessary to obtain more signal at the receiver.

Contacts were difficult to obtain and this inhibited the survey speed as well as resulting in several "no readings". The gradient array appears to have been the correct array to use; judging by the low resistivities, a Pole-Dipole array may have not worked.

There are several EW trending chargeability anomalies of up to four time background. The chargeabilities on the western part of the property are generally higher. There may be more sand cover in the area. To single out any one chargeability anomaly is difficult because of lack of other information. One explanation of the erratic higher chargeability and over all low resistivities could be that the area is underlain by sediments which have an erratic distribution of graphitic and/or sulphide sections. Graphitic sediments were encountered on the Glen Auden Tweed property which lies directly to the north.

RECOMMENDATIONS

The property lies in a currently active area in which several new gold discoveries have been found recently. However the current geophysical surveys did not turn up any obvious drill targets. Any further work on the property should be based on results of the following recommendations.

1. Three tiers of reverse circulation holes. One along 1400N drilling every 300 meters in an EW direction. The next two tiers would be along 800N and 100N. Any anomalous gold values in the till should then be traced up ice and correlated with an IP anomaly if possible. Such a program would, as well as detecting significant gold values in tills, give some bedrock information which is lacking in this area.

Yours truly,

R.J. Meikle

CERTIFICATE

I, Raymond Meikle of Timmins, Ontario hereby certify that:

1) I hold a three year Technologist Diploma from the Haileybury School of Mines, Haileybury, Ontario, obtained in 1975.

2) I have been practising my profession since 1973 in Ontario, Quebec, NWT, Manitoba, New Brunswick, Nova Scotia for Teck Exploration Ltd., Metallgesellschaft Canada Ltd., Rayan Exploration Ltd., Sabina Industries Ltd. and most recently Exsics Exploration Ltd.

3) I have based conclusions and recommendations contained in this report on knowledge of the area, my previous experience, and on the results of the field work conducted on the property during February, 1987 which was carried out under my overall supervision.

4) I hold no interest, directly or indirectly in this property other than professional fees, nor do I expect to receive any interest in the property or in CASAU EXPLORATION LTD., or any of it's subsidiary companies.

DATED this 28th day of February, 1987
at Timmins, Ontario

R.J. Meikle

A P P E N I C E S

A P P E N I X A

SCINTREX

earth science division

Proton Precession Magnetometer for Portable or Base Station Us

MP-2

features

- *1 gamma sensitivity and accuracy over range of 20,000 to 100,000 gammas.*
- *Operates in very high gradients, to 5000 gammas per metre.*
- *Ultra small size and weight.*
- *Up to 25,000 readings from only 8 D cells.*
- *Battery pack isolated from electronics for corrosion protection.*
- *Battery pack easily extended for winter use.*
- *Light-emitting diode digital display, with complete test feature.*
- *Unique no-glare polarized reflector permits easy reading in bright sunlight.*
- *Indicator light warning of excessive gradient, ambient noise or electronic failure.*
- *Digital readout of battery voltage.*
- *Rugged all metal housing for rough field use at all temperatures.*
- *Automatic recycling or external trigger features permit ready conversion to base station use.*
- *Short reading time.*
- *Broad operating temperature range.*

The MP-2 is a portable one gamma proton precession magnetometer for field survey or base station use. The optimized design of sensor and circuitry using the latest CMOS components has resulted in a very light weight, low power consumption, rugged and reliable magnetometer.

Light emitting diodes coupled with an ingenious optically polarized reflector combine solid state reliability with easy reading even in bright sunlight.

A standard automatic recycling feature allows ready use of the MP-2, with suitable (optional) interfacing, as a base station recorder in analogue or digital form. Alternatively, a remote trigger can be used.

The noise-cancelling dual-coil sensor and electronics have been so designed as to effectively eliminate reading problems due to virtually all magnetic gradients which may be encountered in field survey conditions.

