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GEOPHYSICAL SURVEY

BARRY HOLLINGER 4 GROUP

NELL PARTAGERS AND

NEW EAST/WEST GRID
PACAUD TOWNSHIP

LARDER LAKE MINING DIVISION

DISTRICT OF TIMISKAMING, ONTARIO

**FOR** 

ALEXANDER H. PERRON

### RECEIVED

JUL 27 1998

GEOSCIENCE ASSESSMENT OFFICE

JULY 24, 1998

MISS WENDY K. WELLER GEOTECH IN\_TRAINING



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<u>SUMMARY</u> 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

#### NEW EAST/WEST GRID

PACAUD TOWNSHIP

LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING, ONTARIO

#### INTRODUCTION

The claim group consists of four unpatented mining claims found in Pacaud Township, Concession VI, Lot 3.

On June 1, 1998, a new east grid was established. A new north/south baseline was cut, picket lines were established every 200 feet, stations were cut and measured every 100 feet.

The linecutting and chaining was contracted out to Mr. Maurice Sasseville, and crew.

The magnetometer survey was done by Mr. Richard Nash, the electromagnetometer survey was completed by Miss Wendy K. Weller. All drafting, contouring and report writing was done by Miss Wendy K. Weller.

#### ACCESS AND LOCATION

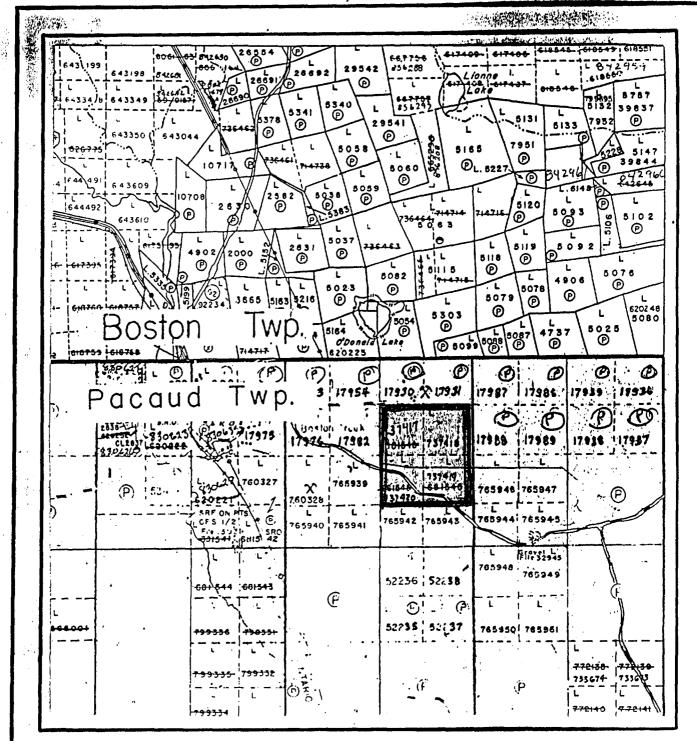
The Barry Hollinger Four Group lies in the middle half of Lot 3, Conc. VI approximately one and one half miles from the village of Boston Creek, which is twelve (12) miles southeast of the town of Kirkland Lake. (See Figure 1a).

