



42A08NW2009 2.19122 BOWMAN

010

**2.19122**

**VLF EM-16 Geophysical Survey**

in

**Bowman Twp**

**(map sheet M-333, Larder Lake Mining District, Ontario)**

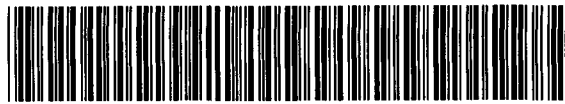
for

**Pelangio-Larder Mines Limited**  
**(Cross Lake Minerals Ltd. Option)**

**Dec/98 - Jan/99**

Date: Jan. 5/98

By : David V. Jones  
Hon.B.Sc.For.



42A08NW2009 2.19122 BOWMAN 010C

**Table of Contents**

Introduction..... 2

Location & Access ..... 3

Previous Exploration Work ..... 5

Survey Method ..... 6

Results & Discussion ..... 6

Recommendations ..... 8

Statement of Qualifications ..... 9

References ..... 10

Appendix A : VLF Operating Procedures ..... 11

Appendix B : Surface rights owners & notices of intent to perform work .... 12

**List of Figures**

Figure 1 : General location map ..... 3

Figure 2 : Claim map : Bowman Twp. .... 4

Figure 3 : VLF profiles (grid A & grid B)..... rear pocket

Figure 4 : VLF profiles (grid C) ..... rear pocket

## **Introduction**

On behalf of Pelangio-Larder Mines Limited, a VLF EM16 geophysical survey was completed on three small claim blocks located in Bowman Twp.. The claims are part of a larger land package that Pelangio is presently optioning from Cross Lake Minerals Ltd., and encompasses claims in both Bowman Twp. and adjoining Currie Twp..

The intent of the survey was to provide a cost effective method of acquiring new geophysical information on the claim blocks, while at the same time satisfy the assessment work requirements that were coming due on the property.

The survey was performed on the following three non-contiguous claims :

**Table 1:**

<b>Claim #</b>	<b># of units</b>	<b>Description</b>	<b>Due Date</b>	<b>Work Required</b>
1223759	4	Lot 6 N 1/2 of Con 3	Jan 17/99	\$1,600
1223760	8	Lot 1 & Lot 2 S 1/2 Con 3	Jan 17/99	\$3,200
1223761	2	N 1/2 of Lot 2 N 1/2 of Con 3	Jan 17/99	\$800

The recorded claim holder and their address for all three claims are :

Cross Lake Minerals Ltd.  
210-800 Wst Pender St.  
Vancouver, B.C.  
V6C 2V6

Portions of the claims have surface rights owners, which are listed in Appendix B along with copies of the Notices of Intention to Perform Assessment Work which were sent to each owner prior to commencing this work program.

The survey was completed in its entirety by the author of this report,

David V. Jones  
P.O. Box 1513  
South Porcupine, Ont.  
P0N 1H0

Field work commenced on December 18/98 and finished on January 3/99.

## Location & Access

The three claim blocks are located in Bowman Twp which encompass the town of Matheson Ontario, and is situated in the District of Cochrane, and the Larder Lake Mining District (see Figure 1 & 2). The township is surveyed and the specific Lot and Concession areas that are covered by the claims are summarized in the previously listed Table 1.

Access to the claim blocks can be made from all weather concession roads that run south off of Highway 101 just west of Matheson, or alternatively, west off of Highway 11 approximately 6 kilometres south west of Matheson.

