



42A01SE0198 2.5972 EBY

010

REPORT OF GEOPHYSICAL SURVEYS
 COMPLETED ON THE KENOGAMI LAKE PROPERTY
 OF GREN-TECK KIRKLAND RESOURCES LTD.
 EBY TOWNSHIP, ONTARIO

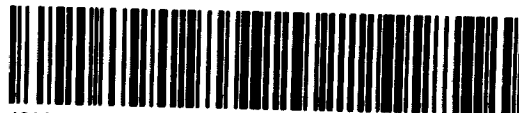
RECEIVED
 NOV 2 1983
 MINING LANDS SECTION

LARDER LAKE
 MINING DIV.
RECEIVED
 OCT 28 1983
 AM PM
 7|8|9|10|11|12|1|2|3|4|5|6

BY: CARL P. FORBES
 CONSULTING EXPLORATION
 MANAGER

KIRKLAND LAKE, ONTARIO
 OCTOBER 27, 1983.

Qual. 2.2689



INTRODUCTION

Location	1
Access	1
History	1 + 2

GEOLOGY 2 + 3

GEOPHYSICAL PROGRAM

General	3
Magnetic Survey	3 + 4
VLF Electromagnetic Survey	4
Results of Magnetic Survey	4 + 5
Results of VLF Electromagnetic Survey	5 + 6

CONCLUSIONS 6

RECOMMENDATIONS 6 + 7

INTRODUCTIONLOCATION

-The property described in this report is owned outright by Gren-Teck Kirkland Resources Ltd. and consists of 14 unpatented mining claims located centrally along and south of the north boundary of Eby Township, Larder Lake Mining Division, Ontario. All of the claims except for part of one are water claims covering the basin of Kenogami Lake. The claims are numbered as follows:

L-642883 ✓	L-642884 ✓	L-642885 ✓
L-642886 ✓	L-643189 ✓	L-643190 ✓
L-643191 ✓	L-643192 ✓	L-643193 ✓
L-643194 ✓	L-643195 ✓	L-643607 ✓
L-643608 ✓		

ACCESS

-The property is readily accessible off of Highway 11, some nine miles west of the Town of Kirkland Lake, Ontario. The number one post of claim L-642883 is close to the bridge across the Blanche River at the outlet of Kenogami Lake on Highway 11. Kenogami Lake is a resort area with cottages along most of the eastern shoreline, affording easy access to many parts of the lake.

HISTORY

-Past exploration work in the vicinity of Kenogami Lake on the Rogick and Walters properties resulted in the discovery of several gold showings, spurring additional work extending into the Kenogami Lake basin. In 1948 Burtho Gold Mines Ltd. drilled 6 holes from

the ice of Kenogami Lake to probe the postulated extensions of the Larder Lake break and the Walters break. The location of these faults was taken directly off of O.D.M. map no. 1946-1, but the drilling failed to intersect any of the fault zones interpreted on map no. 1946-1.

In 1939 Pioneer Gold Mines Ltd. drilled 2 holes from the ice off of the promontory on current claim L-642885. This work was designed to test for the westerly extension of the auriferous porphyry mineralization on the Rogick property to the east. Two intersections of note were obtained (.17 across 5 feet and .19 across 4.2 feet), but never followed up. No further work is recorded for the Kenogami Lake basin until 1979 when the Ontario Government completed an airborne Input survey over the area as part of the Kirkland Lake Initiative Program (KLIP). The survey revealed 8 anomalies in the lake across the northern section of the Gren-Teck property and two anomalies in the south bay of Kenogami Lake.

GEOLOGY

-The most pronounced geological feature on the Kenogami Lake property is a regional fault, the Larder Lake break; which extends from beyond Matachewan to Chibougamau, Quebec. This fault generally separates the Timiskaming series of sedimentary rocks from the older volcanics and has been a most productive structure in northeastern Ontario and northwestern Quebec. A number of porphyry bodies intrude both these rock

sequences in the vicinity of the Larder Lake break. Gently dipping sedimentary rocks of the Cobalt group occur adjacent to the north boundary of the property. All of these rock units are cut by diabase dikes of the Matachewan swarm. The basin of Kenogami Lake represents a large untested section of a major geological structure that has hosted a number of gold deposits to the east and west.

