

Questor Surveys Limited

200 Grand River Ave., Brantford, Ontario, Canada N3T 4X9 Tel.:(519) 753-1600 Fax.:(519)753-5533



31C13SE0043 2.13590 TUDOR

010

2.13590

AIRBORNE MAGNETIC/VLF-EM SURVEY

**NORANDA EXPLORATION COMPANY
LIMITED**

MADOC AREA, ONTARIO

RECEIVED

OCT 17 1990

MINING LANDS SECTION

PROJECT # 90067

OCTOBER, 1990



31C135E0043 2.13590 TUDOR

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1. INTRODUCTION

This report details the logistics of a fixed-wing airborne magnetic VLF-EM/survey flown for Noranda Exploration Company, Limited.

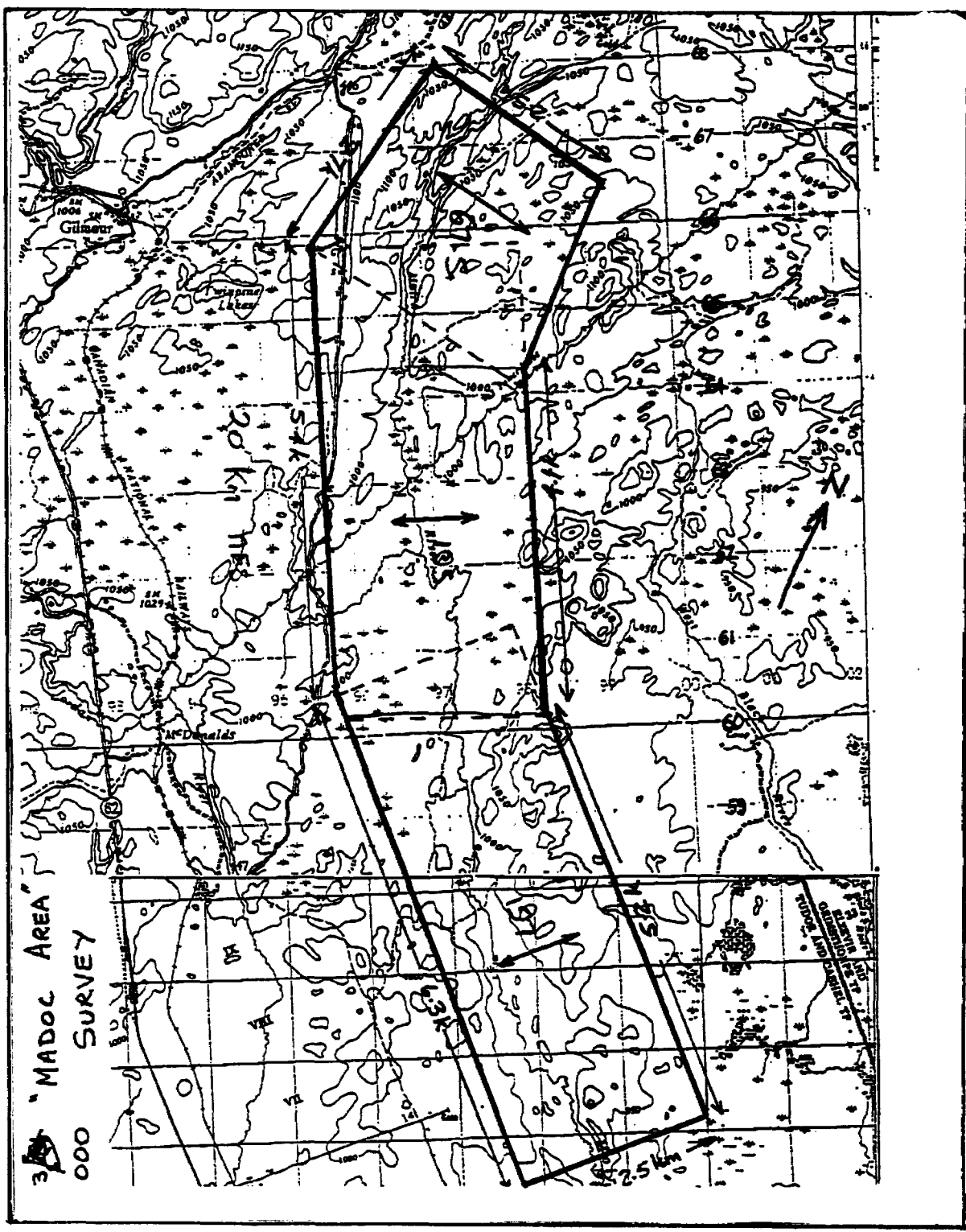
The survey was commissioned by Mr. B. Groves of Noranda.

Terence J. McConnell, Geophysicist for Questor, supervised the data compilation through to the completion of the project in October, 1990.

The survey area consists of three contiguous blocks, comprising 425 kilometers of traverse and control lines. These were flown between the dates of September 24 and September 27, 1990 using Belleville, Ontario as a base of operations. The three blocks have been merged to form one continuous data set.

The project is located 32 km north of Madoc, Ontario. N.T.S. Map sheets 31C 12 and 31C 13 include the survey site (see location maps).





2. OPERATIONS

2a. Personnel

The survey crew was made up of experienced Questor employees:

Crew Manager/Geophysicist	T. McConnell
Pilot/Captain of Aircraft	J. Monsalve
Equipment Technician/Navigator	M. Barrett

The digital flight path records were checked for completion at the base of operation, in Belleville, Ontario. Final data compilation and drafting were carried out by Questor at its Brantford, Ontario office. The magnetic and electromagnetic processing was carried out using Questor software and the results were computer drafted.

2b. Equipment

A Cessna 206, C-FAQD, equipped with the following instruments was used for the survey:

1. Scintrex H-8 Cesium Vapour optical pumped Magnetometer;
2. Herz Industries Totem 2A VLF/EM Receiver;
3. Picodas PDAS 1000 Digital Data Acquisition System;
4. RMS GR 33 Analogue Recorder;
5. Geocam 75 SF 35 mm. Camera;
6. TRT Radar Altimeter;
7. Rosemount Barometric Altimeter;
8. Trimble TANS GPS Satellite Navigation System with cross-track indicator for pilot.

Regular calibrations of the equipment were performed at the beginning and end of each survey. Details of the calibration procedures are given in Appendix C.

A GEM Systems GSM-19 digitally recording base station was used to monitor the diurnal variations.

2c. Production

The flight line spacing over the three contiguous blocks was 100 meters. Table 1 summarized the kilometers flown during the survey operation.

TABLE 1

Traverse lines (km)	397.0
Control lines (km)	<u>28.0</u>
Total lines (km)	425.0

The survey was completed in five production flights.

2d. Survey Procedure

During the survey, the aircraft maintained a terrain clearance as close to 60 meters as possible. In areas of substantial topographic relief or large population, the aircraft height may exceed 60 meters for safety reasons. The aircraft's air speed was maintained at 120 knots while on survey.

The details of each production flight are documented on the digital flight logs produced on each analogue record. The logs include the survey times, line numbers and fiducial intervals, as well as a record of equipment irregularities and atmospheric conditions. One may refer to these logs in order to relate the flight path film to the geophysical data.

