010

REPORT On The ELECTROMAGNETIC

and

MAGNETIC SURVEY

On THE PROPERTY of LOYDEX RESOURCES INC.

FOURBAY LAKE AREA,

District of Kenora - Thunder Bay, Patricia Mining Division

N.T.S. 52-J-2

LOYDEX RESOURCES INC.
24 Kenton Court, Whitby, Ontario L1N 5X7

INTRODUCTION:

A program consisting of a V.L.F. Electromagnetic Survey and a Magnetic Survey have recently been completed on the property of Loydex Resources Inc. in the Fourbay Area, west of Sturgeon Lake, Ontario.

PROPERTY:

The property consists of fifteen (15) contiguous mining claims in the Fourbay Area, Districts of Kenora and Thunder Bay, Patricia Mining Division. The claims are registered with the Ministry of Natural Resources of Ontario, under the following claim numbers;

PA 611671, PA 612169, PA 612170, PA 612171,
PA 612172, PA 612173, PA 612174, PA 612175,
PA 612176, PA 612177, PA 612178, PA 612189,
PA 612190, PA 612191,PA 612192.

GEOLOGY

The geological and geophysical interpretation of the area is shown on Map No. 39b, Sturgeon Lake Area, accompanying a report by A.R. Graham in volume XXXIX, Part 2, Ontario Department of Mines Annual Report, 1930 and on a preliminary map No. P1039 - Fourbay Lake Area, issued in 1975 by the Ministry of Natural Resources of Ontario.

The geology consists of east-west striking mafic metavolcanics with intrusions of Trondjemite, granodiorite sills (?) and quartz veins. Gold in the area is apparently associated with blue quartz veins as in the King Bay Area.

SURVEY METHODS and INSTRUMENT DATA:

The V.L.F. (very low frequency) Electromagnetic Survey was conducted over previously cut lines with readings at 12.5 meter intervals. The equipment used was the Geonic EM-16 System.

The V.L.F. method uses military radio transmitters at low frequencies as primary signals as opposed to portable transmitters in the convential E.M. methods. The instrument has two receiving coils and the parameters measured are: (i) The vertical in-phase component.

(ii) The vertical out-of-phase component (quadrature component).

The interpretation of the results used the relative measurements of these two parameters and it is possible to outline such poor conductors as sheared contacts, faults, breccia zones and alteration anomalies which are produced by a wide range of geological affects. Profiles tend to show a complex "cluttered" pattern and additional assistance is required to distinguish trends. By the use of the Fraser Method of filtering tilt angle profiles, the readings at 12.5 meter intervals are converted into contourable data and it is this data that is plotted on the accompanying map.

The magnetic survey was carried out over the same network of lines using a Geonics GSM-8 Proton magnetometer. The magnetometer measures the vertical component of the earth's magnetic field. Readings were taken at 12.5 meter intervals. These are plotted as gammas on a separate map, after correction for diurnal variation.

All conductor axes have been plotted on the magnetic map to aid in the interpretation.

RESULTS of the GEOPHYSICAL SURVEYS

The Electromagnetic Survey is shown on Map 1, indicating profiles of In and Out Phase Components and Map 2 showing Fraser Filtered Contours. The Magnetic Survey is shown on map 3.

THE FOLLOWING IS A LIST OF THE ELECTROMAGNETIC FRASER FILTERED CONDUCTORS. EACH CONDUCTOR HAS AN EXPLANATION AS TO ITS CAUSE

Conductor A

A cross-cutting structure which may be caused by shearing. Worthy of exploring in more detail by prospecting or using soil geochem methods.

Conductor B

Possibly a long shear zone which strikes east-west across the entire claim group. Sections within this long zone are of interest.

(i) Zone at 6W and 7W approximately 800 meters north of base line. An interesting conductor since blue quartz stringers occur at line 7W and 820 meters north of base line.

(ii) Zone at line 1W, 910 meters north of base line. At this loation is a large quartz vein (unable to determine width due to overburden). Associated with this vein is pyrite and chalcopyrite sulphides.

(iii) Zone between lines 5E - 8E at 900 meters north of base line is probably due to a shear zone. At line 8E, 920 meters north of base line, a quartz vein occurs within the shear.

