MURGOLD RESOURCES INC.

Gogama, Ontario

VLF - E-M SURVEY

Report on Filtered Data

by

Norminex Limited

P. O. Box 2003

Sudbury, Ontario

December 1981

CONTENTS

TABLES

ILLUSTRATIONS

SUMMARY AND CONCLUSIONS

VLF - E-M field data were filtered using a moving average technique described by Fraser (1969). The contoured results of this were compared with the location of cross-overs plotted by the field crews and topographic lineaments obtained from an analysis of aerial photography.

These data were plotted on a composite plan and a good correlation exists amongst the three features. They are interpreted to represent two prominent sets of fractures, one of which trends 45° and the other between 90° and 110°. Both of these trends parallel that of known gold-bearing quartz veins on the property but most of the veins discovered to date follow the latter trend.

All of the anomalous zones have the potential for containing valuable mineralization. They have been separated into groups with different priorities for further investigation based on their association with known occurrences of Cu/Au mineralization and structure.

RECOMMENDATIONS

The anomalous zones outlined by the contours of filtered VLF-EM data should be further evaluated by:

a) Soil geochemical surveys with analyses for Cu and Au;

b) Trenching wherever soil geochemical anomalies are found;

c) Drilling the most favourable zones.

It is recommended that this filtering technique be carried out on the remainder of the VLF-EM survey data.

VLF - E-M SURVEY

Report on Filtered Data

Introduction

Ground geophysical surveys were carried out over the Murgold Resources Inc. Claim group in Chester Township, Ontario during the summer of 1981. Field work was supervised by R. Henning, P. Eng., Toronto.

An electromagnetic survey using the energy from very low frequency radio transmitters (VLF - E-M) located in Seattle, Washington, (NLK) and Cutler, Maine (NAA) formed a major part of this work. The survey was conducted using flagged lines oriented in a north-south direction approximately 600 feet apart and readings were taken at intervals of about 100 feet along each line. The location of survey lines and stations was determined by pace and compass. Measurements proportional to the in-phase and out-of-phase components of the secondary electromagnetic field were made using an instrument manufactured by Geonics Ltd., Toronto and designated EM-16 (No. 16882). Results of this survey were plotted as profiles along the traverse lines with a horizontal scale of 1 inch = 400 feet and vertical scale of 1 inch - 40 %.

Field Work

Measurements with the EM-16 were made using one or the other of the two transmitter stations interchangeably. This practise has the advantage that when one station ceases broadcasting the other one can often be used. The primary electromagnetic fields from each station will have different orientations, strengths and frequencies which will produce different responses from a buried conductor. Consequently it is preferable to conduct a VLF-EM survey using each transmitter for the entire survey. Fortunately, for the

Chester township survey the transmitter stations are almost diametrically opposed and their broadcast frequencies are in the same order of magnitude. The results of a survey using only one station probably would not be significantly different from those obtained in this survey.

Our evaluation of this survey is based upon an examination of the field notes and profiles and the following assumptions:

a) The in-phase and out-of-phase components of the secondary electromagnetic field were recorded as percentages of the primary field, positive or negative.

b) For an operator traversing north and facing north, a positive in-phase reading represents a southward dipping ellipse of polarization and a negative reading represents a northward dipping one. For an operator traversing south and facing south the reverse relationship holds and a positive in-phase reading represents a northward dipping polarization ellipse.

These data have been plotted by the field crews as profiles along the traverse lines. The relative position and length of many of these lines were subsequently adjusted to lie within the known boundaries of the property. Consequently, the location of cross-overs representing significant conditions is only an approximation and should be checked.

Results of Field Work

True cross overs indicating the presence of conductors were selected from the field data using the assumptions stated above and are plotted on the enclosed map. They are divided into four categories on the basis of the average peak value for the in-phase component of the secondary electromagnetic field. In general the larger the peak values the better the conductor and large values close together indicate a good conductor close to

surface. A large peak to peak separation along the traverse line indicates either a broad conductor or a deeply buried one.

Those data representing the in-phase component of the secondary electromagnetic field were filtered using a moving average technique described by D. C. Fraser (1969). This produces another set of positive and negative numbers such that the true cross-overs can be represented by the greatest positive values. It is achieved by adopting the convention that the moving average is conducted from north to south and that north dips of the polarization ellipse are negative. It is useful as another method for showing the location and trend of conductors and it improves the resolution of anomalies making them easier to recognize. The technique indicates anomalies at all inflection points in the profile whether or not they cross over. Also, different results are obtained by changing the length of interval averaged, i.e. the sample spacing, so that care must be taken to select the one which best portrays the anomalies in a given area. A spacing of 50 feet was selected for this survey because it is suitable for defining conductors within a few hundred feet of the surface (Fraser, 1969).

The results of this analysis are listed in Table I and are shown on the enclosed map. Anomalous zones are indicated by contours of averaged values representing the in-phase component of the secondary electromagnetic field where it is greater than 10% of the primary field.

