010

GEOPHYSICAL SURVEY
BARRY HOLLINGER 4 GROUP
PACAUD TOWNSHIP
LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING, ONTARIO

FOR

ALEXANDER H. PERRON

2.16716

Qual # 2.15688

AUGUST 1996

MISS WENDY K. WELLER
GEOTECH IN TRAINING

010C

TABLE OF CONTENTS

MAPS

SUMMARY i)

This report is a Geophysical Survey, as required by The Ministry of Northern Development and Mines, for assessment work purposes, following the recommendations set forth in the Mining Act Regulations 1991.

The report includes an introduction to the property, general geology, field results and conclusions, based on the field survey.

Technical data is provided in the Assessment Data Form found at the back of this report. Field data is compiled on the accompanying plan maps at the back of the report.

GEOPHYSICAL SURVEY

BARRY HOLLINGER 4 GROUP

PACAUD TOWNSHIP

LARDER LAKE MINING DIVISION

DISTRICT OF TIMISKAMING, ONTARIO

INTRODUCTION

The claim group consists of four (4) contiguous unpatented mining claims. The claims are located in the middle half of Lot 3, Conc. VI in Pacaud Township.

The original grids from 1984 and 1987 were only partly located so a new baseline was established starting at the number 1 post of claim No. L-737419 and was out to the number 4 post of claim L-737420. A grid system of picket lines 200 feet apart with stations every 50 feet was established at right angles to the base-line.

The line cutting was performed by A J Perron Gold Corp.

The Magnetometer and Electromagnetic surveys were performed by Miss Wendy K. Weller.

The drafting, contouring, interpretation and report were done by Miss Wendy K. Weller.

ACCESS AND LOCATION

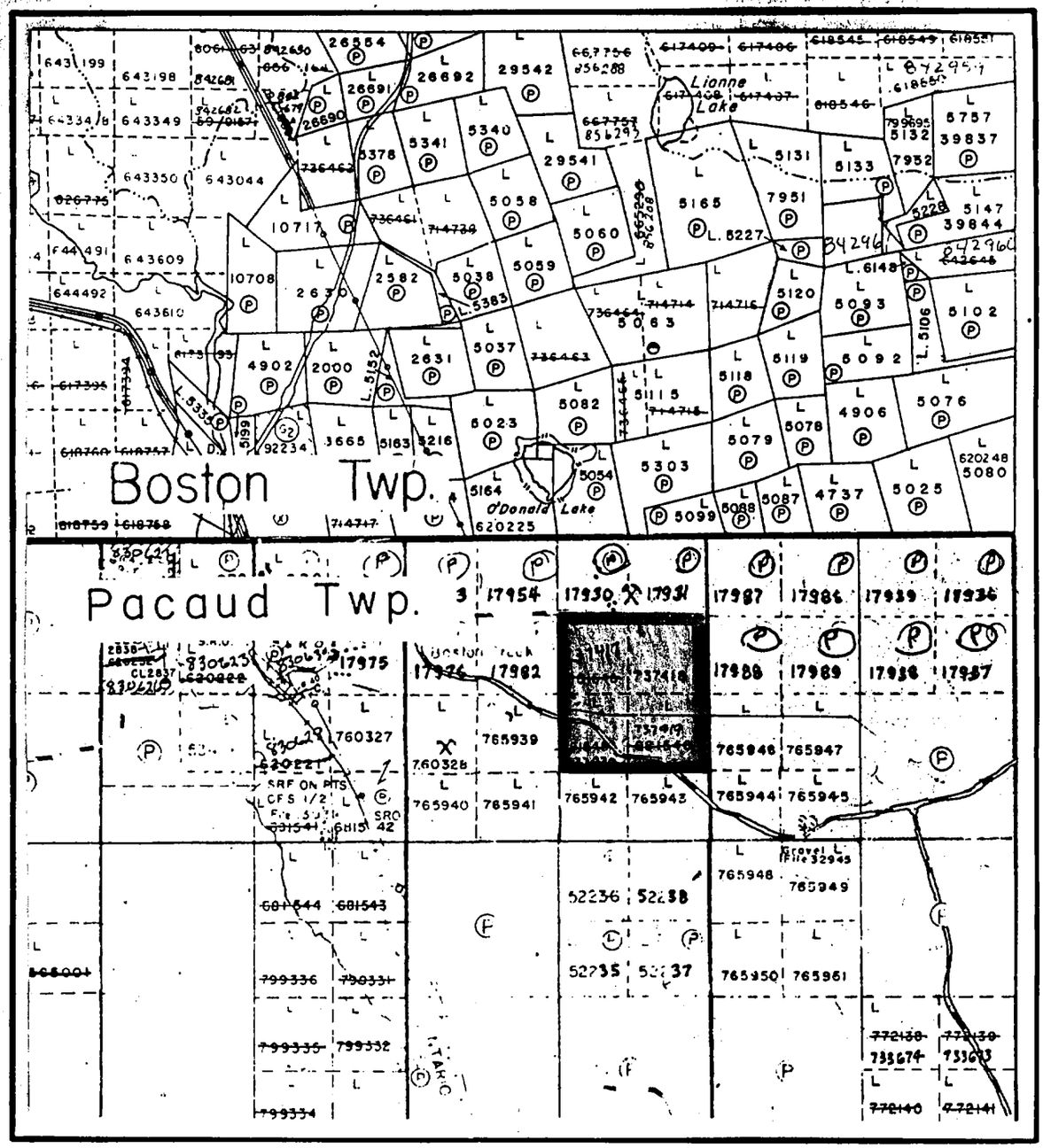
The Barry Hollinger Four Group lies in the middle half of Lot 3, Conc. VI approximately one and one half miles from the village of Boston Creek, which is twelve (12) miles southeast of the town of Kirkland Lake.