Conductor C

Possibly a long weak shear zone paralleling conductor B. An interesting moderately strong conductor occurs within this long structure between lines 2W - 4W at 750 meters north of base line. An interesting shaped anomaly and no apparent cause. Worthy of additional prospecting.

Conductor D

Possibly a wet shear zone beneath Jumping lake occuring between lines 2E - 5E at 340 meters north of base line. May be of interest if other shear zones within claim group contain mineralization of interest.

Conductor E

A very weak conductor south of Jumping Lake, located at 5E and 150 meters north of base line, contains rocks exhibiting shearing. Cause of conductor may be shearing.

Conductor F

Strongest conductor on the property. Location at 4W and 210 meters south of base line contains semi-massive sulphides of pyrite within a sheared Trondhjemite intrusive, minor amounts of chalcopyrite and pyrrhotite. Worthy of additional work along entire conductor.

Conductor G

A moderately strong conductor immediately south of Conductor F. Exhibits cross cutting features and minor folding. Strikes south-east off of claims into a small lake. Should be prospected.

THE RESULTS OF THE MAGNETIC SURVEY ARE SHOWN ON MAP 3 ACCOMPANYING THIS REPORT

The area south and south-west of Jumping Lake exhibits discontinuous east-north-east magnetic anomalies. The area north of Jumping Lake lacks magnetic responses with the exception of several weak magnetic anomalies at the south boundary of claim PA 612177. This would indicate a different rock type for these two areas.

The sulphides associated with Conductor F exhibits a moderately strong magnetic response.

Conductor E has an associated magnetic response.

The remaining EM-16 conductors have no magnetic highs associated with them. This would indicate that these conductors are due to shearing and would prove interesting in prospecting for gold.

RECOMMENDATIONS

(1) A systematic soil geochem program be performed on the grid with particular attention being paid to the sulphide and quartz showings as outlined in this report.

(2) Clearing and blasting Conductor F where semi-massive pyrite has been found.

(3) If the geochem is interesting, a drill program with short holes should be initiated to explain some of the conductors outlined in this report.

L J Nelson

Respectfully submitted by:
Lloyd J. Nelson - B. Sc.
Lowdex Resources Inc.
May 5, 1983

A. NIVEN, O.L.S. I.M. TB T8897 TB TB

I.M.L. 6th 2M. BASE 3M. LINE 4M. 5M. 6M. K.G.R.O.S.

120M

GRAVEL

119M.

118M.

117M.

116M.

DISTRICT OF

File Nº 182148

FOURBAY LAKE
M - 2879
SCALE: 1" = 40 CHAINS

GRAVEL

Jumping

Cobb Bay

Sturgeon L.

Sixmile Creek

Sixmile Lake

File Nº 181172

91°00'

59' 58' 57' 56' 55' 54' 53' 52' 51' 50'

Sixmile Lake Área – M.2877

52J02SW0049 52J02SW0040 FOURBAY LAKE

900

Ontario Ministry of Natural Resources

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

2.6003

#83-123

Mining Lands

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): EM-16 (GEONICS EM16), GEM PROTON MAG

Township or Area: FOURBAY LAKE M-2879

Claim Holder(s): LOYDEX RESOURCES INC

Prospector's Licence No.: T 1293

Address: 24 KENTON CT., WHITBY, ONT L1N 5X7

Survey Company: ABOVE

Date of Survey (from & to): 8 11 83 / 11 4 83 (Day / Mo. / Yr.)

Total Miles of line Cut: 17.5 miles

Name and Address of Author (of Geo-Technical report): L.J. NELSON, 24 KENTON CT., WHITBY, ONT., L1N 5X7

Credits Requested per Each Claim in Columns at right

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

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

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
PA	611671	60
	612169	60
	612170	60
	612171	60
	612172	60
	612173	60
	612174	60
	612175	60
	612176	60
	612177	60
	612178	60
	612184	60
	612190	60
	612191	60
	612192	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

PATRICIA MINING DIV.
RECEIVED
NOV 17 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

RECEIVED
NOV 10 1983
12 Rec'd.
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Pa. 611671

Total number of mining claims covered by this report of work: 15

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
900	Nov. 17, 1983	
	Date Approved as Recorded: Feb 6/84	Branch Director