TABLE OF VLF - E-M ANOMALIES

Anomaly No.	Line No.	Station No.	Remarks
A-1	140 W	79+00 S	prominent topographic lineament parallel to No. 11 showing
	158 W	79+00 S	
A-2	158 W	61+50 S	
A-3	158 W	55+00 S	West from Chester Resources showing
B-1	146 W	97+00 S	West end of Mill Pond
	140 W	98+00 S	
B-2	104 W	112+00 S	east of Arethusa Lake
B-3	104 W	46+50 S	No. 20 vein system
B-4	98 W	56+00 S	
B-5	104 W	61+50 S	No. 16 vein system
B-6	110 W	78+50 S	
B-7	182 W	49+00 S	Old showing
C-1	128 W	115+00 S	West end of Arethusa Lake
C-2	188 W	40+50 S	Nearly conformable
C-3	188 W	57+50 S	
C-4	98 W	38+00 S	
C-5	110 W	39+50 S	
C-6	122 W	38+00 S	
C-7	95 W	7+50 S	Adjacent to topographic lineament
	107 W	8+50 S	
	101 W	4+50 S	

Discussion of Results

The VLF - E-M map shows that the contoured zones generally coincide with the major cross overs. Contoured values have the advantage that they indicate the trend of anomalies through areas where the crossovers are not clearly defined. Some of these coincide with known vein systems such as No. 16 and No. 20. Others are associated with fault zones such as the north-easterly trending one near No. 2 shaft (Strathmore). A few coincide with swampy areas and may be the result of better conductivity of wet ground or due to the presence of a conductor beneath the swamp, or to both. Examples of this are seen at the west end of Mill Pond and of Arethusa Lake.

The principal anomalous zones are labelled and described in the following paragraphs in order of priority for investigation.

A - Anomalies - first priority

Three anomalies are given top priority rating because they lie on the westward extension of known mineralized zones and are associated with linear features showing prominently on the aerial photographs.

Anomaly A-1 extends from Weeduck Lake eastward through Deer Lick Pond to line 98W. It is parallel to and slightly north of a zone of geochemical anomalies which was trenched and mapped as the No. 11 showing. This showing contains disseminated chalcopyrite associated with diorite and alaskite in a number of separate localities trending about 100°. The anomaly probably reflects a fracture or shear zone which may be mineralized. This conductor widens and strengthens to the westward and should be explored in detail using soil geochemistry and trenching. The areas of especial interest are located about 79+00 S on lines 140W and 158W. Two anomalies lying north of A-1 extend westward from the boundary with Chester Resources property. These intersect line 158 at 61+50 S and 55+00 S and are designated A-2 and A-3 respectively. The A-3 anomaly probably is the westward continuation of the central showing

on the Chester property and both warrant further exploration.

B - Anomalies - second priority

These include anomalies which occur in the vicinity of known gold bearing veins such as the No. 20 and 16 vein systems.

Anomaly B-1 occurs at the west end of Mill Pond near line 146W (97400 S) and B-2 lies to the east of Arethusa Lake on line 104W (112400 S). These are situated approximately along strike from the No. 3 vein system and consequently merit detailed examination.

Anomalies B-3 to B-6 lie east of and adjacent to the Chester Resources property and include the No. 16 and 20 vein systems. Since two of these anomalies are associated with known gold-bearing veins and all four show similar trends, they should be explored in detail.

C - Anomalies - third priority

The anomalies in this category are given a lower priority because they do not have an obvious association with veins or topographic lineaments. However, they represent zones for more detailed exploration because there is no obvious explanation for them.

D - Anomalies - fourth priority

The anomalies in this category are all associated with known lakes and swampy areas. Some of these, such as the one trending northeasterly between Arethusa and Mesomikenda Lakes, probably reflect a local fracture zone which occupies this depression. This group is given lowest priority because the anomalies may be explained by wet ground. However, they should be checked for the presence of mineralization because Archean mineral deposits often occur under swamps.

Other low level anomalies occur along strike from known vein systems such as eastward from No. 1 vein. These have not been given a rating because it is assumed that they will be checked with more detailed work as a result

of continued exploration of the zone.

During the field work insufficient attention was paid to horizontal control in determining the location of flagged lines and of stations along these lines. Consequently the precise location of each of the anomalous regions to be explored in detail should be verified. This may be accomplished by running one or more short VLF profiles between the older survey lines.

Interpretation of these data assumes that the anomalies are close to the location plotted. Any significant relocation of survey lines or stations will invalidate this assumption.

Interpretation of Results

The most prominent topographic lineaments observed on air photographs of the property are shown on the accompanying map. Two dominant trends are exhibited by these features: 45° and 90° to 110°. The first one occurs most abundantly near Lake Mesomikenda. Probably it is a reflection of fracture zones developed during a period of right-handed displacement along a NNW trending fault under the lake. Only one vein (No. 15) which parallels this trend has been discovered to date.

The second direction is parallel to one set of diabase dykes and to most of the gold-bearing zones on the Chester and Murgold properties. It is interpreted to represent a dominant system of fractures which probably developed during an earlier period of deformation. Consequently, this trend has the greatest potential for hosting gold-bearing quartz veins. In the northern part of Chester townships these linear features may simply reflect the trend of formations. However, they should be investigated in detail because of their potential for hosting strata bound mineralization.