During the course of the survey the following data were recorded:

1. airborne magnetometer data;
2. secondary VLF signals (both total field and quadrature components) from two stations:
 - Cutler, Maine (NAA - 24.0 kHz)
 - Seattle, Washington (NLK - 24.8 kHz)
3. a record of the terrain clearance as provided by radar altimeter;
4. a record of height above sea level as provided by a barometric altimeter;
5. a photographic record of the terrain passing below the aircraft as obtained from a 35 mm camera;
6. time markers impressed synchronously on the photographic and geophysical records to facilitate positioning on photomosaics;
7. digital satellite positioning information as provided by GPS receiver; and
8. ground base station magnetometer data.

All signals except GPS positions were sampled at a 5 Hz (~12m) interval. GPS position was sampled at a nominal rate of 1 Hz.

2e. Magnetic Diurnal

Diurnal variations in the earth's magnetic field had been recorded to an accuracy of 0.1 nT using a base station equipped with a Gem Systems GSM-19 Overhauser Proton Precession Magnetometer. It was monitored periodically during the day for severe diurnal changes (magnetic storms). A variation of 30 nT over a 3 minute time period was considered to be a magnetic storm. During such an event, the survey would normally have been discontinued or postponed and any survey data would have been scrubbed.

The base station magnetometer was set up in a magnetically quiet area near the crew quarters.

2f. Data Recovery

Navigation for the survey was performed using a Trimble TANS GPS satellite receiver. On-board computers acquired and recorded positional information once per second from the GPS receiver. This information was then compared with a suite of pre-programmed flight lines and area co-ordinates to provide the pilot with a real time display of his position relative to a selected flight line. Both traverse lines and control lines were navigated in this fashion. The Equipment Technician/Navigator also confirmed relative position using ortho photomosaics carried on board.

The flight path of the aircraft was also recorded by strip camera on black and white, 125ASA, 35 mm film which was exposed continuously while on line. The aperture setting on the camera can be manually adjusted by the operator during flight, assuring the proper exposure of the film. The camera is fitted with a wide angle 18 mm lens. Fiducial numbers are imprinted on the film, marked onto the analogue records and recorded digitally at the same instant.

For each line, the equipment operator enters the flight details information into the digital data system where they are recorded and verified (read-after-write). The information includes line number, time, fiducial range, and other pertinent flight information. This information is compared to the film analogue records and the magnetic base station recording at the completion of the survey flight.

The film and all records are developed, edited and checked at the completion of each flight. All analogue records are inspected for coherence with specifications.

The procedures are performed on the survey site daily by the Equipment Technician so that the data quality and progress may be measured objectively. Reflights for covering navigational gaps and other deficiencies are usually flown on the following day.

3. DATA COMPILATION

3a. Products

The survey consisted of three contiguous surveys blocks. The data from the three blocks was merged to form one continuous data base. The data are presented on two 1:10,000 scale map sheets, for each one of the parameters.

The products delivered by Questor to Noranda Exploration Company Limited along with three copies of the report include:

1. Unscreened master topographic base map, scale 1:10,000;
2. Clear overlay of the flight path, 1:10,000 scale;
3. Contours of the magnetic total field, scale 1:10,000;
4. Stacked profiles of magnetic total field, scale 1:10,000
5. Contours of the total field VLF with stacked profiles of quadrature VLF superimposed thereon, scale 1:10,000;
6. One colour contour map of magnetic total field;
7. Ortho photomosaic of the area at 1:10,000 scale;
8. Four slides of enhanced images of total magnetic intensity;
9. The digital flight logs;
10. The negative of the flight path film;
11. Archive digital data containing both raw and processed (gridded) data.

3b. Flight Path

The recorded flight path was plotted and verified at the base of survey operations. It was then shipped back to the main office where it was routinely verified by a computer programme 'speed check', which flags any abnormalities in the distance per fiducial unit on a line. As a final check, the rough magnetic contour maps were examined for contour irregularities that could be attributed to positional errors.

3c. Magnetics

A Gem Systems GSM-19 Proton Precession Magnetometer was operated at the survey base to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to permit removal of diurnal drift. Any subsequent leveling changes can be made utilizing control line crossing differences.

The corrected data was then interpolated onto a regular grid using a cubic spline technique. The resulting grid provides the basis for presenting the magnetic contours. The total field magnetic data were presented as contours on a 1:10,000 scale base map.

Remarks on the Magnetic Results:

The aeromagnetic data over the Madoc area is dominated by a magnetic package consisting of several discrete linear strongly magnetic units. The units trend N to NNE in the northern part of the survey area, curving round to a NNW trend in the south of the area. Weakly to moderately magnetic units are also evident sub-parallel to these central units. This package probably comprises interbedded metasedimentary and mafic metavolcanic units of varying magnetic character.

The dominant structural trend is 030°, defined by either a change in magnetic character along the fractures or by offsets to the magnetic units. Through most of the area movement along these structures is minor, but shows sinistral offset when evident. In the northwest of the survey area, lithological units are discordant across one of these 030° trending structures. To the west of the feature, magnetic linear units trend 045° in contrast to the NNW orientation of the units to the east.

The prominent linear magnetic units are truncated in the south by a 330° trending structure. Within this southern corner of the survey area, the rocks display a 'flat' magnetic signature relative to the remainder of the survey area, and probably represents non-magnetic sedimentary or felsic volcanic units.

3d. VLF/EM

The VLF maps of the survey area record the total field component of the secondary VLF signals from the station at Cutler, Maine (NAA - 24.0 kHz). The results have been plotted as filtered total field contours and quadrature profiles.

The VLF method is sensitive to the angle of coupling between the conductor and the propagated EM field. As such, conductors which strike towards the VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it. VLF/EM anomalies are not EM anomalies in the conventional sense. EM anomalies normally reflect the eddy currents induced in a conductive body by the primary field. VLF/EM anomalies, however, reflect the effects of current gathering, which is a non-conductive phenomenon. The primary field from the transmitting station sets up weak currents which flow in the bedrock and overburden. These currents tend to gather in low resistivity zones such as massive sulfides, faults, shears, river valleys or zones of conductive overburden.

The total field yields peaks over VLF/EM current concentrations, while the quadrature component yields crossovers. VLF anomalies which appear to transect the magnetic data, and those VLF trends which appear to be truncated or offset, are often due to fault or shear zones.

The dominant N - S trending units defined from the magnetic data are also evident on displays of the VLF - EM data. Structures determined from the magnetic data and discussed above are generally detected in the VLF - EM data through offsets to the responsive units. Faults and fractures in the survey area are not strongly conductive. WNW and NE trends are also evident in the VLF - EM data.

The prominent NE oriented linear is attributed to cultural effects.

Respectively Submitted
QUESTOR SURVEYS LIMITED



Terence J. McConnell
President
Geophysicist.

Qual 2.9262

APPENDIX A: MAGNETOMETER

Scintrex H8 Cesium Magnetometer

The airborne magnetometer is a Scintrex H8 Cesium sensor which operates on the principle of optical pumping to produce a measurement of the total magnetic intensity. It has a sensitivity of 0.001 gamma and an operating range of 17,000 gammas to 99,000 gammas. The H8 incorporates fully automatic tuning over its entire range with manual selection of the ambient field starting point for quick startup. The instrument can accurately track field changes exceeding 25,000 nT, and for this survey has an absolute accuracy of 0.1 nT at a 0.2 second sample rate. The sensor is oriented to optimize results in a low ambient magnetic field. The sensor housing is mounted at the tip of the tail boom. A 3-term flux gate is used to counteract the effects of permanent, induced and eddy magnetic fields in the aircraft.