Date: May 1/83

Recorded Holder or Agent (Signature): L J Nelson

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: L. J. NELSON (above)

Date Certified: May 1/83

Certified by (Signature): L J Nelson

1362 (81)

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) Moore EM-16; GEM 8 Proton M/G
Township or Area FOURBAY LAKE
Claim Holder(s) LOYDEX RESOURCES INC
24 KENTON CT, WHITBY, ONT
Survey Company LOYDEX RESOURCES INC
Author of Report L.J. NELSON
Address of Author ABOVE
Covering Dates of Survey APRIL 8 – 11, 1983 (linecutting to office)
Total Miles of Line Cut 17.5 MILES

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	
Geological	
Geochemical	

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

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

DATE: May 1/83 SIGNATURE: L.J. Nelson (Author of Report or Agent)

Res. Geol. _____ Qualifications 631.565

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
PA	611671
	612169
	612170
	612171
	612172
	612173
	612174
	612175
	612176
	612177
	612178
	612179
	612189
	612190
	612191
	612192

If space insufficient, attach list

TOTAL CLAIMS 15

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 2139 Number of Readings 2139

Station interval 12.5 meters Line spacing 100 meters

Profile scale 1CM = 20° (EM16)

Contour interval 500 gammas (Mag)

MAGNETIC

Instrument Geonics EM16 / GEM 8 Proton Mag.

Accuracy -- Scale constant ± 1 gamma over operating range

Diurnal correction method All calculations have been done and removed

Base Station check-in interval (hours) —

Base Station location and value —

ELECTROMAGNETIC

Instrument Geonics EM16

Coil configuration —

Coil separation —

Accuracy —

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

Frequency Cutler Maine 17.8 K Hz (specify V.L.F. station)

Parameters measured (I) Vertical in-phase component

(II) Vertical out-of-phase component (Quadrature)

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

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.6003

Mining Lands Comments

okay.

☑ To: Geophysics Mr. R. Barlow.

Comments

☑ Approved ☐ Wish to see again with corrections | Date Jan 3/83 | Signature R Barlow

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geochemistry

Comments

LD

☐ Approved ☐ Wish to see again with corrections | Date | Signature

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

1593 (81/10)

	Em	mnG		Em	mnG	7.6003	
Pa 611671	✓	✓	P612.176	✓	✓		
612169	✓	✓	77	✓	✓		
70	✓	✓	78	✓	✓		
71	✓	✓	612189	✓	✓		
72	✓	✓	90	✓	✓		
73	✓	✓	91	✓	✓		
74	✓	✓	92	✓	✓		
75	✓	✓					

1983 12 02 2.6003

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Sioux Lookout, Ontario
P0V 2T0

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims PA 611671, PA 612169 to 78 inclusive, PA 612189 to 92 inclusive in the Area of Fourbay Lake.

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

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

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

A. Barr:mc

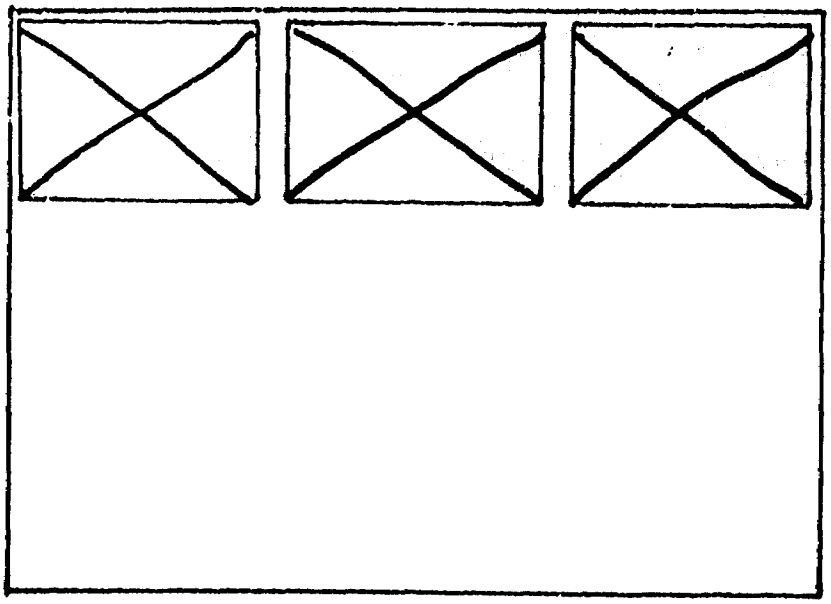
cc: Loydex Resources Inc.
24 Kenton Court
Whitby, Ontario
L1N 5X7
Attention: L.J. Nelson