Most of the VLF - E-M anomalies show trends that coincide with one or the other of these sets of lineaments. Consequently, the anomalous zones are interpreted to be reflections of these linear features.

REFERENCES

Fraser, D. C. (1969) "Contouring of VLF - E-M Data"
Geophysics Vol. 34, No. 6
pp 958 - 967

.888

900

Our File: 2.4888

1984 02 10

Resident Geologist
L. E. Luhta
60 Wilson Avenue
Timmins, Ontario
P4N 3W2

Dear Sir:

RE: Geophysical (Electromagnetic) survey submitted on mining claims P 471952 et al in the Township of Chester.

Enclosed is a copy of the report and plans for your files. This survey has not been assessed as the claims have already received their maximum 80 days Geophysical credits.

Yours very truly,

J. R. Morton
Acting Director
Land Management Branch
Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

Phone: 416 (965-1380)

D. Kinvig:dg

cc: Mining Recorder
Timmins, Ontario

cc: Murgold Resources Inc.
Suite 2300
3900 Bay Street
Toronto, Ontario
M5H 2Y2

250

November 1, 1983 2.4888

Norminex Limited
P.O. Box 2003
Postal Station "A"
Sudbury, Ontario

Attention: Mr. J.F. Davies

Dear Sirs:

RE: Geophysical (Electromagnetic) Survey submitted on Mining Claims P471952 et al in the Township of Chester.

Enclosed are the plans, in duplicate, for the above mentioned survey. Thank you for your reply to our letter dated June 17, 1983. We still require that the electromagnetic readings be profiled on the plans at a scale not to exceed 1 inch = 50%.

For further information please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

R. Pichette:sc

Encls:

cc: Mining Recorder
Timmins, Ontario

cc: Murgold Resources Inc
Suite 2300
3900 Bay Street
Toronto, Ontario
M5H 2Y2

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.4883

Mining Lands Comments

☑ To: Geophysics R. BARLOW.

Comments

VLF maps needs modeling
- sent back with only new
VLF readings

☐ Approved	☑ Wish to see again with corrections	Date Sept 27/83	Signature R Barlow

☐ To: Geology - Expenditures

Comments

☐ Approved	☐ Wish to see again with corrections	Date	Signature

☐ To: Geochemistry

Comments

L. v. P.

☐ Approved	☐ Wish to see again with corrections	Date	Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

NORMINEX LIMITED

MINERAL EXPLORATION & RESEARCH

R. A. Cameron, Ph.D., P.Eng.
J. F. Davies, Ph.D., P.Eng.
R. E. Whitehead, Ph.D.

P. O. Box 2003
Postal Stn. "A"
Sudbury, Ontario

September 12, 1983

Mr. F. W. Matthews
Land Management Branch
6450 Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3

Dear Sir:

Re: Your file 2.4888

Enclosed please find the plans of a geophysical survey submitted earlier and referred to in your letter of June 17. These were prepared by Norminex for Murgold Resources and accompanied a report signed by R. A. Cameron, President of Norminex. We are enclosing a resume of Dr. Cameron as requested. He is now out of the country for a few months. In his absence, and as vice-president of Norminex Ltd., I am signing the maps. You already have my resume on file.

I trust this meets your requirements and request that you advise me if these maps are now acceptable.

Yours very truly,

J. F. Davies
Vice-President

JFD/mw
Encl.
c. Murgold Resources

Ontario Natural Resources

Your file:

Our file: 2.4888

June 17, 1983

Murgold Resources Inc
Suite 2300
390 Bay Street
Toronto, Ontario
M5H 2Y2

Dear Sirs:

RE: Geophysical (Electromagnetic)
Survey submitted on Mining Claims P471952 et al
in the Township of Chester

Enclosed are the plans, in duplicate, for the above-mentioned survey. Please provide the following:

a) a brief resume stating the qualifications of R.A. Cameron- guidelines enclosed

b) signature of R.A. Cameron on all the plans

c) all claim lines and claim numbers must be shown on the maps

d) V.L.F. maps need the raw data reading plotted at each station

e) a key map showing the location of the property with respect to Township boundaries, established reference lines and easily identified topographic features. The map should be inset in one corner of the plan or inserted in the report.

For further information, please contact Mr. F.W. Matthews at (416) 965-1380.

Yours very truly,

E.E. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

R. Pichette:mc

cc: Mining Recorder
Timmins, Ontario

Encl.