The property is accessible via a secondary road that extends eastward from the village of Boston Creek into the Barry Hollinger Mine site. This road may be reached via highway 112 and highway 564. (See Figure 1 b).

PREVIOUS WORK

Scattered old trenching can be found throughout the property, however no records are available.

April, 1985 - Geophysical Survey
M Greer

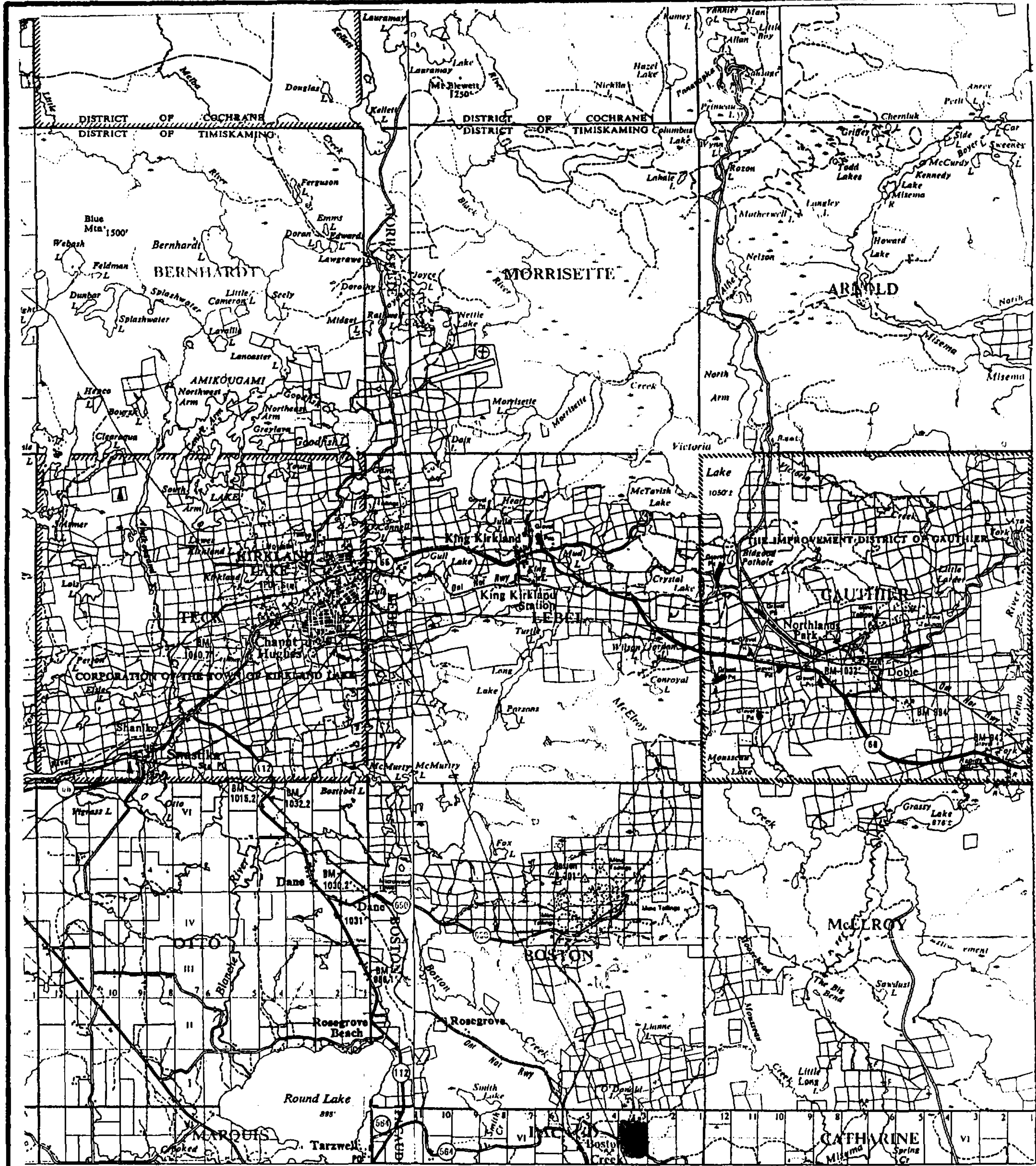


Claim Location Map

Scale: 1 inch to 1/2 mile

Taken from a June 1986

Figure 1a



Location Map

Figure lb

August, 1986 - Geological Survey
M. Greer

April, 1987 - Geophysical Survey
Barry Hollinger Joint Venture

The above reports can be viewed at the Regional Office.

TOPOGRAPHY

The terrain consists of low swampy areas surrounded by high steep hills, which has a large percentage of exposed outcrop.

A very large creek, pond system runs south/east through claim No. L-737419.

The vegetation in both claims ranges from alder, grass, balsam in the low lying areas to red jack pine and poplar, and silver and white birch on the outcrop showings.

GENERAL GEOLOGY

According to the O.D.M. Map No. 1957-4 the underlying bedrock consists of basic volcanic lava flows of the Keewatin age. These rock types are primarily gabbroic lava flows and andesite, basalt and pillow lava. The flows appear to be trending northwest-southeast and are facing east.

INSTRUMENTATION

Electromagnetic Survey:

The VLF-EM method uses as a source, one of the main submarine communications transmitters in the 15 to 25 kHz band found throughout the world. These submarine communication radio waves travel in a single mode parallel to the surface of the earth along the earth-air surface.

Without vertical conductors and travelling over flat ground, the magnetic field component of this radio or surface wave is horizontal and perpendicular to it's direction of travel.

VLF instruments are capable of picking up these structures that change the direction of the waves by measuring the tilt angle of the major axis of the polarization ellipse. This is illustrated by the tilt angle being zero on flat ground, but when a conductor is present the tilt angle will acquire a finite value. The direction of tilt indicates the direction of the conductor. Calculations of such parameters as depth, depth extent, dip and

width of the conductor is very minimal.

The VLF easily illustrates the location of the upper limit of dipping structures which can be seen or plotted as VLF profiles as areas of greatest change in tilt angle per unit of distance.

The instrument used for this EM survey was a Geonics VLF-EM16 Unit. The sensitivity of this unit is ± 1% for the in-phase and ± 1% for the quadrature. The operating frequency for the EM16 is from 15-25 kHz and the station selection is made by plug-in units.

For the purpose of this EM survey the station used was Cutler, Maine, which has a frequency of 24.0 kHz.

All the readings were taken facing north at 50 foot intervals and the topography was noted for future use in the interpretation of the EM results.