TECHNICAL DESCRIPTION OF MP-2 MAGNETOMETER

SCINTREX

RESOLUTION	1 Gamma.
TOTAL FIELD ACCURACY	± 1 Gamma over full operating range.
RANGE	20,000 to 100,000 gammas in 25 overlapping steps.
INTERNAL MEASURING PROGRAMME	Single reading — 3.7 seconds. Recyc. feature permits automatic repetitive readings 3.7 seconds intervals.
EXTERNAL TRIGGER	External trigger input permits use of sampling intervals longer than 3.7 seconds.
DISPLAY	5 digit LED (Light Emitting Diode) readout displaying total magnetic field in gammas or normalized battery voltage.
RECORDER OUTPUT (Optional)	Multiplied precession frequency and gate time outputs for interfacing with incremental tape recorders (eg. Increlogger) for digital recording. As an additional option a digital to analogue convertor is available for use with analogue recorders.
GRADIENT TOLERANCE	Up to 5000 gammas/metre.
POWER SOURCE	8 alkaline "D" cells provice up to 25,000 readings at 25° C under reasonable signal/noise conditions (less at lower temperatures). Premium carbon-zinc cells provide about 40% of this number.
SENSOR	Omnidirectional, shielded, noise-cancelling dual coil, optimized for high gradient tolerance.
HARNESS	Complete for operation with staff or back pack sensor.
OPERATING TEMPERATURE TANGE	−35°C to +60°C.
SIZE	Console, with batteries: 80 x 160 x 250mm. Sensor: 80 x 150mm. Staff: 30 x 1550mm. (extended) 30 x 600 mm. (collapsed)
WEIGHTS	Console, with batteries: 1.8kg. Sensor: 1.3kg. Staff: 0.6kg.

SCINTREX LIMITED
222 Snidercroft Road,
Concord, Ontario, Canada L4K 1B5
TELEPHONE (416) 669-2220, TELEX 06-964570

A P P E N I X B

CRONE GEOPHYSICS LIMITED
RADEM VLF EM RECEIVER

An EM receiver measuring the FIELD STRENGTH, DIP ANGLE and QUADRATURE components of the VLF communications stations.

This is a rugged, simple to operate, ONE MAN EM unit. It can be used without line cutting and is thus ideally suited for GROUND LOCATION OF AIRBORNE CONDUCTORS and RECONNAISANCE SURVEYS of MINERAL SHOWINGS. This instrument utilizes higher than normal EM frequencies and is capable of detecting poorly conductive sulphide deposits and fault zones. It accurately isolates BANDED CONDUCTORS and operates through areas of HIGH POWERLINE NOISE. The method is capable of deep penetration but due to the high frequency used its penetration is limited in areas of clay and conductive overburden.

The DIP ANGLE measurement detects a conductor from a considerable distance and is used primarily for location conductors. The FIELD STRENGTH measurement is used to define the shape and attitude of the conductor.

- Instrument Sales, Rental and Repair Services
- Contract Survey Services
- Consulting Services
- Computer Plotting and Processing Services

HEAD OFFICE: 3607 Wolfedale Rd.
MISSISSAUGA, Ontario
CANADA L5C 1V8
PHONE: (416) 270-0096
TELEX: 06-961260

SPECIFICATIONS*

SOURCE OF PRIMARY FIELD: VLF Communications Stations 1 to 25 KHz

NUMBER OF STATIONS: 7 Switch Selectable

STATIONS AVAILABLE: The Seven Stations May Be Selected From:

	CODE	STATION & LOCATION	CALL SIGN	FREQUENCY
Standard	CM	Cutler, Maine	NAA	17.8 KHz 24.0
"	SW	Seattle, Washington	NLK	24.8 KHz
"	AM	Annapolis, Maryland	NSS	21.4 KHz
"	H	Laulualei, Hawaii	NPM	23.4 KHz
"	BOF	Bordeaux, Frace	NWU	15.1 KHz
"	E	Rugby, England	GBR	16.0 KHz
Optional	MS	Moscow, Russia	UMS	17.1 KHz
"	OD	Odessa (Black Sea)	EWB	15.6 KHz
"	NC	Exmouth, Australia	NWC	22.3 KHz
"	HN	Helgelend, Norway	JXZ	17.6 KHz
"	YJ	Yosamai, Japan	NDT	17.4 KHz
"	TJ	Tokyo, Japan	JG2AR	20.0 KHz
"	BA	Buenos Aires, Argentina		23.6 KHz

CHECK THAT STATION IS TRANSMITTING: Audible signal from speaker.