R. A. Cameron

Economic Geologist, Geophysicist

Education

B.Sc. & Dipl. Eng.	Dalhousie University, 1948
M.A.Sc. (Mining Geology)	University of Toronto, 1953
Ph.D.	McGill University, 1956

Professional Associations

Member, Association of Professional Engineers, Ontario
Fellow, Geological Association of Canada
Member, Canadian Institute of Mining & Metallurgy

Experience

- Nine seasons of summer field work with survey parties in Labrador, Nova Scota, Quebec and Saskatchewan.
- Lecturer, Department of Geology, University of N.B.
- Geologist, Imperial Oil Ltd., Edmonton, Alberta
- Geologist, Malartic Gold Fields Ltd.,Halet, P.Q.
- Chief Geologist, East Malartic Mines Ltd., Norrie, P.Q.
- Area Geologist, McIntyre Porcupine Mines Ltd., Val d'Or, P.Q.
- Field Manager, Atlantic Development Board potash exploration project.
- Asst. Professor, Department of Mineral Engineering, Technical University of Nova Scotia, Halifax, N.S.
- Assoc. Professor, Department of Geology, Laurentian University, Sudbury, Ontario.

Other

Author or co-author of 10 publications or reports.

September 7, 1983

2.4888

REGISTERED

Murgold Resources Incorporated
Suite 2300
390 Bay Street
Toronto, Ontario
M5H 2Y2

Dear Sirs:

RE: Geophysical (Electromagnetic) Survey submitted on Mining Claims P 471952 et al in the Township of Chester

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Enclosed is a copy of our letter dated June 17, 1983, requesting additional information for the above mentioned survey.

Unless you can provide the required data by September 21, 1983 the mining recorder will be directed to cancel the work credits recorded on June 29, 1983.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

S. Hurst:sc

Encls:

cc: Mining Recorder
Timmins, Ontario

June 17, 1983

2.4888

Murgold Resources Inc
Suite 2300
390 Bay Street
Toronto, Ontario
M5H 2Y2

Dear Sirs:

RE: Geophysical (Electromagnetic)
Survey submitted on Mining Claims P471952 et al
in the Township of Chester

Enclosed are the plans, in duplicate, for the above-mentioned survey. Please provide the following:

a) a brief resume stating the qualifications of R.A. Cameron- guidelines enclosed

b) signature of R.A. Cameron on all the plans

c) all claim lines and claim numbers must be shown on the maps

d) V.L.F. maps need the raw data reading plotted at each station

e) a key map showing the location of the property with respect to Township boundaries, established reference lines and easily identified topographic features. The map should be inset in one corner of the plan or inserted in the report.

For further information, please contact Mr. F.W. Matthews at (416) 965-1380)

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

R. Pichette:mc

cc: Mining Recorder
Timmins, Ontario

Encl.

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.4888

Mining Lands Comments

[illegible]

[x] To: Geophysics MR. BARLOW

Comments

VLF ran data needed

[ ] Approved [-] Wish to see again with corrections | Date Aprl 9 | Signature R. Barlow

[ ] To: Geology - Expenditures MR. KUSTRA

Comments

There is no geology report, nor a proper geological map. This report appears to be only geophysics & has been given to Mr. Barlow.

[ ] Approved [ ] Wish to see again with corrections | Date | Signature

[ ] To: Geochemistry

Comments

[ ] Approved [ ] Wish to see again with corrections | Date | Signature

[ ] To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

2.4888

1982 07 05

Mining Recorder
Ministry of Natural Resources
199 Larch Street
Sudbury, Ontario
P3E 5P9

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims S 471952 et al in the Township of Chester.

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

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

J. Skura/sc

c.c. Murgold Resources Inc
Gogama, Ontario

c.c. Norminex Limited
Sudbury, Ontario
Attn: R.A. Cameron

Ontario

Ministry of Natural Resources

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

The Mining Act

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

Type of Survey(s)

Township or Area

Claim Holder(s)

Prospector's Licence No.

Survey Company

Survey Dates (linecutting to office) | Day | Mo. | Yr. | Day | Mo. | Yr.

Total Miles of line Cut

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

Special Provisions Credits Requested

Instructions

For first survey:
Enter 40 days. (This includes line cutting)

For each additional survey: using the same grid:
Enter 20 days (for each)

	Days per Claim
Geophysical	
- Electromagnetic	
- Magnetometer	
- Radiometric	
- Other	
Geological	40
Geochemical	

Man Days

Instructions

Complete reverse side and enter total(s) here

	Days per Claim
Geophysical	
- Electromagnetic	
- Magnetometer	
- Radiometric	
- Other	
Geological	
Geochemical	

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.

	Days per Claim
Electromagnetic	
Magnetometer	
Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

RECORDED
MAY 29 1982
Receipt No.

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	See attached list.				
	See file 2.4889				

RECEIVED
OCT 26 1982
MINING LANDS SECTION

MAY

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

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
11,040		
	Date Approved as Recorded	Regional/Branch Director

Regional Mining Engineer

Report Completed

Date of Report

Recorded Holder or Agent (Signature)

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying

Date Certified

Certified by (Signature)

1982 (81/2)

5469240		5469108	
5469241		5469109	
5469242		5469110	
5469243		5469111	
5469244		5469112	10
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5490002 -			

Total 91
Page 1 - 206
Total. 297

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5438320		5490015	
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5438327	1		
5439293			
5439294	4		
5439295			
5439296			
5450922	1		

unpatented claims 203
91
294

297 x 10 - 2940
TAX - 208
3118

140
66
206

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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

Type of Survey(s) Geophysical

Township or Area Shirley Twp.