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

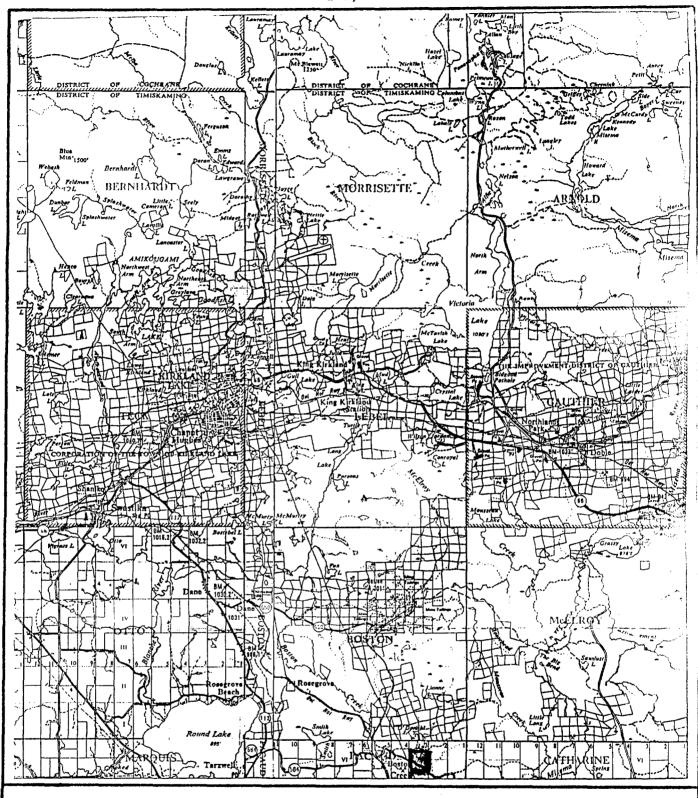


## Claim Location Map

Scale: 1 inch to 1/2 mile

Taken from a June 1986

Figure la



Location Map

Figure lb

August 1986

- Geological Survey

M. Greer

April 1987

- Geophysical Survey

Barry Hollinger Joint Venture M. Greer

August 1996

- Geophysical Survey

Barry Hollinger 4 Group Wendy K. Weller

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  $\pm$  1% for the inphase and  $\pm$  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.

#### 1998 ELECTROMAGNETIC AND MAGNETOMETER SURVEYS

### i) Magnetic Survey:

The field data is presented on a map at a horizontal scale of one inch to 200 feet, Map No. BH/98/mag, found at 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 in a north to north/west direction. The magnetic relief ranges from 58,022 gammas to 60,929 gammas.

In the southeast half of the grid a very large high magnetic structure crosses PL800N to PL1000S. This high

magnetic structure is heavily altered and sheared zones of the Pacaud fault.

In the northwest half of the grid a very large magnetic low structure is noted. The area is very flat, wet area. The vegetation in this area is alder and small stunted spruce and pine.

#### ii) Electromagnetic Survey:

There are 3 conductors found in this survey.

- Q1 Crosses PL800N 1600E to PL1400N 1360E.
  The area is very flat, wet alder bogg. The conductor is north of the large creek which crosses the claim group.
- Q2 Crosses PL200N 1360E to PL200S 1320E.
  The conductor crosses the top and east side of a very steep and large outcrop.
- Q3 Crosses PL400S 2300E to PL800S 2250E.

  The conductor crosses the east slope of the very large outcrop that crosses the west side of the property.

To discover more about the conductive zones, the data is being Frazer filtered.

#### CONCLUSIONS AND RECOMMENDATIONS

Conductors 2 and 3 appear to have some 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 Q1.

All information is being compiled on the property at present to help determine future programs.