PARAMETERS MEASURED:

(1) DIP ANGLE in degrees of the magnetic field component, from the horizontal, of the major axis of the polarization ellipse. Detected by a minimum on the field strength meter and read from an inclinometer with a range of ±½°.

(2) FIELD STRENGTH (total or horizontal) of the magnetic component of the VLF field, (amplitude of the major axis of the polarization ellipse). Measured as a percent of normal field strength established at a base station. Accuracy ±2% dependent on signal. Meter has two ranges: 0-300% and 0-600%.

(3) QUADRATURE component of the magnetic field, perpendicular in direction to the resultant field, as a percent of the normal field strength, (amplitude of the minor axis of the polarization ellipse). This is the minimum reading of the Field Strength meter obtained when measuring the dip angle. Accuracy ±2%.

OPERATING TEMPERATURE RANGE: −40°C to 50°C (−40°F to 120°F)

DIMENSIONS: 9 cm x 19 cm x 27 cm (3½" x 7½" x 10½")

SHIPPING DIMENSIONS: 30 cm x 14 cm x 36 cm (11⅞" x 5½" x 14")

WEIGHT: 2.7 kg (6 lbs)

SHIPPING WEIGHT: 6.0 kg (13 lbs)

BATTERIES: 2 of 9 volt
Average Life Expectancy
20 Hours for Continuous Operation

Specifications subject to change without notice

900

November 12, 1987 File: 2.9989

Mining Recorder
Ministry of Northern Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

Re: Mining Claims L 882642 et al
in the Townships of Bragg and Newman

This letter will confirm our conversation on November 10, 1987 that the maximum days credit for Geophysical assessment work as allowed under Section 77 of the Mining Act has been approved on Mining Claims L 882642 et al.

The claim holder has submitted additional Geophysical data. This material therefore is being forwarded to the Assessment Files Research Office without being assessed by this office. The duplicate copy is being sent to the Resident Geologist.

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

Yours sincerely,

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

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

SH:pl

cc: Casau Exploration Ltd.
1458 Rupert Street
North Vancouver, B.C.
V5K 4L7

Resident Geologist
Kirkland Lake, Ontario

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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) LINECUTTING

Township or Area BRAGG, NEWMAN TOWNSHIPS

Claim Holder(s) CASAU EXPLORATION LTD.

1458 Rupert Street, North Vancouver

Survey Company ALQUEST EXPLORATION LTD.

Author of Report R.J. Meikle

Address of Author P.O. Box 1880 Timmins, Ontario

Covering Dates of Survey Feb. 5-25, 1987
(linecutting to office)

Total Miles of Line Cut 73 km

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	40
–Magnetometer	20
–Radiometric	
–Other IP	20
Geological	
Geochemical	

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

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

DATE: April 13/87 SIGNATURE: R.J. Meikle
Author of Report or Agent

Res. Geol. _____ Qualifications 23860

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

See attached List

(prefix)	(number)

If space insufficient, attach list

TOTAL CLAIMS _____

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag-5840 VLF-2920 Number of Readings Mag-5840 VLF-2920

Station interval Mag -12.5m VLF-25m IP-25m Line spacing 100m

Profile scale VLF - 1cm = 10 degrees

Contour interval 200 nt-Mag IP Chargeability- 5ms Resistivity- 100 ohm meters

MAGNETIC

Instrument Scintrex MP-2

Accuracy – Scale constant +/- 10 nt

Diurnal correction method Base station looping

Base Station check-in interval (hours) 1 hour

Base Station location and value All baseline intersections

ELECTROMAGNETIC

Instrument Crone Radem

Coil configuration

Coil separation

Accuracy

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency NAA - 24.0 KHz NSS - 24.8 KHz (specify V.L.F. station)