Claim Holder(s) Bruncor (Resources) Inc.

Survey Company Hemlo Ltd.

Author of Report K.H. Cameron

Address of Author [illegible] Sudbury Ont.

Covering Dates of Survey May 11/81 - Dec 15/81 (linecutting to office)

Total Miles of Line Cut 11.0

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	20
-Magnetometer	
-Radiometric	
-Other	
Geological	
Geochemical	

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

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

DATE: May 29/82 SIGNATURE: [signature] Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

RECEIVED
JUN - 3 1982
MINING LANDS SECTION

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

[illegible] Claim

If space insufficient, attach list

TOTAL CLAIMS _____

CONFIDENTIAL

837 (5/79)

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 VLF - 16

Coil configuration _____

Coil separation _____

Accuracy _____

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

Frequency Seattle, Washington and Cutler, Maine
(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 _____

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 _____

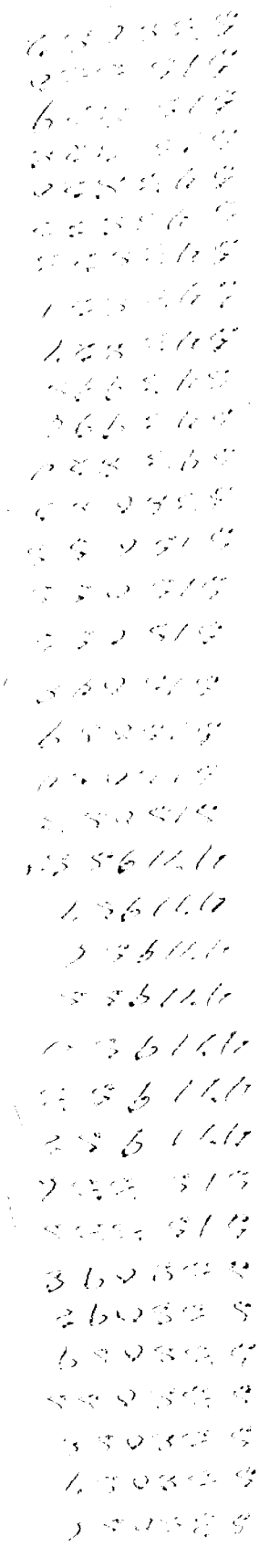
Sensor altitude _____

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 _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

NORMINEX LIMITED
P. O. Box 2003
Terminal "A"
Sudbury Ontario

STATEMENT OF ACCOUNT WITH MURGOLD RESOURCES LTD.

Report on VLF - E-M Survey	$4,000.00
Printing	191.80
TOTAL	$4,191.80

December 21, 1981

The following list of Employees whose names appear on Geophysical Survey in 1951.

Line Cutting.

			Total days
Robert Scott -	May 18 -	June 6th -	20
Richard Wright -	May 19 -	June 30th -	43
Joe Wawe -	May 19 -	July 22nd	64
Leonard Cecil -	June 7 -	July 22.	45

Total days - 172 days.

Geophysical.
Instrument work & Mapping.

Norval Lamoureux -	May 19 -	Aug 4.	63.
Norris Palmer.	May 19 -	Aug 4. + 3 days O.T.	66
Ken. Riley -	May 22.	June 25 -	35
Ron J. Gibbs	May 22	June 25.	35
R. Leonard.	July 9.	Aug 7.	30
W. Thomas	July 9.	Aug 15 -	33
W. Lessard	July 1	July 15 -	10
"	15 —	(193 hrs)	24