Respectfully submitted,

Hiller

July 24, 1998

Miss Wendy K. Weller Geotech In-training

#### **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.

August 1996 - Geophysical Survey

Barry Hollinger 4 Group

Pacaud Township

Technical Data:	•
Line (mi/km):	Line traversed:
No. of samples/stations:	Line/picket spacing: 200 FT/100 FT.
ELECTROMAGNETIC SURVEY:	Operator: MISS WENDY K. WELLER
Instrument: GEONICS EM-16	Accuracy: ± 1%
VERTICAL AND HORIZONTAL Coil configuration:	Coil separation: INFINITY
Method: FIXED TRANSMITTER	Parameters: IN_PHASE/QUADRATURE
Vertical scale: 1 INCH = + 40%	Horizontal scale: 1 INCH = 200 FT.
Frequency: 24.6 kHz	Station: SEATTLE, WASHINGTON
Operational technique:	G NORTH ÆAST
ALE VENDINGS INCH LAGIN	
AAA AALC TIA OHDVCV.	On a sala DICUADO NASH
MAGNETIC SURVEY:	Operator: RICHARD NASH Accuracy: - 1 GAMMA
Instrument: MCPHAR GP-8 PROTON	
Base station: BL 0+00	Diurnal method: CLOSED LOOP BL TIE
Base station time: 30 MINUTES	Location/value: BL000/59228
Contour interval: 50 - 100 GAMMAS Contoured by: MISS WENDY K. WELLER	Datumn subtracted: 58,000 GAMMAS Horizontal scale: 1 INCH = 200 FEET
Operational technique: SENSOR POLE	
INDUCED POLARIZATION SURVE	
Transmitter used:	Receiver used:
Method:	Frequency:
On time:	Range:
Off time:	Delay time:
Power source:	Output:
Electrode array:	Electrode spacing:
Readings taken:	·
Operational technique:	
	•
~~ ~ · ~~~ · · · · · · · · · · · · · ·	

# Assessment Data Form

Type of work:	•	
Prospecting:	Geological:	
	NING	
	TROMAGNETIC SURVEYS	
Geochemical:	Drilling:	
	Other work:	
	Dollars Applied: \$4,800.00	
Recorded Holder:	Survey Company:	
Name: ALEXANDER H. PERRON	Name: GWEN RESOURCES LTD.,	
Address: 103 GOVERNMENT ROAD EAST,	Address: 103 GOVERNMENT ROAD EAST,	
KIRKLAND LAKE, ONTARIO P2N 1A9	KIRKLAND LAKE, ONTARIO P2N IA9	
Survey/Report Information	·	
Start of work: JUNE 1, 1998	End of work: JUNE 18, 1998	
Draughting time: JULY 15,16, 1998	Report time: JULY 23, 24, 1998	
	Author: MISS WENDY K. WELLER	
•	L-737418, L-737419, L-737420	
·	· 	
	***************************************	
	· · · · · · · · · · · · · · · · · · ·	
Nork applied to claim(s) L-737417, L-73	37418, L-737419, L-737420	
·		
	***************************************	
ersons who performed work (supervi	sor first):	
WEN RESOURCES LTD.	*******	
VENDY K. WELLER		
RICHARD NASH	**************************************	
	***************************************	

#### CERTIFICATE

- I, Wendy K. Weller, of Kirkland Lake, Ontario, do hereby certify:
- That I am a Geotech in Training and reside at:
   Second Street, Apartment #2, Kirkland Lake, Ontario.
   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 8 years.
- 3) That I was employed as a Diamond Driller for Heath & Sherwood for 1 year.
- 4) That I have been practising as a Geotech Trainee for a period of eight (8) years and I am qualified to write this report.
- 5) That I supervised and participated in this survey.

121/98 Pate/

Wendy K. Weller Geotech Trainee



Ministry of Northern Development and Mines

# Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)

W980.00448
Assessment Files Research Imaging



32D04SW2003

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of subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the review the assessment work and correspond with the mining land holder. Recorder, Ministry of Northern Development and Mines, 6th Floor,