APPENDIX A: VLF-EM RECEIVER

Herz Industries Ltd. Totem 2A

The Totem 2A VLF electromagnetic airborne receiver measures the total field and vertical quadrature components of the magnetic field radiated from VLF radio transmitters (one or two stations can be recorded simultaneously). The output of the receiver is ± 1.0 volt for a change in field strength of $\pm 100\%$.

These components are digitally recorded with a sensitivity of 0.0125%. The frequency range of the receiver is from 15 kHz to 26 kHz, selectable in 100 Hz steps. A built-in spherics filter reduces the noise contribution of impulse type interference. General noise levels depend on the availability of a suitable station of reasonable signal strength. Ambient noise exceeds the internal noise of the system and generally is in the neighbourhood of 1% or better when in the presence of a strong station.

The total field tends to yield peaks in field strength over VLF current concentrations of the elected frequency. The quadrature component tends to yield crossovers. The quadrature polarity is defined by the direction of flight, relative to the field.

One obvious advantage of dual frequency operations is that primary transmitter sources can be selected to ensure good coupling with conductors in any orientation. Stations are usually selected so as to measure one primary magnetic field which is parallel to the flight lines (in LINE station), and one field which is orthogonal to the flight line direction (ORTHO station). Using this convention, it is found that the LINE channel response best delineates conductors which parallel the line direction.

This can be simply summed up by noting that conductors which strike towards a VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it.

The sensor itself is housed in the wing tip of the aircraft.

APPENDIX C: CALIBRATION PROCEDURE

Calibration of survey equipment was usually performed at the beginning and end of each survey flight.

The continuous chart speed of the RMS Analogue Recorder was set at 6.0 cm/minute (1 mm/sec).

The VLF-EM receiver output is manually calibrated during the ferry flight to the survey area. At altitude and out of ground effect, the receiver response reflects only the primary field strength. Using potentiometers, the output voltage for each channel is set to 1.0 volts. Any subsequent variation in field strength due to secondary sources is measured as a percentage of the primary field. A 10% variation is represented by an output change of 100 mV.

APPENDIX D: THE FLIGHT RECORDS

ANALOGUE PROFILES

<u>Channel Name</u>	<u>Parameter</u>	<u>Sensitivity per cm.</u>
MAG	Magnetics	50 nT
LTOT	VLF-Total: Cutler	25%
LQUA	VLF-quad: Cutler	25%
OTOT	VLF-total: Seattle	25%
OQUA	VLF-quad: Seattle	25%
RAD	Radar Altimeter	50 feet
BARO	Barometric Altimeter	50 feet
4th Mag (FDD1)	4th Difference (noise monitor)	100 pT
LAT	GPS Latitude	0.02 degrees
LONG	GPS Longitude	0.02 degrees



31C13SE0043 2.13590 TUDOR

900

Report of Work 2.1359
Mining Act (Geophysical, Geological and Geochemical Sur)

Type of Survey(s) Airborne Magnetometer & VLF-EM	Mining Division Southern Ont.	Township or Area Tudor Twp.
Recorded Holder(s) Noranda Exploration Company, Limited (no personal liability)	Prospector's Licence No. A-34387	
Address 4 King St. W., Suite 1300, Toronto, Ontario M5H 1B6 P.O. Box 1205, 60 Shirley St. So., Timmins, Ontario P4N 7J5		Telephone No. (416) 982-7187 (705) 268-9600
Survey Company Questor Surveys Limited, 200 Grand River Ave., Brantford, Ontario N3T 4X9		
Name and Address of Author (of Geo-Technical Report) Terry McConnell, 200 Grand River Ave., Brantford, Ontario N3T 4X9		Date of Survey (from & to) 29 07 90 Day Mo. Yr.

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

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

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

Airborne Credits	Electromagnetic	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Magnetometer	40
	Other	40

Total miles flown over claim(s). **11**

Date **Aug. 17/90** Recorded Holder or Agent (Signature) **[Signature]**

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
SO	748125	SO	1037876	SO	1037891
	748126		1037877		1037892
	748127		1037878		1037893
	748128		1037879		1040406
	748129		1037880		1040424
	748130		1037881		1040425
	748131		1037882		1040426
	748132		1037883		1040427
	748133		1037884		1040429
	748134		1037885		1104352
			1037886		1104395
	1037870		1037887		1104396
	1037871		1037888		
	1037872		1037889		
	1037873		1037890		
	1037874				
	1037875				

Total number of mining claims covered by this report of work.	43
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Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in this Report of Work, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying
G.J. Koleszar, P.O. Box 1205, Timmins, Ontario P4N 7J5

Telephone No. **268-9600** Date **Aug. 17, 1990** Certified By (Signature) **[Signature]**

Received Stamp

SOUTHERN ONTARIO MINING DIVISION
RECEIVED
AUG 21 1990
AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

For Office Use Only

Total Days Cr. Recorded 3440	Date Recorded Aug 21/90	Mining Recorder [Signature]
Date Approved as Recorded Dec 18/90	Provincial Manager, Mining Lands [Signature]	

Mining Act

Report of Work

(Geophysical, Geological, and Geochemical Surveys)

Type of Survey(s)	Mining Division	Township or Area
Airborne Magnetometer & VLF-EM	Southern Ontario	Tudor M-156
Recorded Holder(s)	Prospector's Licence No.	
Noranda Exploration Co., Ltd (no personal liability)	A-34387	
Address 1300-4 King St. W., Toronto, Ontario, M5H 1B6	Telephone No. (416) 982-9600	
P.O. Box 1205, 60 Shirley St, Timmins, Ontario P4N 7J5	(705) 268-9600	
Survey Company		
Questor Surveys Ltd., 200 Grand River Ave., Brantford, Ont.	N3T 4X9	
Name and Address of Author (of Geo-Technical Report)	Date of Survey (from & to)	
Terry McConnel, 200 Grand River Ave., Brantford, Ont.	29 07 90	
	Day Mo. Yr.	Day Mo. Yr.

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

<p>Special Provisions</p> <p>For first survey:</p> <p>Enter 40 days. (This includes line cutting)</p> <p>For each additional survey: using the same grid:</p> <p>Enter 20 days (for each)</p>	<p>Geophysical</p> <ul style="list-style-type: none"> - Electromagnetic - Magnetometer - Other <p>Geological</p> <p>Geochemical</p>	<p>Days per Claim</p> <p></p> <p></p> <p></p> <p></p> <p></p> <p></p>
<p>Man Days</p> <p>Complete reverse side and enter total(s) here</p>	<p>Geophysical</p> <ul style="list-style-type: none"> - Electromagnetic - Magnetometer - Other <p>Geological</p> <p>Geochemical</p>	<p>Days per Claim</p> <p></p> <p></p> <p></p> <p></p> <p></p> <p></p>
<p>Airborne Credits</p> <p>Note: Special provisions credits do not apply to Airborne Surveys.</p>	<p>Electromagnetic</p> <p>Magnetometer</p> <p>Other</p>	<p>Days per Claim</p> <p>40</p> <p>40</p> <p></p>

[illegible]

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

2

Total miles flown over claim(s).