Parameters measured In phase Dip Angles

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument

Method ☒ Time Domain ☐ Frequency Domain

Parameters – On time 2 sec. Frequency

– Off time 2 sec. Range

– Delay time 900 ms

– Integration time 450 ms

Power 2.5 kw

Electrode array Gradient

Electrode spacing 50m

Type of electrode Stainless Steel

Mining Claim	
Prefix	Number
L	882 642
	882 643
	882 644
	882 645
	882 646
	882 647
	882 648
	882 649
	882 650
	882 651
	882 652
	882 653
	882 654
	882 655
	882 656
	882 657
	877 941
	877 942
	877 943
	877 944
	877 945
	877 946
	877 947

Mining Claim	
Prefix	Number
L	877 948
	877 949
	877 950
	877 951
	877 952
	877 953
	882 667
	882 668
	882 669
	882 670
	832 803
	832 804
	832 805
	832 806
	832 807
	832 808
	832 809

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) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

Blakelock Twp.(M.419)

Bragg Twp.(M.426)

Tomlinson Twp.(M.604)

Seguin Twp.(M.587)

PROJECTED LINE

Firedrood R.

Wasicho Lake

Springer Lake

Sproule Lake

Twopeak Lake

Snare Lake

Batemen Lake

Batemen

Mikwam

Floodwood

SHEIGAT AND VAN NOSTRAND O.L.S. 1930

GRANDES I.L.S. 1930

29 M 30 M 31 M 32 M 33 M 34 M 35 M 36 M

1 M 2 M 3 M 4 M 5 M 6 M 7 M 8 M

No Open Ground

200

42H08NW0036 2.8989 NEWMAN

THE TOWNSHIP OF

NEWMAN

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES CANCELLED	C

NOTES

400' Surface Rights Reservation Around All Lakes & Rivers.

AREAS WITHDRAWN FROM DISPOSITION

S.R. – SURFACE RIGHTS M.R. – MINING RIGHTS

Description	Order No.	Date	Disposition	File

DATE OF ISSUE
OCT 28 1957
LARDER LAKE MINING RECORDER'S OFFICE

#2

PLAN NO. M.556

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

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

TWEED TOWNSHIP

WITHDRAWN FROM DISPOSITION
FILE 188511 JAN. 15, 1981

1 mile

1 mile

PROPOSED HIGHWAY

Bragg Lake

South Floodwood Lake

Floodwood R.

South Floodwood R.

Bragg Cr.

River

Abitibi

Loc La France

Michel Cr.

Little

SANGSTER TOWNSHIP

NEWMAN TOWNSHIP

RAVEN TOWNSHIP

29 M 30 M 31 M 32 M 33 M 34 M 35 M
1 M 2 M 3 M 4 M 5 M 6 M 7 M 8 M
19 M 20 M 21 M 22 M 23 M 24 M 25 M 26 M 27 M

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	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 8, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, S. 65(c) 1

SCALE
500 0 500 1000 Metres
0 1/2 1 Mile

TOWNSHIP
BRAGG

M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE
MINING DIVISION
LARDER LAKE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources — Land Management Branch — Ontario

Date OCTOBER 1986

Number G-348

210

2600N
2500N
2400N
2300N
BL2200N
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
TL1000N
900N
800N
700N
600N

L0+00E L100E L200E L300E L400E L500E L600E L700E L800E L900E L1000E L1100E L1200E L1300E L1400E L1500E L1600E L1700E L1800E L1900E L2000E

882654 882653 882646 882645
882655 882652 882647 882644
882656 882651 882648 882643
882657 882650 882649 882642
882670 882669 882668 882667
877949 877948
877950 877947
877951 877946
877952 877945
877953 877944

RIVER
AMP
K1

BRAGG TOWNSHIP
NEWMAN TOWNSHIP

2600N
2500N
2400N
2300N
BL 2200N (090°)
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
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1200N
1100N
1L 1000N
900N
800N
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882654
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877950
877951
877953
877794
8777?4

L1500E
L1600E
L1700E
L1800E
L1900E
L2000E

AMP

L0+00E
L100E
L200E
L300E
L400E
L500E
L600E
L700E
L800E
L900E
L1000E
L1100E
L1200E
L1300E
L1400E

BRAGG TOWNSHIP
NEWMAN TOWNSHIP

BRAGG TOWNSHIP
NEWMAN TOWNSHIP

877949
877950
877951
877953
882645
882646
882647
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882649
882650
882652
882653
882654
882655
RIVER