	ch a list if necessary)	2.18714	
ALEXANDER H. PERRON		Client Number #181257	-
ddress		Telephone Number	-
103 GOVERNMENT ROAD EAS	T, KIRKLAND LAKE, ONT. P2NIA9	(705) 567-3001 Fax Number	<del></del>
		(705) 567-2158	
ame		Client Number	
ddress		Telephone Number	
		Fax Number	
			<del></del>
	Check ( ) and report on only ONE of	o etilesies —	
Geotechnical: prospecting assays and work under se	, surveys, Physical: drillir ection 18 (regs) renching and	associated assays Rehabilit	tation
Vork Type LINE CUTTING AND CHAIN	ING	Office Use	
MAGNETOMETER AND ELECT		Commodity	
	/	Total \$ Value of Work Claimed 5 31)	
ates Work From 01 06 erformed From Day Month	1 1	NTS Reference	
ilobal Positioning System Data (if availat	ble) Township/Area	Mining Division $\mathcal{L}_{\mathcal{L}}$	
	PACAUD M or G-Plan Number	Mining Division Larder Lake Resident Geologist District kirkland Rake	
	•	District kirkland dake	
- provide - complet - provide	a work permit from the Ministry of Natura proper notice to surface rights holders be and attach a Statement of Costs, form a map showing contiguous mining lands two copies of your technical report.	efore starting work; 0212; that are linked for ass grape cell	/EC
			998
	o propered the technical report (Attac	h a list if necessary) GEOSCIENCE ASSE	COMPA
. Person or companies who	o biebaied the technical leboit (Attac	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	COOMPA
	o prepared the technical report (Allac	Telephone Number OFFICE (705) 567–3001	COOMEN
WENDY K. WELLER	T, KIRKLAND LAKE, ONT. P2N IA9	(705) 567-3001  Fax Number (705) 567-2158	IVE
WENDY K. WELLER  Address 103 GOVERNMENT ROAD EAS	T, KIRKLAND LAKE, ONT. P2N IA9	(705) 567~3001	IVE
WENDY K. WELLER  ddress 103 GOVERNMENT ROAD EAS	RECEIVED	(705) 567-3001  Fax Number (705) 567-2158	1 <b>V</b>
WENDY K. WELLER	RECEIVED  LARDER LAKE MINING DIVISION	(705) 567-3001  Fax Number (705) 567-2158  Telephone Number  Fax Number	/-1008 7-1008 8-655N
WENDY K. WELLER Address 103 GOVERNMENT ROAD EAS lame Address	RECEIVED  LARDER LAKE MINING DIVISION	Telephone Number  (705) 567-3001  Fax Number (705) 567-2158  Telephone Number  Fax Number  Telephone Number  GEOSCIENCE G	/-1008 7-1008 8-655N
WENDY K. WELLER  ddress 103 GOVERNMENT ROAD EAS lame	RECEIVED	Telephone Number  (705) 567-3001  Fax Number (705) 567-2158  Telephone Number  Fax Number  Telephone Number	1009 1009 1009 1009 1009 1009
WENDY K. WELLER  ddress 103 GOVERNMENT ROAD EAS ame  ddress	RECEIVED LARDER LAKE MINING DIVISION  JUL 24 1998  2.34	Telephone Number  (705) 567-3001  Fax Number (705) 567-2158  Telephone Number  Fax Number  Telephone Number  GEOSCIENCE G	1009 1009 1009 1009 1009 1009
WENDY K. WELLER ddress 103 GOVERNMENT ROAD EAS lame ddress	RECEIVED LARDER LAKE MINING DIVISION  JUL 24 1998  2 3 4  Holder or Agent	Telephone Number  (705) 567-3001  Fax Number (705) 567-2158  Telephone Number  Fax Number  Telephone Number  GEOSCIENCE G	7 1000 7 1000 8 5 5 5 5 6 6 6 6 7 6

Fax Number (705) 567-2158

Agent's Address
103 GOV'T RD. EAST, KIRKLAND LAKE, ONT P2N IA9 (705) 567-3001

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form. Mining Claim Number. Or if **Number of Claim** Value of work Value of work Value of work Bank. Value of work work was done on other eligible Units. For other performed on this applied to this assigned to other to be distributed mining land, show in this mining land, list claim or other claim. mining claims. at a future date. mining land. 2 column the location number hectares. 8 indicated on the claim map. TB 7827 16 ha \$26, 825 N/A \$24,000 \$2.825 eg 1234567 12 0 \$24,000 0 eg 2 \$ 8, 892 \$ 4,000 1234568 0 \$4.892 eg 128.00 \$ 1 \$ 1,328.00 \$ 1,200.00 L-737417 1 \$ 127.00 \$ 1,200.00 1 1,327.00 L-737418 2 \$ 1,200.00 127.00 \$ 1,327.00 L-737419 1 3 129.00 \$ 1,329.00 \$ 1,200.00 \$ 4 L-737420 1 5 6 7 8 9 10 11 12 13 14 15 511.00 \$ \$ 5,311.00 \$ 4,800.00 Column Totals WENDY K. WELLER \_, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done. Signature of Recorded Holder or agent Authorized in Writing JULY 24, 1998 Instructions for cutting back credits that are not approved. Some of the credits claimed in this declaration may be cut back. Please check ( > ) in the boxes below to show how you wish to prioritize the deletion of credits: 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated. 2. Credits are to be cut back starting with the claims listed last, working backwards; or 3. Credits are to be cut back equally over all claims listed in this declaration; or 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe): Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