Date	Recorded Holder or Agent (Signature)
------	--------------------------------------

Aug. 27/90

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in this Report of Work, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying

G.J. Koleszar, P.O. Box 1205, Timmins, Ontario P4N 7J5

Telephone No.

268-9600

Date _____

Aug. 27/90

Certified By (Signature)

Received Stamp

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
160	Aug 29/90	KM Chameley
Date Approved as Recorded	Provincial Manager, Mining Lands	
Dec 18/90	R. C. G. G. G.	

SOUTHERN ONTARIO MINING DIVISION
RECEIVED
AUG 29 1990
AM PM
7:8:9 10:11:12:13:14:15:16



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

Type of Survey(s) Airborne Magnetometer and VLF-EM
Township or Area Tudor Twp.
Claim Holder(s) Noranda Exploration Company,
Limited
Survey Company Questor Surveys Limited
Author of Report Terry McConnell
Address of Author c/o 200 Grand River Avenue
Brantford, Ontario N3T 4X9
Covering Dates of Survey 29/07/90
(linecutting to office)
Total Miles of Line Cut N/A

**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 _____
—Magnetometer _____
—Radiometric _____
—Other _____
Geological _____
Geochemical _____

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

Magnetometer 40 Electromagnetic 40 Radiometric _____
(enter days per claim)

DATE: Oct 17, 90 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications 2.926Z

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

SO	748125
(prefix)	(number)
	748126
	748127
	748128
	748129
	748130
	748131
	748132
	748133
	748134
	1037870
	1037871
	1037872
	1037873
	1037874
	1037875
	1037876
	1037877
	1037878
	1037879
	1037880
TOTAL CLAIMS	43

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

Instrument _____
Accuracy — Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

ELECTROMAGNETIC

Instrument _____
Coil configuration _____
Coil separation _____
Accuracy _____
Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line
Frequency _____
(specify V.L.F. station)
Parameters measured _____

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 _____ Frequency _____
— Off time _____ Range _____
— Delay time _____
— Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

MINING CLAIMS TRAVERSED

SO 1037881
 1037882
 1037883
 1037884
 1037885
 1037886
 1037887
 1037888
 1037889
 1037890
 1037891
 1037892
 1037893

 1040406

 1040424
 1040425
 1040426
 1040427
 1040429

 1104352
 1104395
 1104396

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) Magnetic, VLF-EM

Instrument(s) Scintrex H-8 Cesium Vapor Magnetometer, Herz Totem IIA VLF

(specify for each type of survey)

Accuracy Magnetics: 0.01 nT, VLF: 1.0%

(specify for each type of survey)

Aircraft used Cessna 206, C-FAQD

Sensor altitude Mag: 60 meters, VLF: 60 meters

Navigation and flight path recovery method Trimble TANS GPS Satellite Navigation

Aircraft altitude 60 meters Line Spacing 100 meters

Miles flown over total area 425 km Over claims only 43.3 Miles

69.7 hie Km

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 _____

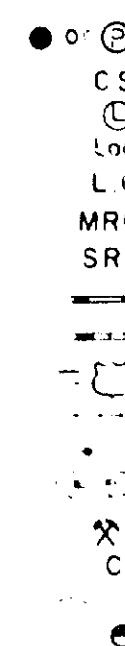
TUDORCOUNTY OF
HASTINGS

MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKOG
MINES
CANCELLED
TRAILS
PATENTED S.R.O.

**NOTES**

This Map Is Not To Be Used
FOR SURVEY PURPOSES.

Lot And Concession Lines Shown Hereon Are
Projected From The Best Information Available.
But Their True Position Is Not Guaranteed.
For Official Survey Purposes Consult The
Original Survey Plans And Field Notes Of
Records In The Ministry Of Natural Resources

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

XIX

XVIII

XVII

XVI

XV

XIV

XIII

XII

XI

X

IX

VIII

VII

VI

V

IV

III

II

I

Grimsthorpe Twp.(M.97)

DATE OF ISSUE

SEP 10 1990

SOUTHERN ONTARIO
MINING DIVISION

THE INFORMATION THAT
APPEARS ON THIS MAP
HAS BEEN COMPILED
FROM VARIOUS SOURCES
AND ACCURACY IS NOT
GUARANTEED. THOSE
WISHING TO STAKE MIN-
ING CLAIMS SHOULD CON-
SULT WITH THE MINING
RECORDS, MINISTRY OF
NATURAL RESOURCES FOR
ADDITIONAL INFORMATION
ON THE STATUS OF THE
LANDS SHOWN HEREON

PLAN NO.-M.156

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

Madoc Twp.(M.120)