L19006
L18006
L17006
L16006
L15006
L14006
L13006
L12006
L11006
L10006
L9006
L8006
L7006
L6006
L5006
L4006
L3006
L2006
L1006
L0.00E

2600N
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BL2200N
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1900N
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1600N
1500N
1400N
1300N
1200N
1100N
MC.OUTL
900N
800N
700N
600N

240

2400N
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BL2200N
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1900N
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1200N
1100N
TL1000N
900N
800N
700N
600N

L0+00E
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L900E
L1000E
L1100E
L1200E
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L1800E
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L2000E
L2100E

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877951
877946
877952
877945
877953
877944

RIVER
CAMP

BRAGG TOWNSHIP
NEWMAN TOWNSHIP

2600N
2500N
2400N
2300N
BL2200N
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
TL1000N
900N
800N
700N
600N

L1500E L1600E L1700E L1800E L1900E L2000E L2100E

882654 882653 882646 882645
882655 882652 882647 882644
882656 882651 882648 882643
882657 882650 882649 882642
882670 882669 882668 882667

877949 877948
877950 877947
877951 877946
877952 877945
877953 877944

RIVER
CAMP

L0+00E L100E L200E L300E L400E L500E L600E L700E L800E L900E L1000E L1100E L1200E L1300E L1400E

BRAGG TOWNSHIP
NEWMAN TOWNSHIP

L2000E L2100E L2200E L2300E L2400E L2500E L2600E L2700E L2800E L2900E L3000E L3100E

2300N
BL 2200N
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
TL 1000N
900N
800N
700N
600N
500N
400N
300N
200N
100N
0+00N

877948 832808 832807 877947 832807 832806 877946 877941 832805 877945 877942 832804 877944 877943 832803

N

TWEED TOWNSHIP
BLAKELOCK TOWNSHIP
BRAGG TOWNSHIP
NEWMAN TOWNSHIP
LOCATION MAP
1" = 1/2 mile

29989

KEY

LAKE:
CREEK:
SWAMP:
D. D. H:
TRENCH:
HIGHWAY:
BUSH ROAD:
POWER LINE:
CLAIM LINE:
CLAIM POST: ASSUMED/FOUND

CLIENT: CASAU EXPLORATION LTD.

TITLE: MAGNETOMETER SURVEY
BRAGG - NEWMAN PROJECT

DATE: MARCH/87 | SCALE: 1:2500 | NTS:
DRAWN: HJP | INTERP: JCG | JOB NO: EE25

FIG 1

INSTRUMENT: Scintrex MP-2 Proton Precession Magnetometer
PARAMETRES MEASURED: Earth's Total Magnetic Field
ACCURACY: +/- 10 nano-teslas
DIURNALS: Corrected by Base Line Looping
CONTOUR INTERVAL: 100

Aliquest Exploration Services
o/b 620706 Ontario Limited
P.O. Box 1469
Timmins, Ontario
P4N 7N2
(705) 264-3311

L1900E L2000E L2100E L2200E L2300E L2400E L2500E L2600E L2700E L2800E L2900E L3000E L3100E

2300N
BL2200N (090°)
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
TL 1000N
900N
800N
700N
600N
500N
400N
300N
200N
100N
0+00N

877948 832808 832807 877947 832807 832806 877946 877941 832805 877945 877942 832804 877944 877943 832803

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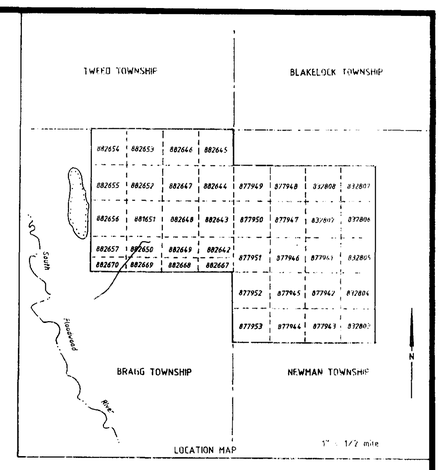