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

52J/02 SW-0040 #1-3

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE

(X)



L-8W L-7W L-6W L-5W L-4W L-3W L-2W L-1W 0 L-1E L-2E L-3E L-4E L-5E L-6E L-7E L-8E

612192 612177 612178 611671

612191 612174 612173 612169

612190 612175 612172 612170

612189 612176 612171

A B C D E F G

Road

JUMPING

LAKE

BASE LINE "B"

BASE LINE "A"

LEGEND

10 - 30 Units

30 - 50 Units

> 50 Units

STATION : NAA Cutler, Maine 17·8 kHz

CLAIM MAP
Scale: 1" = ½ Mile

A.N.

5.0 0 100 200 Metres

1 : 2500

52J/02SW-0040 #3

LOYDEX RESOURCES LTD.

CLIENT :

DISTRICT OF : KENORA - THUNDER BAY
MINING DIV. PATRICIA
AREA FOURBAY LAKE, ONTARIO
GRID JUMPING LAKE
SURVEY FRASER FILTERED EM-16 CONTOURS
SURVEY DATE : April 8-11, 1983.
SURVEY BY Ken Bernier, LOYDEX Resources Ltd.

NTS 52/J/2 | CLAIM MAP: M 2879 | MAP No. 1

L.S. Nelson

52J02SW0040 52J02SW0040 FOURBAY LAKE

200

2600

L-8W L-7W L-6W L-5W L-4W L-3W L-2W L-1W 0 L-1E L-2E L-3E L-4E L-5E L-6E L-7E L-8E

612192 612191 612190 612189 612177 612174 612175 612176 612178 612173 612172 612171 611671 612169 612170

Road

JUMPING LAKE

BASE LINE "B"

BASE LINE "A"

LEGEND

IN PHASE READING — OUT OF PHASE READING

+40° 0 -40°

Profile Scale: 1cm=20°

STATION : NAA Cutler, Maine 17·8 kHz

A.N.

50 0 100 200 Metres

1:2500

CLAIM MAP
Scale: 1" = 1/2 Mile

LOYDEX

CLIENT

DISTRICT OR MINING DIV. KENORA – THUNDER BAY
PATRICIA

AREA FOURBAY LAKE, ONTARIO

PROP. JUMPING LAKE

SURVEY VLF-EM-16 PROFILES

SURVEY DATE April 8-11, 1983

SURVEYED BY Ken Bernier, LOYDEX Resources Ltd.

NTS 52/J/2 CLAIM MAP M 2879 MAP No. 2

52J02SW0040 #2

52J02SW0049 52J02SW0040 FOURBAY LAKE

210

26003

L-8W L-7W L-6W L-5W L-4W L-3W L-2W L-1W L-0 L-1E L-2E L-3E L-4E L-5E L-6E L-7E L-8E

612192 612191 612190 612189 612177 612174 612175 612176 612178 612173 612172 612171 611671 612169 612170

1000 1500

Road

JUMPING LAKE

BASE STATION

BASE LINE "A"

BASE LINE "B"

LEGEND

- > - 1000 Gammas
- > - 1500 Gammas
- EM 16 Conductor (Fraser Filtered)

52J/02 SW-0040 #1

A.N.

50 0 100 200 Metres

1: 2500

LOYDEX RESOURCES INC.

CLIENT :

DISTRICT OF MINING DIV : KENORA - THUNDER BAY / PATRICIA

AREA : FOURBAY LAKE, ONTARIO

GRID : JUMPING LAKE

SURVEY : MAGNETOMETER SURVEY

SURVEY DATE : April 8-11, 1983.

SURVEY BY : Ken Bernier, LOYDEX Resources Ltd.

N.T.S. 52/J/2 | CLAIM MAP M 2879 | MAP No. 3

52J02SW0049 52J02SW0040 FOURBAY LAKE

220

26003