GEOPHYSICAL PROGRAM

GENERAL

-During February, 1983 a control system of base and picket lines was laid out on the ice of Kenogami Lake. Fence slats were used as pickets and were subsequently retrieved when the surveying was completed.

A baseline was started on the point on claim L-642883 and carried westerly on a bearing of 262° for 6400 feet to the western boundary of claim L-643189. Picket lines were run at right angles to the baseline at 400 foot intervals with chainage stations established every 100 feet. The total amount of control line established was 13 miles.

A magnetometer survey and VLF-EM survey were conducted over the grid with the objective of further outlining anomalous areas associated with the previously mentioned geological and geophysical features. The direction of line was designed to traverse the geology at high angles.

MAGNETIC SURVEY-A Geometrics fluxgate magnetometer was used to conduct a magnetic survey over the grid between February 20th

and March 1st, 1983. This instrument measures the vertical component of the earth's magnetic field to within 10 gammas. Survey procedure involved reading the baseline to make each station on the baseline a control station. The lines were then read "loop-fashion", tying back to the baseline after each loop. Daily and diurnal adjustments for magnetic drift were calculated for all readings. The corrected values are plotted on a map scaled at 1 inch equalling 400 feet. Magnetic contours were drawn at 100 and 500 gamma intervals wherever appropriate.

VLF ELECTROMAGNETIC SURVEY-A Geonics EM-16 VLF electromagnetic unit was used to conduct an electromagnetic survey over the grid between March 2nd and 10th, 1983. This instrument measures the resulting dip angle and quadrature of a secondary electromagnetic field when the primary very low frequency signal encounters conductivity. Seattle, Washington at 18.6 KHz was used as a transmitting station. Both dip angles and quadrature values are profiled on a map scaled at 1 inch equalling 400 feet. The results were Fraser filtered and contour maps at the same scale were prepared.

RESULTS OF MAGNETIC SURVEY-The lake basin exhibits a moderately flat magnetic response with a general east-west magnetic trend. The areas of very low magnetic response (depressions) in the south bay on claims L-642885, L-642886 and L-643194 lie along the projection of the Walters break and probably represent highly carbonatized

sections along this fault zone. The high positive magnetic anomaly trending northwest-southeast along the lakeshore on claim L-643189 remains unexplained. Diabase dikes are known to occur immediately south of here, but not on the same strike as the anomaly. Geology map no. 1946-1 shows the general strike of rock units in the vicinity, but the magnetic anomaly would trend roughly perpendicular to their strike. It is interesting to note that an airborne Input anomaly occurs just off the northwest nose of the positive magnetic anomaly.

RESULTS OF VLF ELECTROMAGNETIC SURVEY-The two airborne Input anomalies in the south bay are well substantiated on the ground by the VLF survey. An offset continuation of this conductor stretches northwesterly away from the airborne conductors across claims L-643607 and L-643608. This anomaly represents the Walters fault zone and coincides with the magnetic depressions from the magnetic survey. A good northwesterly striking anomaly was revealed on the east shore of the south bay on claims L-642885 and L-642886. This feature wasn't picked up by the airborne survey and remains unexplained. A strong anomaly was disclosed just west of the point near the Ministry of Natural Resources air base on claim L-642883. This anomaly wasn't picked up by the airborne survey, but might possibly mark the location of the Larder Lake break. On strike to the west a series of anomalies crosses claims

L-643195, L-643192, L-643190 and L-643188. They are well defined on the ground, but don't quite match the location of several of the airborne conductors, although they are close. It is suggested that these anomalies mark the Larder Lake fault zone. The other airborne anomalies in the north tier of claims are not coincidentally located by the ground survey, but again they are close to the long arcing conductor revealed by the ground survey close to the north shore of the east bay. This arcing anomaly may represent a subsidiary break to the north of the Larder fault zone.

CONCLUSIONS

-The geophysical program was successful in further outlining airborne geophysical features on the ground. The magnetic survey revealed an unexplained positive anomaly and low magnetic response suggestive of extensive carbonatization where the Walters fault zone would be located. The VLF electromagnetic survey has outlined the possible location of the Larder Lake break and defines the Walters fault zone. Several other anomalies were picked up and are worthy of more investigation.

RECOMMENDATIONS-The magnetic depressions and VLF anomalies along the Walters fault zone should be surveyed by a horizontal loop EM method to further define this anomalous area. The geophysics completed to date suggests extensive carbonatization with attendant conductivity which are the prerequisites for a drill target in this locality.