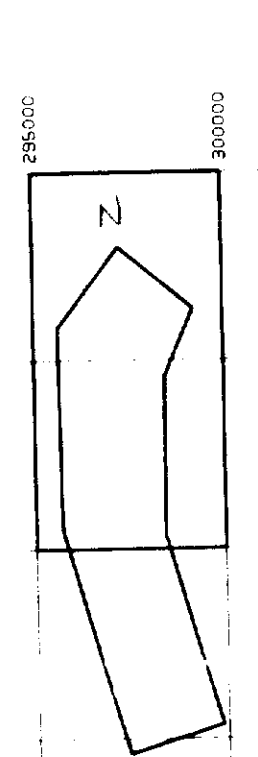


31013560043 2.13590 TUDOR

CLAIM LOCATIONS +
HT PATH MAP as above

LEGEND
 — 5 fiducial interval
 — 20 fiducial interval

NOTATION

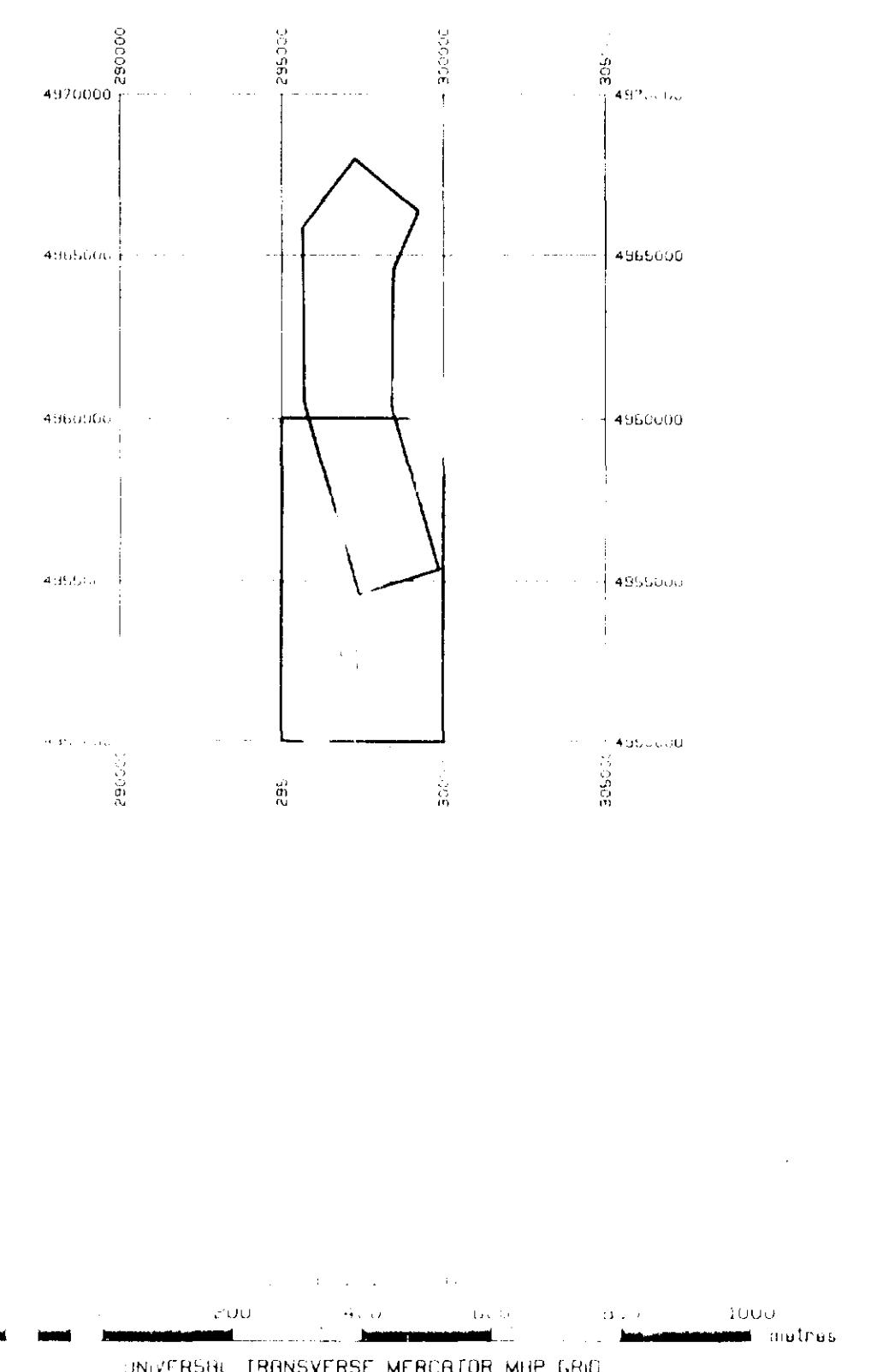


Scale 1:10 000
400 600 800 1000 metres
TRANSVERSE MERCATOR MAP GRIC.

FLIGHT PATH MAP

LEGEND

- 5 fiducial interval
- - - 20 fiducial interval



Surveyed and compiled by QUESTOR SURVEYS LIMITED
September - October 1990
Job No. 90067

AIRCRAFT
C-1740 LESSA STATIONARY 205G
MAGNETOMETER
SENSE MAG LESSA STATIONARY
RESOLUTION 0.001 milligauss
CYCLE RATE 0.2 seconds
SAMPLE INPUT 0.2 seconds

DATA ACQUISITION
PICOPDS P1000 DATA ACQUISITION SYSTEM

FLIGHT LINE SPACING
TRAVERSE LINES 100 meters
TE LINES 0.25 meters per block

FLIGHT LINE DIRECTION
BLOCK 1
TRAVERSE LINES 125 - 135 degrees
TE LINES 045 - 025 degrees
BLOCK 2
TRAVERSE LINES 090 - 070 degrees
TE LINES 000 - 180 degrees
BLOCK 3
TRAVERSE LINES 075 - 255 degrees
TE LINES 145 - 325 degrees

FLIGHT HEIGHT
140 meters - MEAN CHARTER CLEARANCE

NAVIGATION
Using Terrestrial TRANS GPS Navigation System

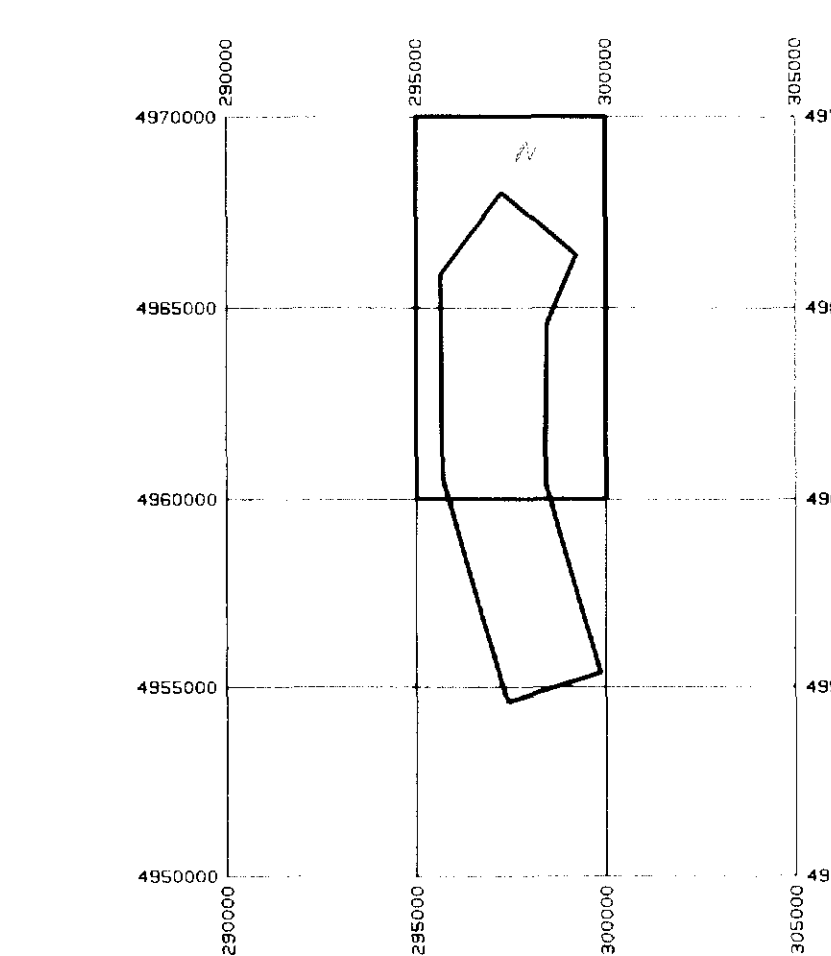
$$e_1 = \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}, \quad e_2 = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}, \quad e_3 = \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}$$