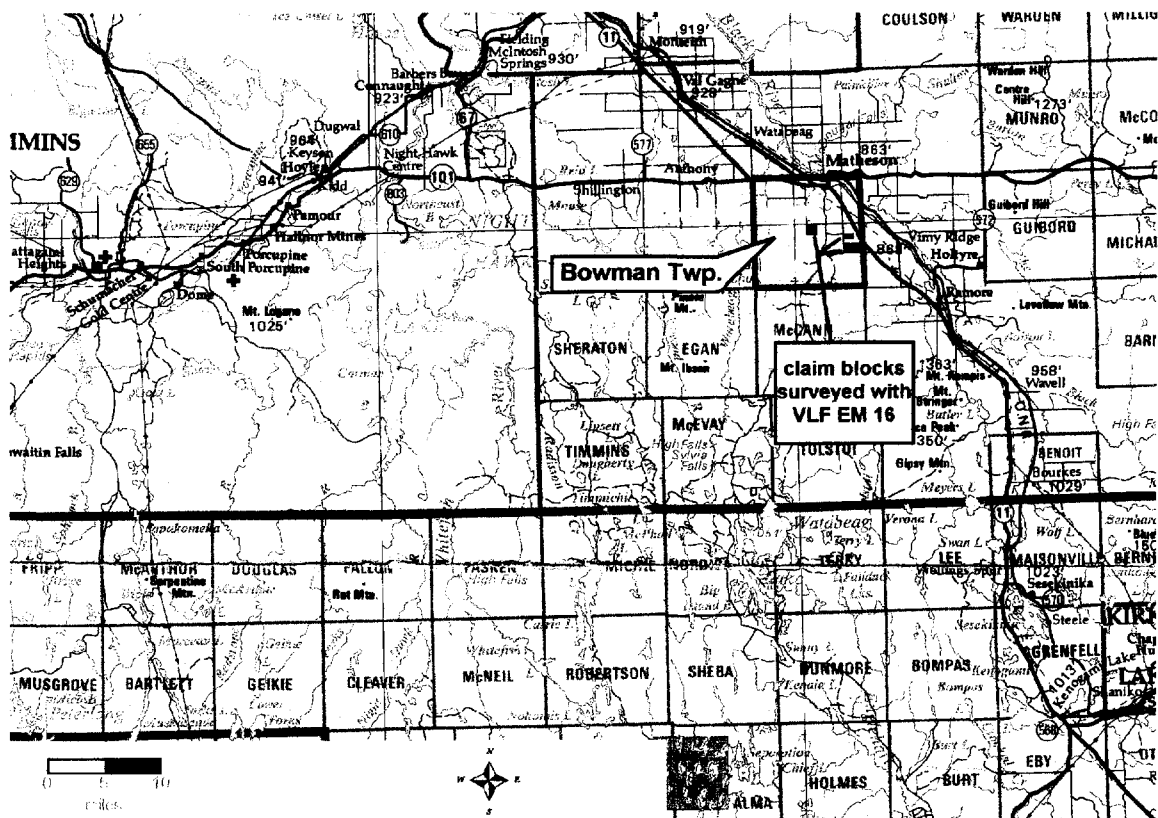


Figure 1 : General Location of claim blocks in Bowman Twp.