Magnetic Survey:

This system uses a backward motion of spinning protons of a hydrogen atom within a fluid of hydrogen and carbon. These spinning magnetic protons are caused to have two opposite poles by applying a magnetic field using a current within a coil of wire. When the current is stopped, the protons precess about the earth's magnetic field and in turn generate a small current in the wire. This frequency of precession is proportional to the earth's total magnetic field.

This instrument is read directly in gammas which is the absolute value of the earth's total field for that station.

1996 ELECTROMAGNETIC AND MAGNETOMETER SURVEYS

1) Magnetic Survey:

The field data is presented on a map at a horizontal scale of one inch to 200 feet, Map No. BH/96/2, found in the back of this report.

The magnetic data is illustrated as isomagnetic contours (contour interval 100 gammas) on a map of corrected magnetic values recorded at each station.

The magnetic trend is a northwest direction.

In this survey in claim L-737420 a large magnetic structure is noted. This magnetic high structure crosses

picket lines 13W to P17W in a southwest to south direction. This high magnetic structure is probably heavily altered and shear zones of the Pacaud fault. M. Greer's 1987 magnetometer survey showed a similar high magnetic structure.

ii) Electromagnetic Survey:

There are three conductors found in this survey.

Conductor C1 is found near the top and along the south edge of a large outcrop showing on P1 OW 350 south to P14W 250 south.

Conductor C2 follows the edge of a steeply sloping north face hill and pine bogg. The conductor crosses P10W 13 south to P15W 850 south.

Conductor C3 follows the top of a steep hill covered in jack pine, birch, balsam and alder. C3 crosses P18W 825 south to P110W 725 south.

To dicsover more about these conductive zones the data should be Frazer filtered.

CONCLUSIONS AND RECOMMENDATIONS

Only conductor C3 appears to have any association with the magnetic trend and structure. The VLF conductor axis is found to occur along the edge of a higher magnetic gradient.

The magnetic low indicates a change in the structure, possibly caused by a fault which also may be indicated by the EM response in claim L-737420.

A diamond drill program is being looked at for this property in the upcoming year.

Respectfully submitted by

August 13, 1996

Miss Wendy K. Weller

BIBLIOGRAPHY

Sixty-sixth Annual Report of the
Ontario Department of Mines

Volume LXVI, Part 5, 1957

Geology of Boston Township and part of
Pacaud Township by K.D. Lawton

April 10, 1987 - Geophysical Survey Report on the
M. Greer Barry Hollinger Joint Venture
Boston and Pacaud Townships.

Technical Data:

Line (mi/km): 4 MILES 6.4 KMS
Line traversed:
No. of samples/stations: 211
Line/picket spacing: 200 FT/100 FT.

ELECTROMAGNETIC SURVEY:

Operator: MISS WENDY K. WELLER
Instrument: GEONICS EM-16
Accuracy: ± 1%
Coil configuration: VERTICAL AND HORIZONTAL
Coil separation: INFINITY
Method: FIXED TRANSMITTER
Parameters: IN-PHASE/QUADRATURE
Vertical scale: 1 INCH = ± 40%
Horizontal scale: 1 INCH = 200 FEET
Frequency: CUTLER - 24.0 kHz
Station: CUTLER, MAINE
Operational technique: CUTLER, MAINE, ALL READINGS TAKEN FACING NORTH 90° TO THE STATION.

MAGNETIC SURVEY:

Operator: MISS WENDY K. WELLER
Instrument: MCPHAR GP-8 PROTON
Accuracy: ± 1 GAMMA
Base station: BL 0 0+0
Diurnal method: CLOSED LOOP BL TIE IN
Base station time: 30 MINUTES
Location/value: BL 0+00/58570
Contour interval: 50 - 100 GAMMAS
Datumn subtracted: 58,000 GAMMAS
Contoured by: MISS WENDY K. WELLER
Horizontal scale: 1 INCH = 200 FEET
Operational technique: SENSOR POLE MOUNT.