LEGEND

— 5 fiducial interval
+ 20 fiducial interval

2. 13590

SHEET LOCATION



Scale 1:10 000

200 0 200 400 600 800 1000 metres
UNIVERSAL TRANSVERSE MERCATOR MAP GRID

MADOC AIRBORNE GEOPHYSICAL SURVEY NORANDA EXPLORATION COMPANY LIMITED

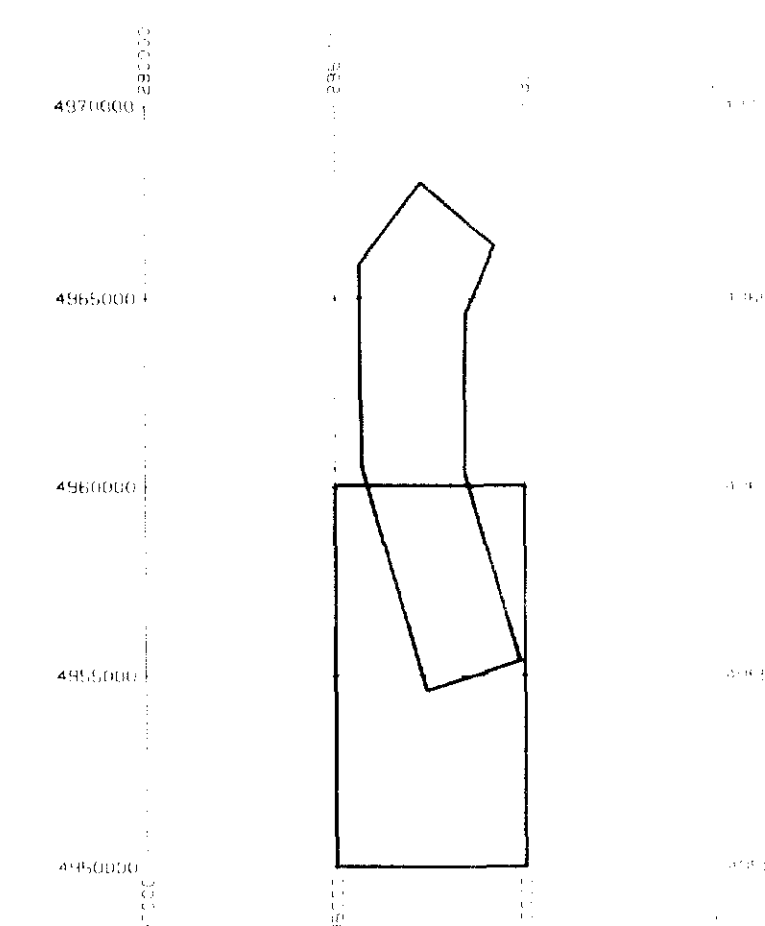
Surveilled and completed by GUESTER (A.K.A. Y.S. KATZ)
September 1987 October 1987
100 per cent

ABSTRACT
C-FRQ (25000) SYSTEM 2016
MAGNETOMETER
SENTRY 46 LE SUM VERBUL
RESOLUTION 0.001 mT/m
CYCLE RATE 1/2 seconds
SAMPLE INTERVAL 10 metres
DATA ACQUISITION
PICKERS P1000 DIGITAL ACQUISITION SYSTEM
FLIGHT LINE SPACING
TRANSVERSE LINES 100 metres
TE LINES 6 lines per block
FLIGHT LINE DIRECTION
BLOCK 1
TRANSVERSE LINES 135 135 degrees
TE LINES 145 135 degrees
BLOCK 2
TRANSVERSE LINES 135 135 degrees
TE LINES 145 135 degrees
BLOCK 3
TRANSVERSE LINES 135 135 degrees
TE LINES 145 135 degrees
SURVEY HEIGHT
200 metres - MEAN CHARTER L1 ELEVATION
NAVIGATION
Using Trimble TRANS GPS Navigation System

FLIGHT PATH MAP

LEGEND
1. Flight path
2. Magnetic field
3. Magnetic intensity

2.13590



MADOC
AIRBORNE GEOPHYSICAL SURVEY
NORANDA EXPLORATION COMPANY LIMITED
Surveyed and compiled by NORANDA SURVEYS LIMITED
September - October 1980
Job No. 90007

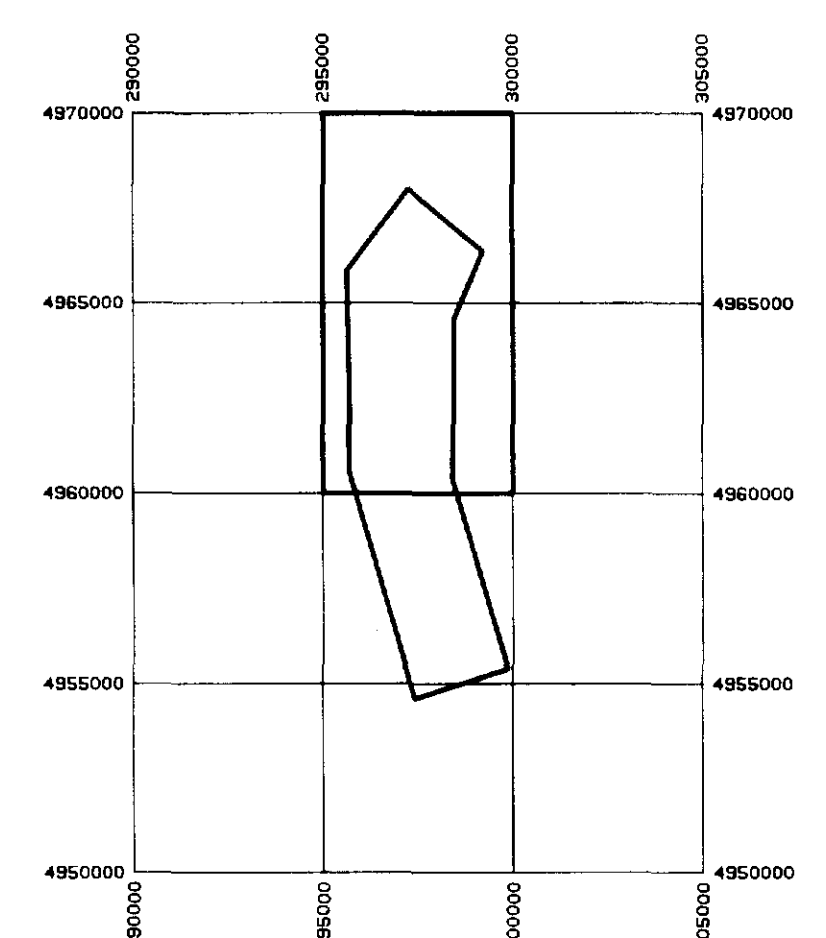
AIRCRAFT
C-47D (ESSNA) STATIONAR 206G
MAGNETOMETER
SUNTEX HS CESUM VAPOR
RESOLUTION 0.001 nanotesla
CYCLE RATE 0.2 seconds
SAMPLE INTERVAL 12 metres
DATA ACQUISITION
PIEDRAS 10000 DIGITAL RECORDING SYSTEM
FLIGHT LINE SPACING
TRAVERSE LINES 100 metres
TE LINES 2 lines per block
FLIGHT LINE DIRECTION
BLOCK 1
TRAVERSE LINES 135 - 315 degrees
TE LINES 045 - 225 degrees
BLOCK 2
TRAVERSE LINES 090 - 270 degrees
TE LINES 000 - 180 degrees
BLOCK 3
TRAVERSE LINES 075 - 255 degrees
TE LINES 145 - 225 degrees
SURVEY HEIGHT
200 metres - MEAN TERRAIN CLEARANCE
NAVIGATION
Using Trimble TANS GPS Navigation System