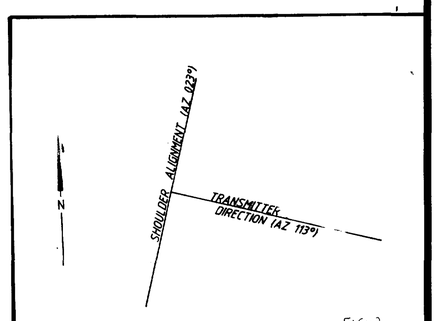

LEGEND

INSTRUMENT: CRONE RADEM
TRANSMITTER STATION: *CUTLER, MAINE (NAA)*
FREQUENCY: *24.0 KHZ*
PARAMETERS MEASURED: INPHASE DIP ANGLE (DEGREES)
TOTAL FIELD STRENGTH (%)
OPERATOR: *EXSICS EXPLORATION LTD*
PROFILE SCALE: *1 CM=10%*

KEY

LAKE:
HIGHWAY:
CREEK:
BUSH ROAD:
SWAMP:
POWER LINE:
D.D.H:
CLAIM LINE:
TRENCH:
CLAIM POST: ASSUMED/FOUND

CLIENT: *CASAU EXPLORATION LTD*
BRAGG-NEWMAN PROJECT
TITLE: *CRONE VLF-DIP* 29987

DATE: *MARCH/87*	SCALE: *1:2500*	NTS:
DRAWN: *HJP*	INTERP: *JCG*	JOB NO: *EE25*

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Timmins, Ontario
P4N 7N2
(705) 264-3311

L1900E L2000E L2100E L2200E L2300E L2400E L2500E L2600E L2700E L2800E L2900E L3000E L3100E

2300N
BL 2200N
2100N
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
TL 1000N
900N
800N
700N
600N
500N
400N
300N
200N
100N
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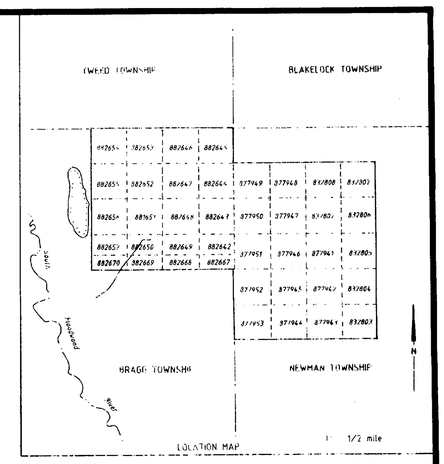
832808
832805
832803

N



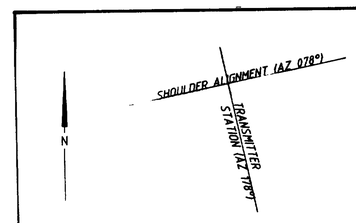


Fig 3

LEGEND

INSTRUMENT: CRONE RADEM
TRANSMITTER STATION: ANNAPOLIS, MARYLAND (NSS)
FREQUENCY: 21.4 KHZ
PARAMETERS MEASURED: INPHASE DIP ANGLE (DEGREES)
TOTAL FIELD STRENGTH (%)
OPERATOR: EXSICS EXPLORATION LTD.
PROFILE SCALE: 1 CM=10%

D Hall

KEY

LAKE:
HIGHWAY:
CREEK:
BUSH ROAD:
SWAMP:
POWER LINE:
D. D. H:
CLAIM LINE:
TRENCH:
CLAIM POST: ASSUMED/FOUND

CLIENT: CASAU EXPLORATION LTD.
BRAGG-NEWMAN PROJECT
TITLE: CRONE VLF-DIP
29989.

DATE: MARCH/67	SCALE: 1:2500	NTS:
DRAWN: HJP	INTERP: JCG	JOB NO: EE25

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P4N 7N2
(705) 264-3311

L2000E L2100E L2200E L2300E L2400E L2500E L2600E L2700E L2800E L2900E L3000E L3100E

2300N
BL2200N
2100N
2000N
1900N
1800N
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1600N
1500N
1400N
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1200N
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TL1000N
900N
800N
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600N
500N
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200N
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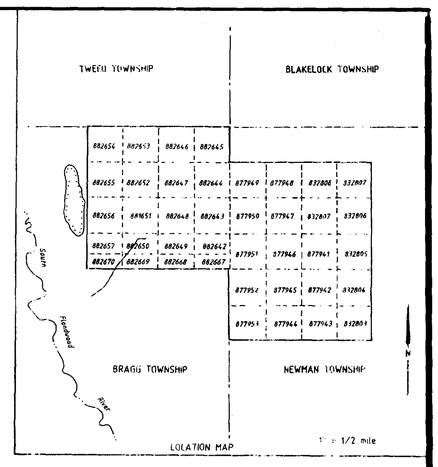
877947 832807 832806
877946 877941 832805
877945 877942 83 804
877944 877943 832803