INDUCED POLARIZATION SURVEY

Transmitter used:
Receiver used:
Method:
Frequency:
On time:
Range:
Off time:
Delay time:
Power source:
Output:
Electrode array:
Electrode spacing:
Readings taken:
Other data:
Operational technique:

Assessment Data Form

Type of Work:

Prospecting: ____ Geological: ____

Physical: LINE CUTTING, CHAINING

Geophysical: MAGNETOMETER AND ELECTROMAGNETIC SURVEYS

Geochemical: ____ Drilling: ____

Assays/Analyses: ____ Other work: ____

Cost of Work: $3,626.00 **Dollars Applied:** $3,200.00

Recorded Holder:

Name: ALEXANDER H. PERRON

Address: 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9

Survey Company:

Name: A J PERRON GOLD CORPORATION

Address: 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9

Survey/Report Information:

Start of work: JULY 30, 1996 End of work: AUGUST 12, 1996

Draughting time: AUGUST 11, 12, 1996 Report time: AUGUST 8, 12, 13, 1996

Completion of report: AUGUST 13, 1996 Author: MISS WENDY K. WELLER

Work performed on claim(s) L-737419 and L-737420

Work applied to claim(s) L-737417, L-737418, L-737419, L-737420

Persons who performed work (supervisor first):

A J PERRON GOLD CORPORATION

WENDY K. WELLER

MICHAEL BURNS

C E R T I F I C A T E

I, Wendy K. Weller, of Kirkland Lake, Ontario do hereby certify:

1) That I am a Geotech in Training and reside at:
71 Second Street, Apartment #2, Kirkland Lake, Ont. P2N IR6.

2) That I graduated from the Haileybury School of Mines as a certified Diamond Driller in 1982. I have had a staking licence for the past 6 years.

3) That I was employed as a Diamond Driller for Heath and Sherwood for 1 year.

4) That I have been practising as a Geotech Trainee for a period of six (6) years and I am qualified to write this report.

5) That I supervised and participated in this survey.

Aug 13/96
Date

Wendy K. Weller
Geotech In-Training

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number
W9680.00398

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

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Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regu... Recorder. ...he Mining
- A separate copy of this form must...
- Technical reports and maps must...
- A sketch, showing the claims the...

32D04SW0094 2.16716 PACAUD

900

Recorded Holder(s)		Client No.
ALEXANDER H. PERRON		181257
Address		**Telephone No.**
103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9		(705) 567-7057
Mining Division	**Township/Area**	**M or G Plan No.**
LARDER LAKE	PACAUD TOWNSHIP	

Dates Work Performed From: JULY30, 1996 To: AUGUST 12, 1996

Work Performed (Check One Work Group Only)

	Work Group	Type
V	Geotechnical Survey	LINE CUTTING, MAGNETOMETER, ELECTROMAGNETIC SURVEYS
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

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Total Assessment Work Claimed on the Attached Statement of Costs $ 3,626.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
A J PERRON GOLD CORPORATION	103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9
WENDY K. WELLER	103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9
MICHAEL BURNS	103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9

(attach a schedule if necessary)

Certification of Beneficial Interest * **See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
	AUGUST 13, 1996	

Certification of Work Report

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

Name and Address of Person Certifying
MISS WENDY K. WELLER, 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONTARIO P2N IA9

Telepone No.	Date	Certified By (Signature)
(705) 567-7057	AUGUST 13, 1996	

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
$3200 reserve $426	Aug 13/96		
	Deemed Approval Date: Nov. 11/96	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

				Claim	this Claim	a Future Date
	L-737419	1	$1,813.00	$ 800.00	$ 800.00	$ 213.00
	L-737420	1	$1,813.00	$ 800.00	$ 800.00	$ 213.00
	L-737417	1		$ 800.00		
	L-737418	1		$ 800.00		
	4 **Total Number of Claims**		$ 3,626.00 **Total Value Work Done**	$3,200.00 **Total Value Work Applied**	$ 1,600.00 **Total Assigned From**	$ 426.00 **Total Reserve**

2.16716

0241 (03/91)

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☑ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with r to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use): W9680.00398

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

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Work Type	Units of Work *Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.*	Cost Per Unit	Total Cost
LINE CUTTING	6.4 Kms. X 257./km.	737419 - $822.00	
		737420 - $822.00	$1,644.00
MAGNETOMETER	6.4 Kms. X 102./km	737419 - $326.00	
		737420 - $326.00	$ 652.00
ELECTROMAGNETIC	6.4 Kms. X 105./km	737419 - $336.00	
		737420 - $336.00	$ 672.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
14 DAYS X 1 FORD TRUCK X $40.00/DAY			$ 560.00
Food and Lodging Costs			
14 DAYS X $7.00 /DAY (FOOD)			$ 98.00
		Total Value of Assessment Work	$3,626.00