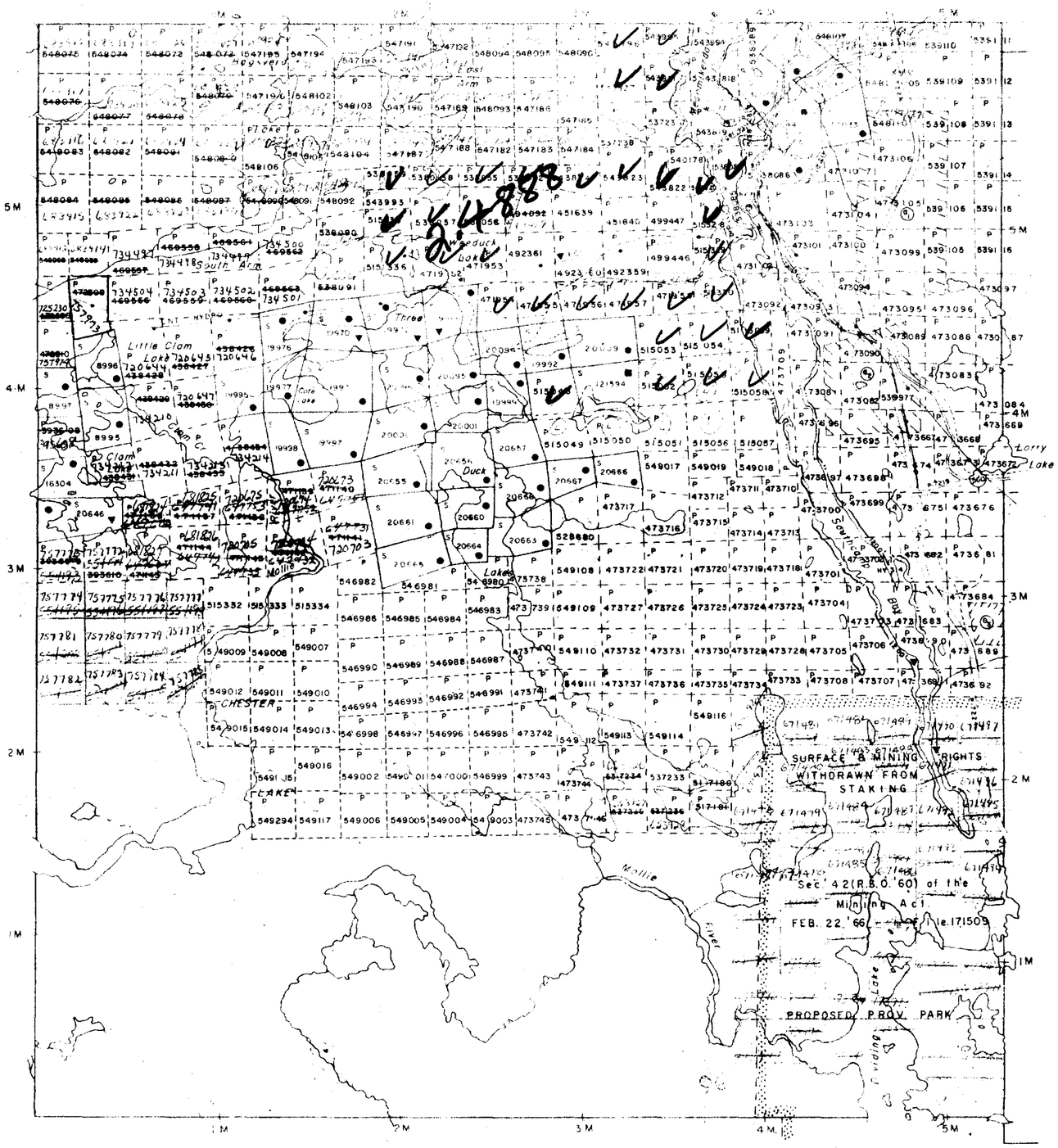
Total 301 days.

Total - 172.
30 x 7 = 210
2279 days.

NEVILLE TP M.882

YEO TP. M.1188

BENNEWEISS TP. M.658



INVERGARRY TP. M.948

THE TOWNSHIP OF

CHESTER

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

DISPOSITION OF CROWN LANDS

PATENT, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LEASE, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

Flooding rights to 1200' contour reserved to Ont. Hydro ▼7543, Loc HY 34 File 10621

SAND & GRAVEL

M.T.C. Pit No. 1349
" Gravel Pit No. 1649
" " " No. 1385

PLAN NO. M.717

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

LEGEND

—10— VLF-EM filtered in-phase component (contour interval = 10%)