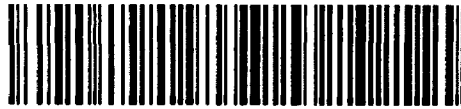
The anomalous conditions attributed to the Larder Lake fault zone should also be further investigated by a more advanced electromagnetic method to define target areas for diamond drilling. The strong VLF anomaly on the east shore of the south bay should also be gone over with a more advanced method as this anomaly occurs close to where Pioneer Gold Mines Ltd. obtained some results from their 1939 drilling. Once a more advanced geophysical program has been completed the better defined zones could be drilled to test the merit of the geophysical indications.

Respectfully Submitted by:

Carl P. Forbes

CARL P. FORBES
CONSULTING EXPLORATION MANAGER

OCTOBER 27, 1983.



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244, 255

2.5972

1983 11 08

Mr. George J. Koleszar
Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for Geophysical (Electromagnetic and Magnetometer) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims L 642883 et al in the Township of Eby.

This 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 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-1380

A. Barr:mc

cc: Gren Teck Kirkland Resources Ltd
14 McPherson Street
Dobie, Ontario
POK 1B0
Attention: James R.B. Parres

2.5972 The Mining Act

Oct. 29th

Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns - Do not use shaded areas below.

244

Ontario Lands Admin (file L 643188)

Type of Survey(s) **GEOPHYSICAL MAGNETIC VLF** WNS of -244 Township or Area **EBY TOWNSHIP**

Claim Holder **GREN-TECK KIRKLAND RESOURCES LTD.** Prospector's Licence No. **T-1239**

Address **Box 40 KIRKLAND LK. ONT.** **2.5972**

Survey Company **COMPANY** Date of Survey (from & to) **31 May 83 - 30 Jun 83** Total Miles of line Cut **8.0**

Name and Address of Author (of Geo-Technical report) **JAMES R. B. PARRES 14 McPHERSON ST. DOBIE, ONT.**

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

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

Airborne Credits	Days per Claim
Note: Special provisions credits to Airborne Surveys.	
Electromagnetic	
Magnetometer	
Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
L	643188				
	643189				
	643190				
	643191				
	643192				
	643193				
	643194				
	643195				

Expenditures (excludes power stripping)

Type of Work **MINING LANDS SECTION**

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.

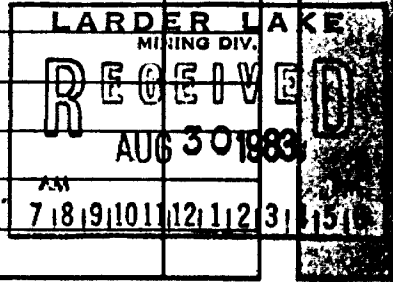
Date **Aug. 30/83** Recorded Holder or Agent (Signature) **James R. B. Parres**

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 **JAMES R. B. PARRES 14 McPHERSON ST. DOBIE, ONT. POK 1B0**

Date Certified **Aug. 30/83** Certified by (Signature) **JRB/James**



For Office Use Only

Total Days Cr. Recorded **480** Date Recorded **AUG 30 1983** Mining Recorder **[Signature]**

Date Approved as Recorded **84.2.2** Branch Director **[Signature]**

Total number of mining claims covered by this report of work. **8**

Ontario **Lands Admin** (2642883) **The Mining Act**

Type of Survey(s) **GEOPHYSICAL & LINECUTTING** Township or Area **EBY TOWNSHIP**

Claim Holder **GREEN TECK KIRKLAND RESOURCES INC.** Prospector's Licence No. **T-1229**

Address **Box 40 KIRKLAND LK. ONT. W430A-255**

Survey Company **LEAHY GEOPHYSICS** Date of Survey (from & to) **69 | Mo. 83 | 21 | Day | Mo. 83** Total Miles of line Cut **6**

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

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	20
	- Radiometric	
	- Other	
For each additional survey: Using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Radiometric	
	- Other	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	642885				
	642886				
	642887				
	642883				
	643607				
	643608				

RECEIVED

MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
SEP - 8 1983
AM 7 18 19 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ **15** = Total Days Credits **15**

Total number of mining claims covered by this report of work. **6**

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.