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Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK × 0.50 = Total $ value of worked claimed

Note:
- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, WENDY K. WELLER (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as AGENT (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

Signature	Date
Wendy K. Weller	AUGUST 13, 1996

0212 (02/96)

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

October 22, 1996

Roy Spooner
Mining Recorder
4 Government Road East
Kirkland Lake, ON
P2N 1A2

Dear Sir or Madam:

Submission Number: 2.16716

Subject: Transaction Number(s): W9680.00398

After reviewing the Work Report(s) we have prepared this letter and the attached summary, which lists the results of our review. Requirements of the Assessment Work Regulation may not have been fully met. Please examine the summary to determine the next course of action concerning the identified Work Report(s).

NOTE: The 90 day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, is no longer in effect for this submission.

PLEASE NOTE ANY REQUESTED REVISIONS MUST BE SUBMITTED IN DUPLICATE.

If the anniversary dates for the mining claims affected by this correspondence have not passed, a number of options are available. Please contact the Mining Recorder to discuss these options.

If you have any questions regarding this correspondence, please contact Steve Beneteau at (705)670-5855.

Yours sincerely,

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Correspondence ID: 10296
Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.16716

Date Correspondence Sent: October 22, 1996 **Assessor:** Steve Beneteau

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9680.00398	737419	PACAUD	Approval	October 21, 1996

Section:

14 Geophysical MAG

Correspondence to:

Mining Recorder
Kirkland Lake, ON

Resident Geologist
Kirkland Lake, ON

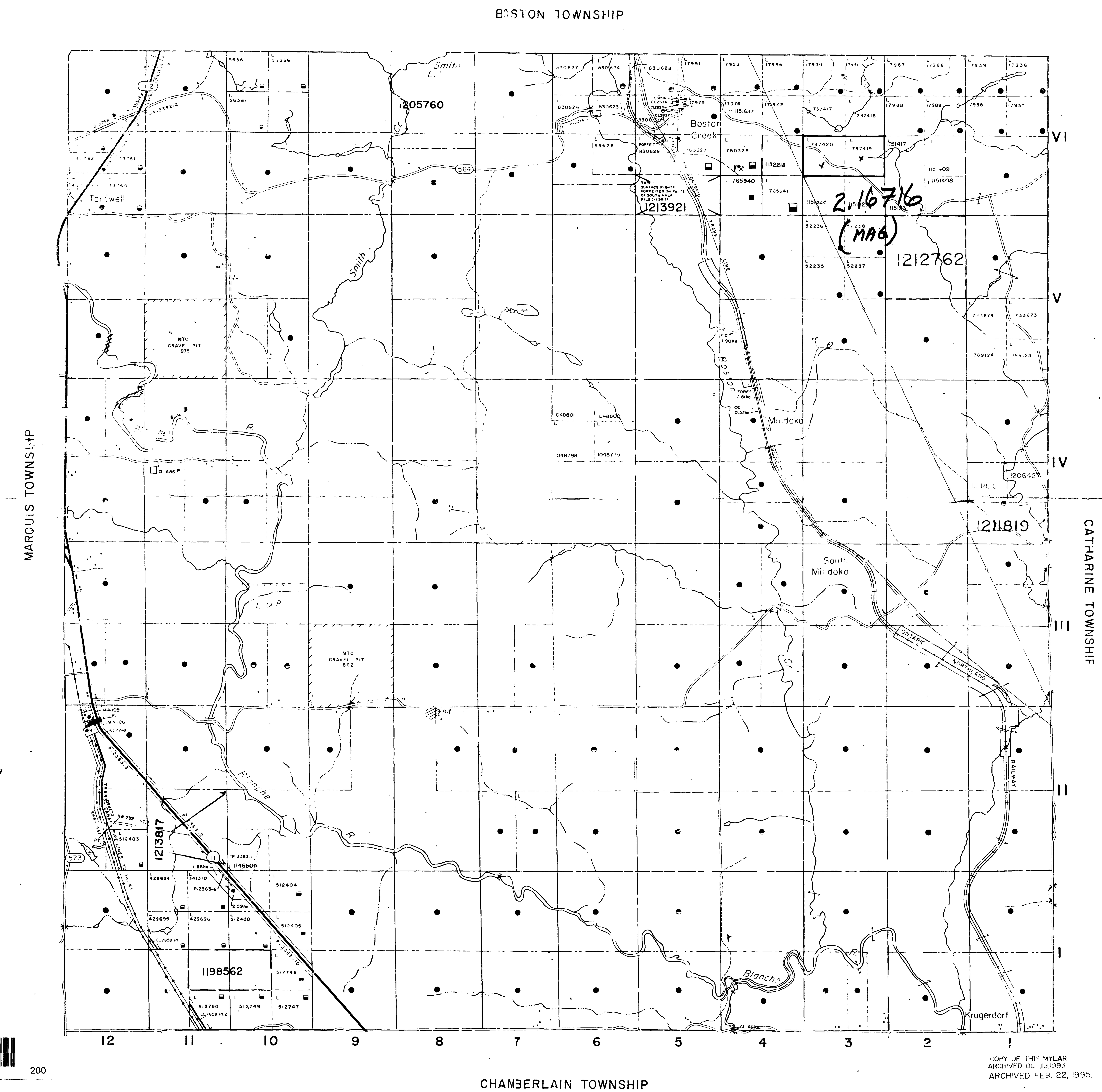
Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Wendy Weller
KIRKLAND LAKE, ONTARIO, CANADA