RECEIVED For Office Use Only LARDER LAKE Received Stamp Deemed Approved Date **Date Notification Sent** MINING DIVISION JUL 24 1998 Date Approved Total Value of Credit Approved 2.344 Approved for Recording by Mining Recorder (Signature) 0241 (02/96)



Ministry of Northern Development and Mines

# Statement of Costs for Assessment Credit

Transaction Number (office use)
W9880.00448

Personal information collected on this form is obtained under the authority of subsection 8(1) of the Assessment Work Regulation 8/96. 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.

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 of work	Total Cost
LINE CUTTING & CHAINING	11.27km X \$250.00/km		\$ 2,818.00
MAGNETOMETER SURVEY	11.27km X 105.00/km		\$ 1,183.00
ELECTROMAGNETIC SURVEY	11,27km X \$110,00/km		\$ 1,240.00
Associated Costs (e.g. supplies	, mobilization and demobilization).		
RECEIVED LARDER LAKE MINING DIVISION  JUL 24 1998  2:34 26			
Transp	portation Costs		
1 TRUCK X 2 DAYS X 70 KM >	( .30¢⋅km		\$ 42.00
Food a	and Lodging Costs		
1 PEOPLE X 2 DAYS X \$7.00	O/person (Lunches)		\$ 28.00
	Total Value of	Assessment Work	\$ 5,311.00

Calculations of Filing Discounts:	
<ol> <li>Work filed within two years of performance is claimed at 100% of the</li> <li>If work is filed after two years and up to five years after performance,</li> <li>Value of Assessment Work. If this situation applies to your claims, use</li> </ol>	it can only be claimed at 50% of the Total
TOTAL VALUE OF ASSESSMENT WORK × 0.50 =	TORE CE PUMPE d'aimed
Note: - Work older than 5 years is not eligible for credit A recorded holder may be required to verify expenditures claimed in this request for verification and/or correction/clarification. If verification and/or Minister may reject all or part of the accessment work submitted.	
	RECUESTION
Certification verifying costs:	JUL 27 (20)
I, <u>WENDY K. WELLÉR</u> , do hereby certify, that the (please print full name)	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 (recorded holder, agent, or state of	company position with signing authority)
to make this certification.	
Signature - 7	2 // IDate

Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines

October 6, 1998

Dear Sir or Madam:

Wendy K. Weller ALEXANDER H. PERRON 103 GOVERNMENT RD. EAST. KIRKLAND LAKE, Ontario P2N-1A9



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

Telephone: (888) 415-9846 Fax: (877) 670-1555

Visit our website at: www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Submission Number: 2.18714

Status

Subject: Transaction Number(s): W9880.00448 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at benetest@epo.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

**ORIGINAL SIGNED BY** 

Blair Kite

Supervisor, Geoscience Assessment Office

Mining Lands Section

## **Work Report Assessment Results**

**Submission Number:** 

2.18714

Date Correspondence Sent: October 06, 1998

Assessor: Steve Beneteau

Transaction

Number

First Claim

Number

Township(s) / Area(s)

**Status** 

**Approval Date** 

W9880.00448

737417

**PACAUD** 

Deemed Approval

September 28, 1998

Section:

14 Geophysical MAG

14 Geophysical VLF

Correspondence to:

Resident Geologist Kirkland Lake, ON

Assessment Files Library

Sudbury, ON

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

Wendy K. Weller

ALEXANDER H. PERRON KIRKLAND LAKE, Ontario