TOTAL FIELD MAGNETIC CONTOUR MAP

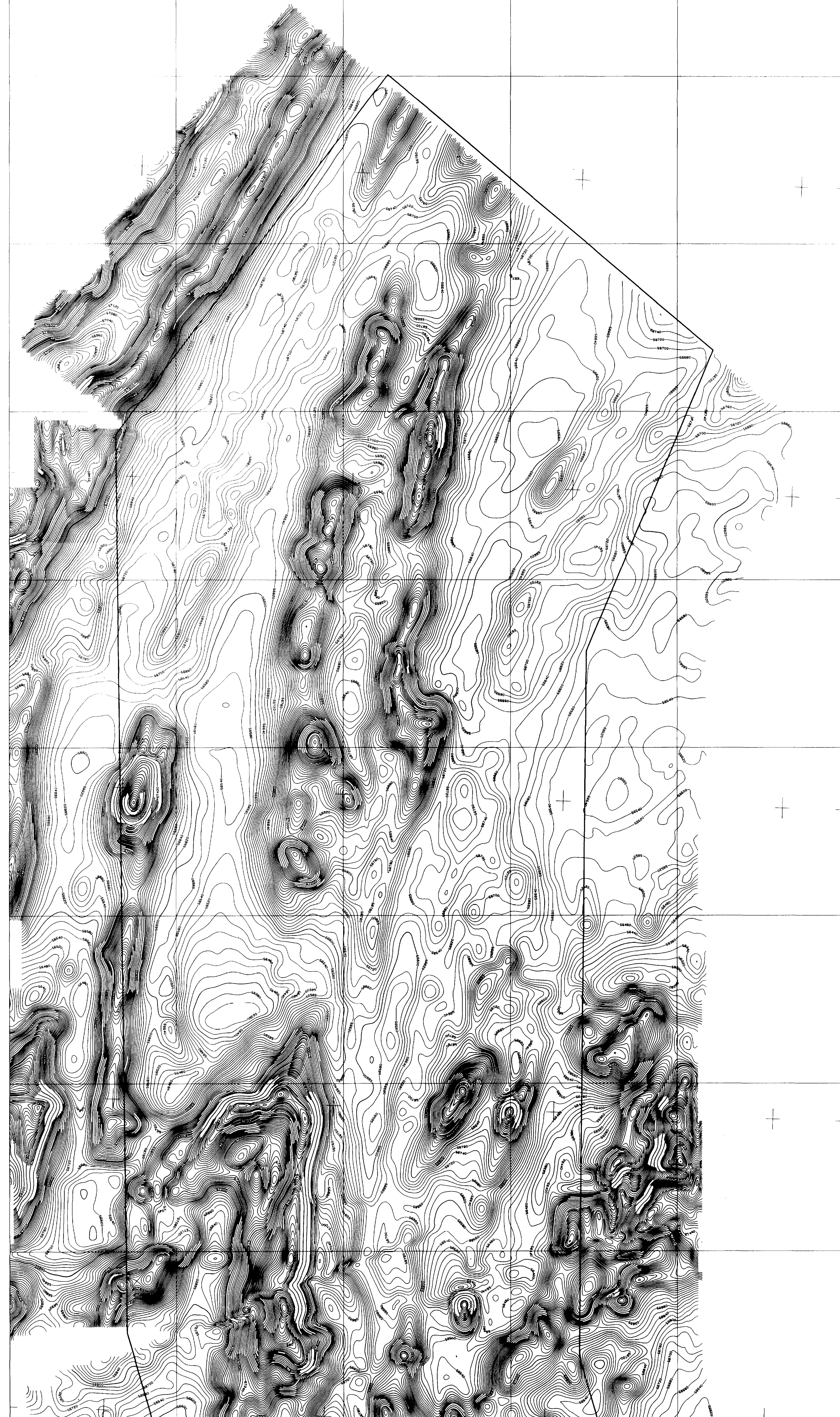
DATA PROCESSING
REGIONAL FIELD GRF MODEL 1985 REMOVED
GRID CELL SIZE 25 metres
CONTOUR INTERVAL 20 nanotesla
PARALLAX CORRECTION 0.0 Pascals
BREF VALUE ADDED 57000 nanotesla

2.13590

SHEET LOCATION



Scale 1:10 000
200 0 200 400 600 800 1000 metres
UNIVERSAL TRANSVERSE MERCATOR MAP GRID



4870000

4860000

4850000

4840000

4830000

4820000

4810000

4800000

4790000

4780000

4770000

77°35'

77°34'

77°33'

77°32'

47°50'

47°45'

47°40'

47°35'

47°30'

47°25'

MADOC
AIRBORNE GEOPHYSICAL SURVEY
NORANDA EXPLORATION COMPANY LIMITED
Surveyed and compiled by QUESTER SURVEYS LIMITED
Section No. 1000000
Job No. 90007

INFORMATION
C. F. HODGSON STATIONERY CO. LTD.
MAGNETOMETER
SURVEYOR: J. S. HODGSON
RESOLUTION: 0.0001 gauss
CYCLE RATE: 0.01 seconds
SAMPLE RATE: 0.01 seconds
DATA ACQUISITION
EXPLORATION SYSTEM
FLIGHT LINE SPACING
THURGOOD LINE: 1000 metres
FLIGHT LINE SPACING: 1000 metres
FLIGHT LINE DIRECTION
BLOCK 1
THURGOOD LINE: 1000 metres
FLIGHT LINE: 1000 metres
BLOCK 2
THURGOOD LINE: 1000 metres
FLIGHT LINE: 1000 metres
BLOCK 3
THURGOOD LINE: 1000 metres
FLIGHT LINE: 1000 metres
SURVEY HEIGHT
1000 metres
NAVIGATION
Using Trimble 1000 GPS Navigation System

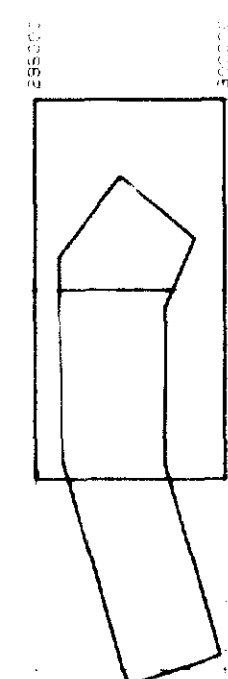
TOTAL FIELD VLF-EM CONTOUR MAP

DATA PROCESSING
Seattle, Washington
LARRY P. J. JONES
LARRY P. J. JONES

2.13590

47°30'

47°30'



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 23

MADOC
AIRBORNE GEOPHYSICAL SURVEY
NORANDA EXPLORATION COMPANY LIMITED
Surveys and completed by GUESTON SURVEYS LIMITED
September - October 1990
Job No. 90007