For Office Use Only

Total Days Cr. Recorded **360** Date Recorded **SEP - 8 1983** Mining Recorder **[Signature]**

Date Approved as Recorded **84.2.2** Branch Director **[Signature]**

Date **Sept-8/83** Recorded Holder or Agent (Signature) **James R. B. Parres**

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 **JAMES R. B. PARRES P.O. Box 40 KIRKLAND LK. ONT.**

Date Certified **Sept. 8/83** Certified by (Signature) **James R. B. Parres**



Mining Lands Comments

- key map not included. (let go)

To: Geophysics Mr. R. Barlow.

Comments

Approved Wish to see again with corrections

Date
Jan 3/83

Signature
RRLW

To: Geology - Expenditures

Comments

Approved Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments
L.D.

Approved Wish to see again with corrections

Date

Signature

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

2.5972

EM MAG

L643188

✓

✓

89

✓

✓

90

1/4

1/4

91

✓

✓

accept

92

1/4

1/4

93

✓

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94

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✓

95

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✓

642883

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✓

MEA

84

✓

✓

85

1/4

1/4

→ accept

86

✓

✓

643607

✓

✓

08

✓

✓

243.M

243.M

EBY LMB

EBY LMB

243.M

243.M

Grenfell Twp. M.351

2.5972

Burt Twp. M.334

Otto Twp. M.379

Blain Twp. M.418

THE TOWNSHIP OF

EBY

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

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

NOTES

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

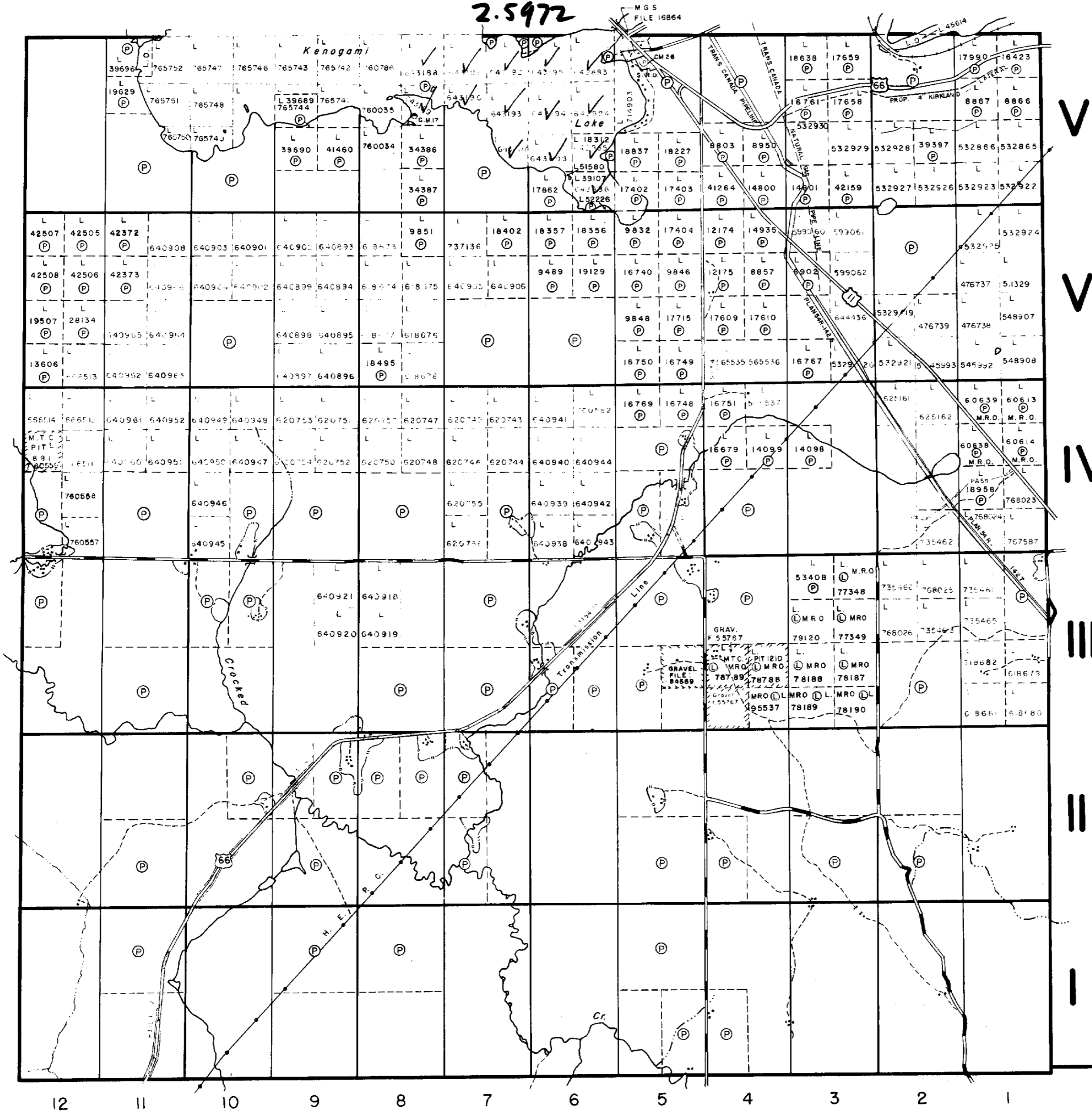
AREAS WITHDRAWN FROM STAKING under Sec.43 of The Mining Act (R.S.O.1970)