ALEXANDER H. PERRON
KIRKLAND LAKE, Ontario

Correspondence ID: 10296



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LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS BASE LINES
  - LOTS MINING CLAIMS PARCELS
- UNSURVEYED LINES
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	▼
ORDER IN COUNCIL	OC
RESERVATION	(R)
CANCELLED	
SAND & GRAVEL	(S)

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

Metres 500 0 1000 Metres
Chains 10 0 10 20 30 40 50 60 Chains
Feet 500 0 1000 2000 3000 4000 5000 Feet

SCALE 1:20 000

DATE OF ISSUE
AUG 13 1996
LARDER LAKE MINING RECORDER'S OFFICE

RECEIVED
AUG 14 1996
MINING LANDS BRANCH

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

TOWNSHIP

PACAUD

M.N.R. ADMINISTRATIVE DISTRICT

KIRKLAND LAKE

MINING DIVISION

LARDER LAKE

LAND TITLES / REGISTRY DIVISION

TIMISKAMING

Ministry of Natural Resources — Ministry of Northern Development and Mines — Ontario

Date OCTOBER, 1986

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ARCHIVED FEB. 22, 1995.

32D04SW0094 2.16716 PACAUD

200

N

PL13 PL12 PL11 PL10 PL9W PL8W PL7W PL6W PL5W PL4W PL3W PL2W PL1W PL0W