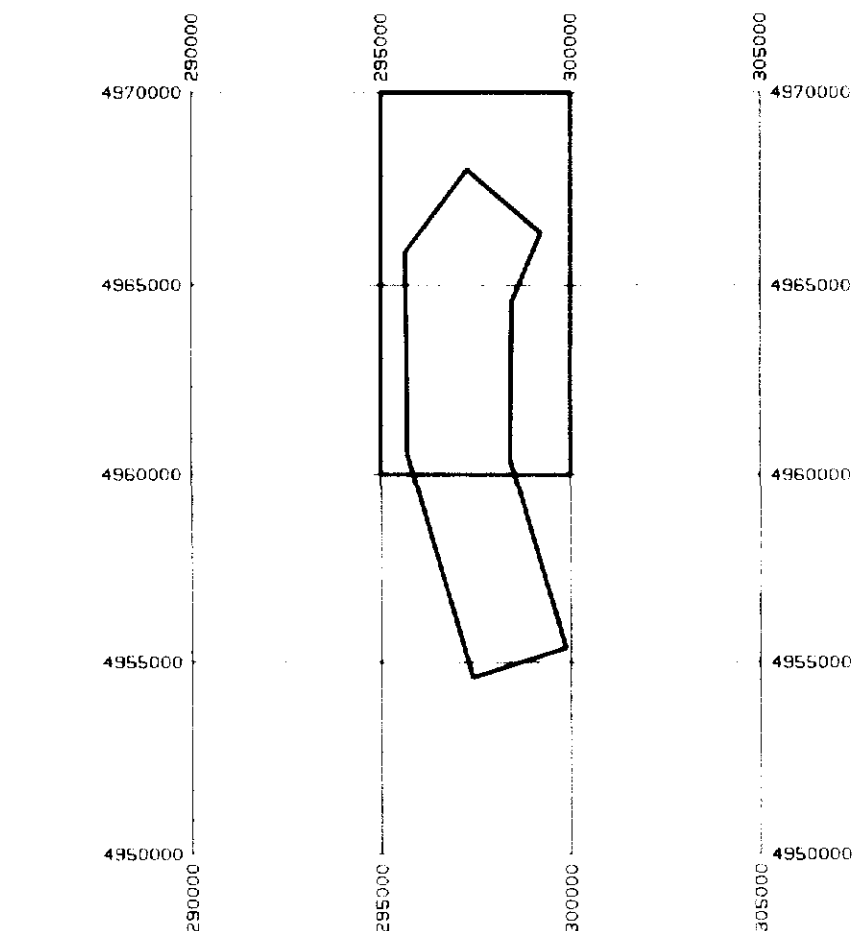
AIRCRAFT
C-440 DCESSA STATIONAR 206L
MAGNETOMETER
SCINTREX H6 CESIUM VAPOR
RESOLUTION 0.001 nanotesla
CYCLE RATE 0.2 seconds
SAMPLE INTERVAL 15 metres
DATA ACQUISITION
PICOHAS P1000 DIGITAL ACQUISITION SYSTEM
FLIGHT LINE SPACING
TRAVERSE LINES 100 metres
TIE LINES 2 lines per block
FLIGHT LINE DIRECTION
BLOCK 1
TRAVERSE LINES 135 - 315 degrees
TIE LINES 045 - 225 degrees
BLOCK 2
TRAVERSE LINES 090 - 270 degrees
TIE LINES 000 - 180 degrees
BLOCK 3
TRAVERSE LINES 075 - 255 degrees
TIE LINES 145 - 325 degrees
SURVEY HEIGHT
200 metres MINIMUM CLEARANCE
NAVIGATION
Using Trimble TRANS GPS Navigation System

QUADRATURE VLF-EM STACKED PROFILES

DATA PROCESSING
Seattle, Washington HXK transmitter: 24.9 kHz
PROFILE BASE VALUE 0
PROFILE VERTICAL SCALE 20

2.13590

SHEET LOCATION



MADOC AIRBORNE GEOPHYSICAL SURVEY NORANDA EXPLORATION COMPANY LIMITED

Surveyed and interpreted by QUESTOR IMAGING LIMITED
September - October 1990
JOB NO. 900067

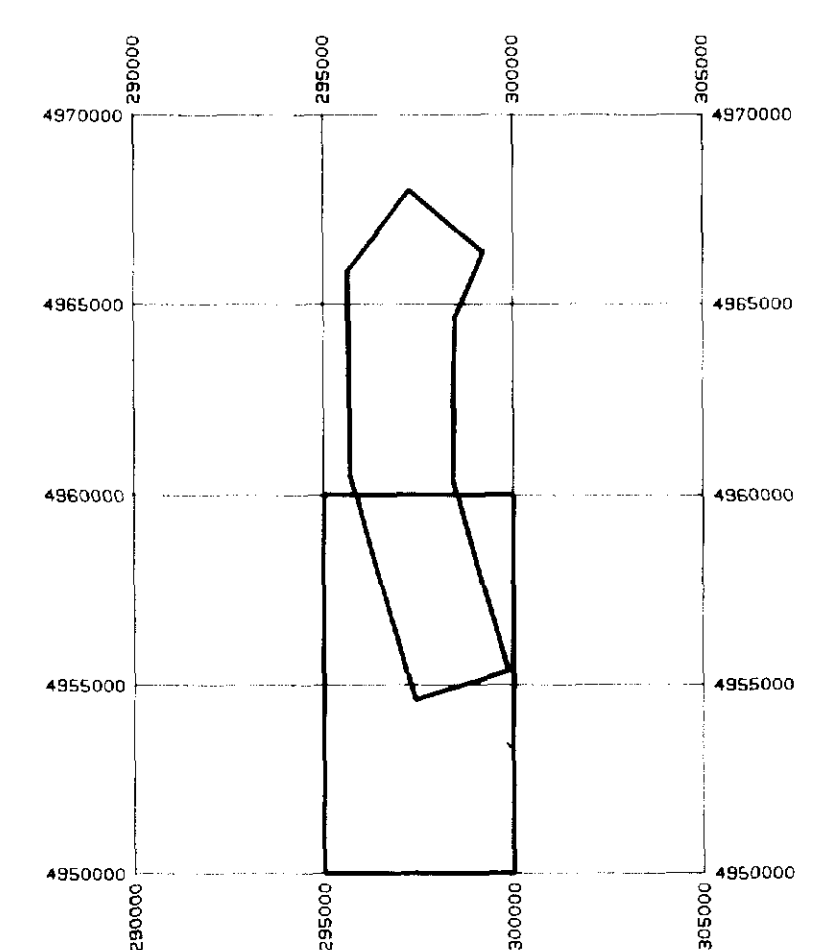
AIRCRAFT
C-130J CESSNA STATIONAIR 206G
MAGNETOMETER
SCINTREX HS CESAM VESPER
RESOLUTION 0.001 nanotesla
CYCLE RATE 0.2 seconds
SAMPLE INTERVAL 12 metres
DATA ACQUISITION
PIEDRAS PIEDRA ACQUISITION SYSTEM
FLIGHT LINE SPACING
TRAVERSE LINES 100 metres
TE LINES 25 lines per block
FLIGHT LINE DIRECTION
BLOCK 1
TRAVERSE LINES 035 - 315 degrees
TE LINES 045, 225 degrees
BLOCK 2
TRAVERSE LINES 090 - 270 degrees
TE LINES 000 - 180 degrees
BLOCK 3
TRAVERSE LINES 075 - 255 degrees
TE LINES 145 - 325 degrees
SURVEY HEIGHT
200 metres - MEAN CANOPY CLEARANCE
NAVIGATION
Using Trimble TRNS GPS Navigation System

QUADRATURE VLF-EM STACKED PROFILES

DATA PROCESSING
Seattle, Washington NLK Transmitter, 24.8 kHz
PROFILE BASE VALUE 0
PROFILE VERTICAL SCALE 20

2.13590

SHEET LOCATION



Scale 1:10 000
200 0 200 400 600 800 1000 metres
UNIVERSAL TRANSVERSE MERCATOR MAP GRID