Average peak value for in-phase cross-overs

- < 10%
- 10% to 20%
- 20% to 30%
- > 30%

Topographic lineaments

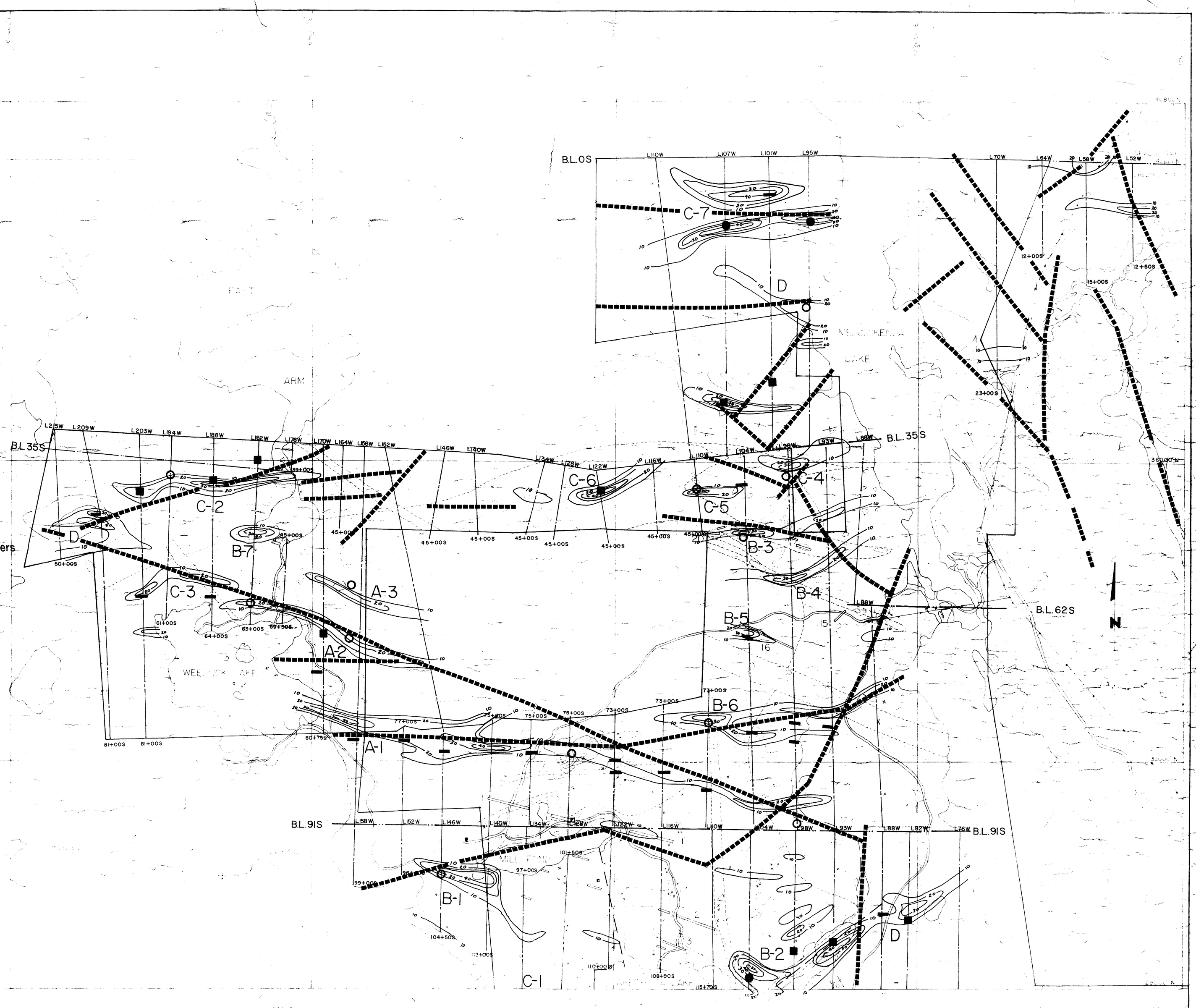
#1

MURGOLD RESOURCES INC.

VLF-EM MAP

CROSS-OVERS and CONTOURS of FILTERED DATA

Prepared by Norminex Ltd. December 1981



NOTE: COMMENCEMENT POINT FOR ALL CO-ORDINATES
N.E. CORNER, CHESTER TOWNSHIP.
180,000'E, 40,000'N

180000'E

180400'E

180800'E

181200'E

181600'E

40000'N

36000'N

ERRINGTON LAKE

ST. LOUIS TWP.

BENNEWEISS TWP.

BENNEWEISS CREEK

BENNEWEISS TWP.

L28W L22W L16W L10W L4W L0W

B.L. 26 S

B.L. 62+50S

II-A

II-B

BERNICE LAKE

BENNEWEISS LAKE

SCALE
400FT 0 400 800FT

N

MURGOLD RESOURCES INC.

VLF-EM MAP

CROSS-OVERS and CONTOURS of FILTERED DATA

Prepared by Norminex Ltd. November 1982

LEGEND

10 VLF-EM filtered in-phase component (contour interval = 10%)

Average peak value for in-phase cross-overs

< 10%

10% to 20%

20% to 30%

> 30%

Topographic lineaments

MAP NO. 2

24888

220

MURGOLD RESOURCES INC.

VLF-EM MAP

CROSS-OVERS and CONTOURS of FILTERED DATA

Prepared by Norminex Ltd. November 1982

2.4888

LEGEND

—10— VLF-EM filtered in-phase component (contour interval = 10%)

Average peak value for in-phase cross-overs

- < 10%
- ○ 10% to 20%
- ● 20% to 30%
- ■ > 30%

—— —— Topographic lineaments

156000'E 158000'E 160000'E 162000'E 164000'E

28000'N 24000'N 20000'N 16000'N

B.L.120S B.L.150S B.L.170S B.L.210S

L54W L48W L42W L134W L128W L122W L116W L110W L104W L98W L93W L88W L82W L76W L70W L64W L58W L52W L46W L140W L146W L152W L158W L164W L170W L176W L182W L188W L194W L200W L206W L212W L218W L224W

I-A I-C I-D I-E I-F

II-D II-E II-F

AEROMAGNETIC INTERPRETATION

SOUTHCAMP BAY

THREE

LAKE

CHESTER

SCALE 400 0 400 800

N

MAP NO. 3

230

L48W L36W L30W L24W L18W L12W L6W L0W

L46W L40W L34W L18W L12W L6W L0W

B.L. 120 S

B.L. 150 S

B.L. 170 S

BEAVER LAKE

ROUND LAKE

CHESTER TWP.

BENNETT TWP.

I-B

II-C

28,000'N

24,000'N

20,000'N

N

SCALE

100 0 400 800

LEGEND

—10— VLF-EM filtered in-phase component (contour interval = 10%)

Average peak value for in-phase cross-overs

▬ < 10%

○ 10% to 20%

● 20% to 30%

■ > 30%

—— —— Topographic lineaments

MURGOLD RESOURCES INC.