737420

737419

C1

C2

C3

CON. VI

LOT 3

SYMBOLS

Claimpost ■ Claim line --- Hydroline ●

Concession line

Access road ..... Pond Creek

Base station 58507

Contour intervals 50 - 100 gammas

INSTRUMENTATION

Instrument used McPhar GP8 Proton Magnetometer

Datum subtract 58000 ɣ

VLF Conductor axis —— —— Q1

2.16716

BARRY HOLLINGER FOUR

GROUND MAGNETOMETER SURVEY

PACAUD TOWNSHIP
LARDERLAKE MINING DIVISION, ONTARIO

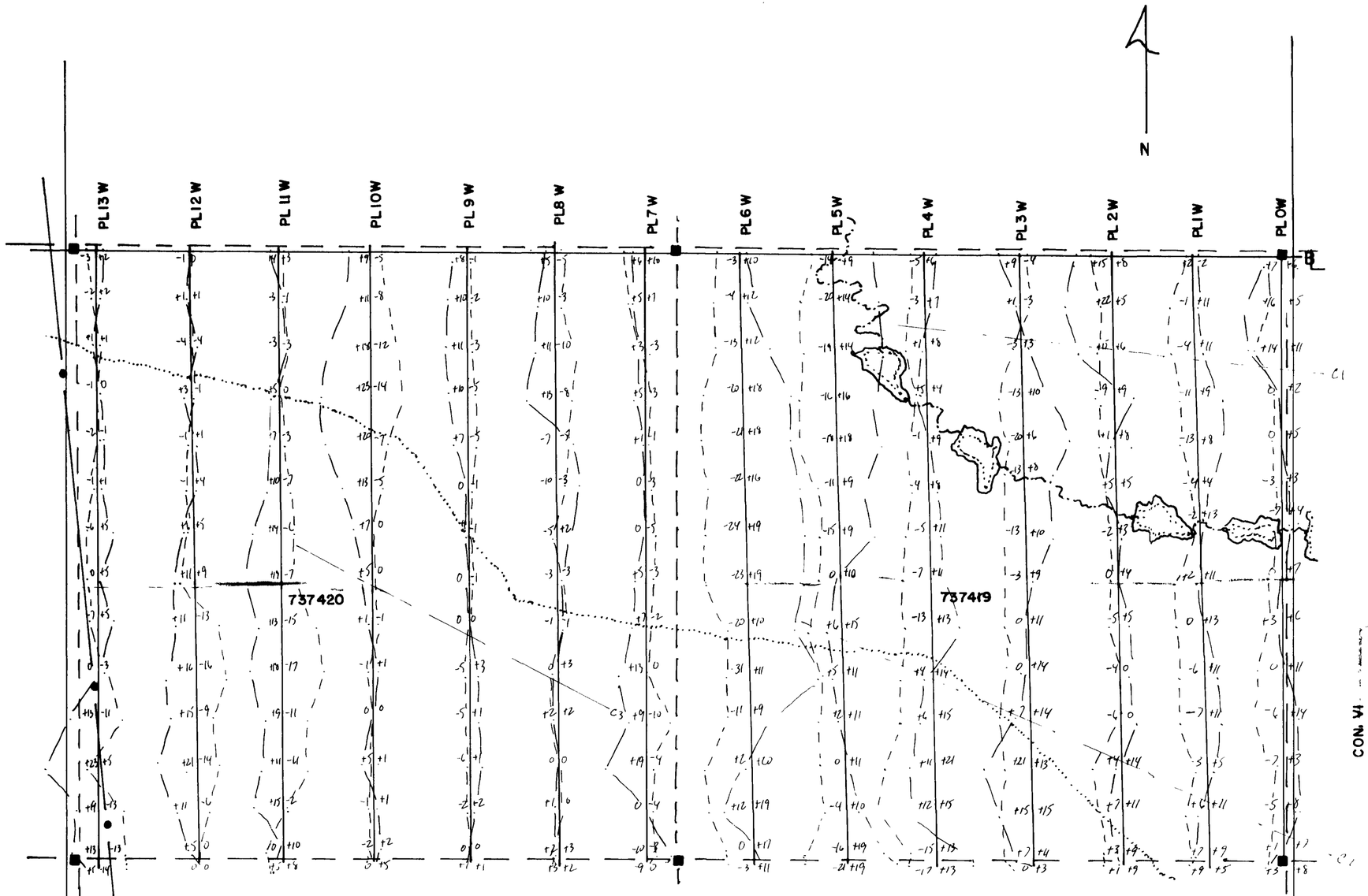
W.K. Weller

SCALE 1" = 200 feet

200 0 200 400

Report by WK Weller — Drawn by WK W

Date Aug / 96 — Map no BH/96/2



SYMBOLS

Claim post ■ Claim line --- Hydro line

Concession line

Access road Pond Creek

Inphase

Quadrature

Conductor axis —— Q1

INSTRUMENTATION

Instrument used GEONICS EM 16

Station used Cutler, Maine

Frequency 24.0 kHz

Vertical scale 1"= ± 40%

2.16716

BARRY HOLLINGER FOUR

GROUND VLF-EM SURVEY

NAA Profiled

PACAUD TOWNSHIP

LARDER LAKE MINING DIVISION, ONTARIO

WK Weller

SCALE 1 inch to 200 feet

200 0 200 400

Report by WK Weller Drawn by WKW

Date Aug/96 Map no BH/96/1