N

LEGEND

METHOD: TIME DOMAIN
ELECTRODE ARRAY: GRADIENT
PULSE DURATION: 2 SEC. ON 2 SEC. OFF
DELAY TIME: 900 MILLISECONDS
INTEGRATATION TIME: 450 MILLISECONDS
RECEIVER: CRONE N-IV
TRANSMITTER: SCINTREX IPC-7 2.5 KW
UNITS: chargeability- MILLISECONDS
resistivity -

ELECTRODE ARRAY : Gradient

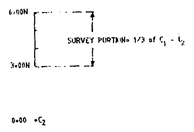


FIG 4

KEY

LAKE:
CREEK:
SWAMP:
D. D. H:
TRENCH:
HIGHWAY:
BUSH ROAD:
POWER LINE:
CLAIM LINE:
CLAIM POST: ASSUMED/FOUND

CLIENT: CASAU EXPLORATION LTD.

TITLE: I.P. CHARGEABILITY
BRAGG - NEWMAN PROJECT
29989

DATE: MARCH/87	SCALE: 1:2500	NTS:
DRAWN: HJP	INTERP: JCG	JOB NO: EE25

Aiguest Exploration Services
o/b 820709 Ontario Limited
P.O. Box 1459
Timmins, Ontario
P4N 7N2
(705) 264-3311

L2000E L2100E L2200E L2300E L2400E L2500E L2600E L2700E L2800E L2900E L3000E L3100E

2300N BL2200N 2100N 2000N 1900N 1800N 1700N 1600N 1500N 1400N 1300N 1200N 1100N TL1000N 900N 800N 700N 600N 500N 400N 300N 200N 100N 0+00N

877948 832808 832807 877947 832807 832806 877946 877941 832805 877945 877942 83.804 877944 877943 832803

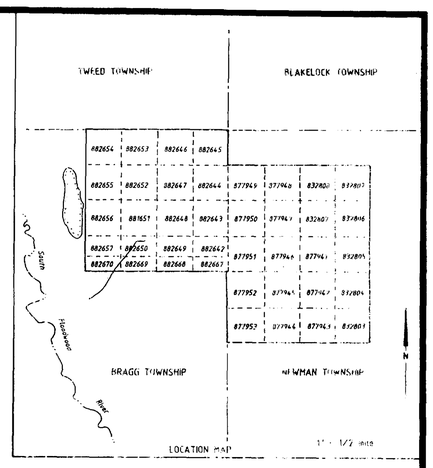


FIG 5

LEGEND

METHOD: TIME DOMAIN
ELECTRODE ARRAY: GRADIENT
PULSE DURATION: 2 SEC. ON 2 SEC. OFF
DELAY TIME 900 MILLISECONDS
INTEGRATATION TIME 450 MILLISECONDS
RECEIVER: CRONE M.-IV
TRANSMITTER: SCINTREX IPC-7 2.5 KW
UNITS: chargeability
resistivity OHM-METERS

ELECTRODE ARRAY : Gradient

KEY

LAKE: HIGHWAY:
CREEK: BUSH ROAD:
SWAMP: POWER LINE:
D. D. H: CLAIM LINE:
TRENCH: CLAIM POST: ASSUMED/FOUND

CLIENT: CASAU EXPLORATION LTD.

TITLE: I.P. APPARENT RESISTIVITY
BRAGG - NEWMAN PROJECT 29989

DATE: MARCH/87	SCALE: 1:2500	NTS:
DRAWN: HJP	INTERP: JCG	JOB NO: EE25

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P4N 7N2
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