VLF-EM MAP

CROSS-OVERS and CONTOURS of FILTERED DATA

Prepared by Norminex Ltd. November 1982

MAP NO. 4

MAP NO. 1

MURGOLD RESOURCES INC.

VLF-EM

Map of Measured Values

CHESTER & BENNEWEIS TOWNSHIPS

LEGEND

In phase / Out-of phase

Readings proportional to the ratio between components of the secondary EM field and the horizontal primary EM field, in percent.

MURGOLD RESOURCES INC.
Location Map

Chester Twp / Bennewies Twp

Scale: 1" = 16 mi

47°00'N

82°00'E

SCALE 400FT 0 400FT 800FT

N

BL.9S

BL.62S

BL.35S

BL.0S

THREE LAKE

DUCK

WEEKUCK LAKE

ARM

EAST

MESKUMKENDA LAKE

SCUTHCAMP BAY

MILL POND

ARE-THUSA LAKE

473709
515058
515052
515055
515054
515053
121594
199921
200091
515048
471957
471956
471955
471954
471953
471952
515336
538057
538056
543998
538059
548092
538058
538082
538055
515335
473092
515059
515330
515329
515328
471958
538084
538085
538086
538087
540178
543820
543822
543823
543824
538088
543819
538089
543818
543821
543827
543994
543995
543986

Q 4882

NOTE: COMMENCEMENT POINT FOR ALL CO-ORDINATES
N.E. CORNER, CHESTER TOWNSHIP.
180,000'E, 40,000'N

176000'E

180000'E

184000'E

ERRINGTON LAKE

ST. LOUIS TWP.

BENNEWEIS TWP.

CHESTER TWP.

BENNEWEISS TWP.

ERRINGTON CREEK

L28W L22W L16W L10W L4W LOW

80°

539109 539110 539111 539112 539113 539114 539115 539116 539105 539106 539107 539108

B.L. 26 S

B.L. 62+50S

BERNICE LAKE

SCALE

400FT 0 400 800FT

N

MURGOLD RESOURCES INC.

VLF - EM

Map of Measured Values

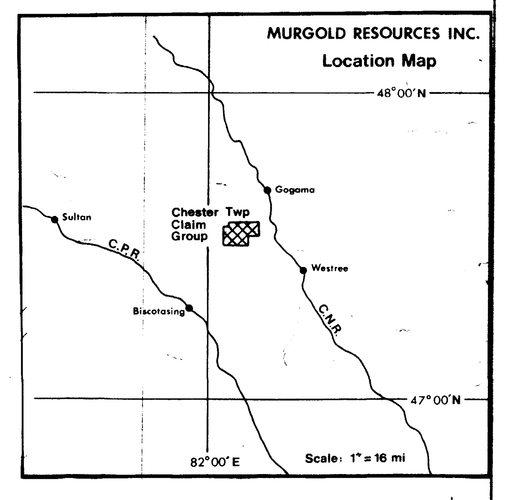
CHESTER & BENNEWEIS TOWNSHIPS

LEGEND

In phase	Out of phase
+25	+2
+10	+6
-5	-1
-0	-2

Readings proportional to the ratio between components of the secondary EM field and the horizontal primary EM field, in percent.

MURGOLD RESOURCES INC.
Location Map



MURGOLD RESOURCES INC.

VLF-EM

Map of Measured Values

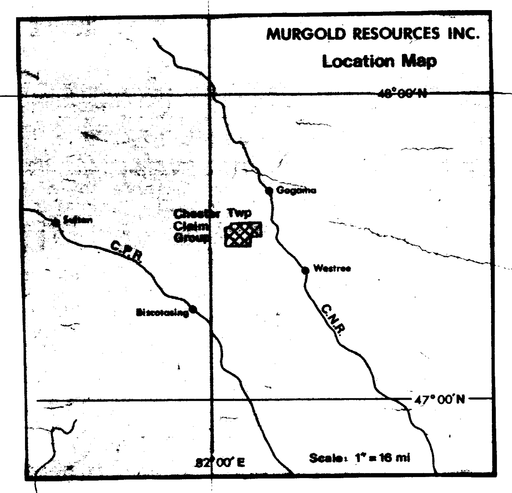
CHESTER & BENNEWEIS TOWNSHIPS

LEGEND

In phase	Out of phase
-25	+8
-20	+6
-15	+4
-10	+2

Readings proportional to the ratio between components of the secondary EM field and the horizontal primary EM field, in percent.

MURGOLD RESOURCES INC.
Location Map



MAP NO 3

MAP No 4

MURGOLD RESOURCES INC.

VLF-EM

Map of Measured Values

CHESTER & BENNEWEIS TOWNSHIPS

LEGEND

In phase	Out of phase
-23	-3
-19	-4
-15	-1
-9	-2

Readings proportional to the ratio between components of the secondary EM field and the horizontal primary EM field. In percent.

SCALE

MURGOLD RESOURCES INC.
Location Map