Order No.	File	Date	Disposition

DATE OF ISSUE
 JAN 31 1991
 Ministry of Natural Resources
 TORONTO

PLAN NO.- M-345

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



VI

V

IV

III

II

I



42A01SE0198 2.5972 EBY



GREN-TECK KIRKLAND RESOURCES LTD.
MAGNETIC SURVEY
GRENFELL AND EBV TOWNSHIPS, ONTARIO
MAIN KENOGAMI LAKE GRID
SCALE 1 INCH TO 400 FEET

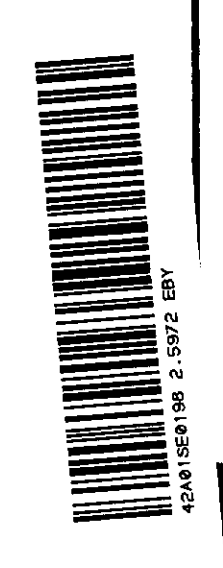
- NOTES**
1. INSTRUMENT - GEOMETRICS FLUXGATE MAGNETOMETER
 2. SURVEY BY - MIKE LEAHY
 3. MAP BY - CATHY CRICHTON
 4. CONTOUR INTERVAL - 100'

Checked and approved by C.P. Foster - Oct. 27/83



GREN-TECK KIRKLAND RESOURCES LTD.
VLF ELECTROMAGNETIC SURVEY
GRENFELL AND EBY TOWNSHIPS, ONTARIO
MAIN KENOGAMI LAKE GRID
SCALE 1 INCH TO 400 FEET

- NOTES**
1. INSTRUMENT-GEONICS EM-16 VLF ELECTROMAGNETIC UNIT
 2. TRANSMITTING STATION-SEATTLE, WASHINGTON AT 18.6 KHZ
 3. SURVEY BY-MIKE LEAHY
 4. MAP BY-CATHY CRICHTON
 5. DIP ANGLE VALUES PLOTTED TO THE LEFT
 6. QUADRATURE VALUES PLOTTED TO THE RIGHT
 7. POSITIVE VALUES PLOTTED TO THE LEFT
 8. NEGATIVE VALUES PLOTTED TO THE RIGHT
 9. PROFILE SCALE 1 INCH TO 50%
- Checked and approved by C.P. Forbes - Oct 27/83



64 60 56 52 48 44 40 36 32 28 24 20 16 12 8 4 0 4 8 12 16 20 24 28 32 36 40 44 48 52 54 55

GREN-TECK KIRKLAND RESOURCES LTD.
 V.L.F. ELECTROMAGNETIC SURVEY
 FRASER FILTER CONTOUR MAP
 GRENFELL AND EBY TOWNSHIPS ONTARIO
 MAIN KENOGAMI LAKE GRID
 SCALE 1 INCH TO 400 FEET

NOTES

1. INSTRUMENT - GEONICS V.L.F. EM. 16-ELECTROMAGNETIC UNIT
2. TRANSMITTING STATION - SEATTLE, WASHINGTON AT 18 KHZ
3. SURVEY BY - MIKE LEAHY
4. MAP BY - CATHY CRICHTON
5. CONTOUR INTERVAL - 10

Checked and approved by C.P. Forbes - Oct. 27/83