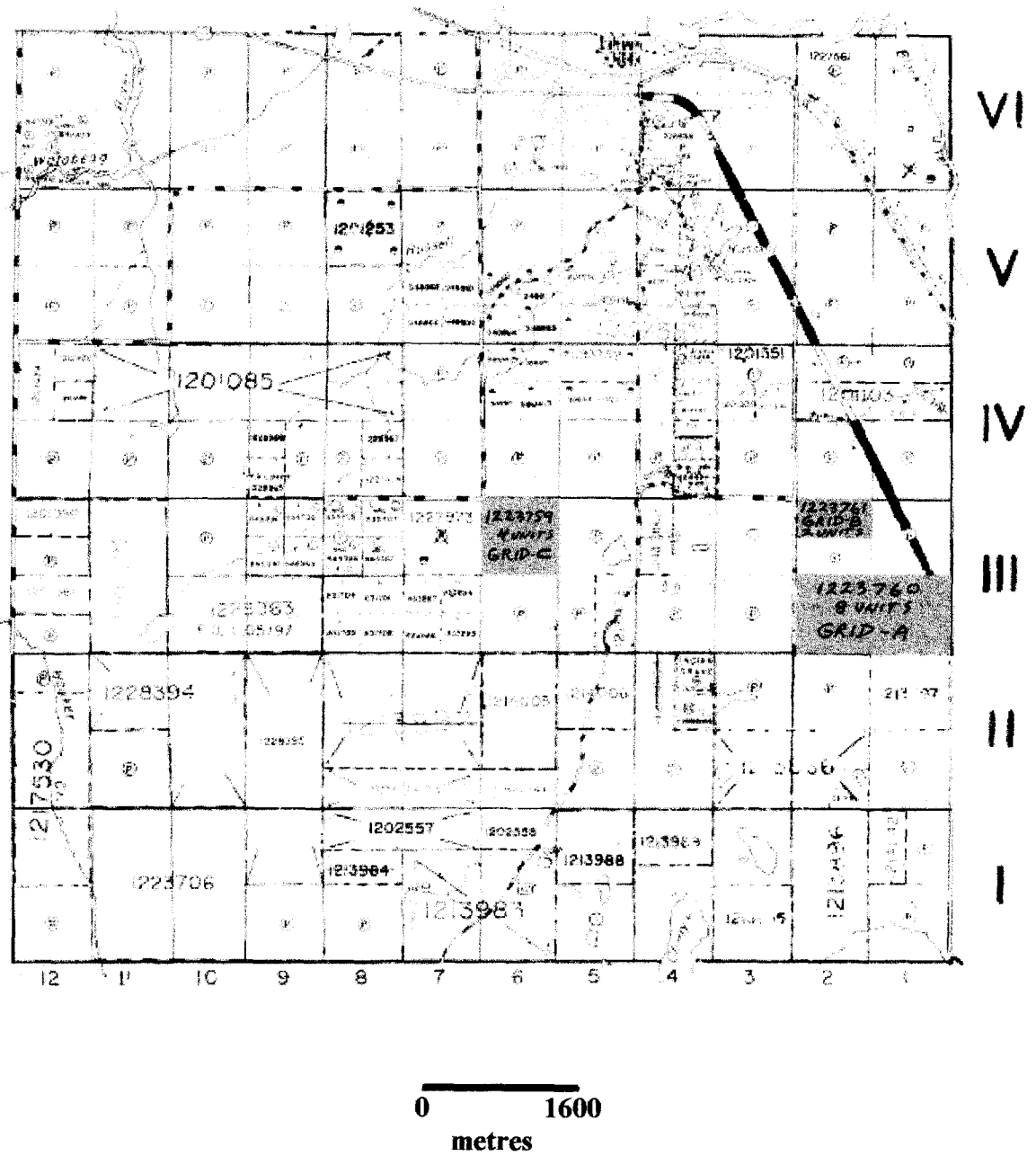


Figure 2 : Bowman Twp. claim map showing claim blocks surveyed for VLF report

**Previous Exploration Work**

<b>Area Covered In Present Survey</b>	<b>Year of Work</b>	<b>Company</b>	<b>Work Type</b>
Grid A - 1223761 Grid B - 1223760 Grid C - 1223759	1988	Cross Lake Minerals Ltd.	- geological survey - includes geophysical & geological compilation map
Grid C - 1223759	1989	Cross Lake Minerals Ltd.	- geophysics (mag & IP) - only partial coverage on north part of grid C
Grid C - 1223759	1973 to 1975	Tillex Syndicate (Derry Michener & Booth)	- geophysics (mag) - geological survey
Grid C - 1223759	1982 1984	Asarco Exploration	- geophysics (mag & HLEM) - geological survey - diamond drill (one hole 557')
Grid A - 1223761 Grid B - 1223760 Grid C - 1223759	1981	Asarco Exploration	- overburden drilling
Grid A - 1223761	1987	Allerston, R.E.	- geophysics (mag)
Grid A - 1223761 Grid B - 1223760 Grid C - 1223759	1995	Falconbridge Ltd.	- geophysics (HLEM partial coverage)

### Survey Method

A flagged grid was established using a compass and thread measuring device, with stations spaced at 25 metre intervals and line spacing of 100 metres. Each station was marked with orange flagging tape which had the station interval inscribed on it with permanent marker.

A common grid was used so that the three claim blocks were all referenced from the same base line. The grid was oriented with the base line at 270 degrees and all grid lines running perpendicular at 360 degrees. The concession line between concession 3 and concession 4 was used as BL0, and Line 0 was set at the # 4 post of claim 1223761.

The survey was then completed using a Geonics VLF-EM 16 instrument, where the transmitter station Cutler, Maine was used (NAA - 24.0 Khz). The VLF readings were taken with the instrument operator facing at approximately 020 degrees, which resulted in the transmitter station being perpendicular to the instrument. The in-phase and quadrature of the vertical magnetic field were measured as a percentage of the horizontal primary field. An in-phase sensitivity of plus or minus 150% and a quad-phase of plus or minus 40% was used with a resolution of plus or minus 1 %. Appendix A outlines the operating procedures for the instrument.

Data was manually plotted on Figures 3 and 4 at a scale of 1:2500 and each claim was labeled as follows : **Grid A** = claim 1223760 (12.4 km of survey lines)  
**Grid B** = claim 1223761 ( 3.2 km of survey lines)  
**Grid C** = claim 1223759 ( 6.4 km of survey lines)

A total of 24.9 kilometres of grid lines were set up (including base & tie lines) and a total of 22 kilometres of VLF surveying was completed on all three blocks.

### Results & Discussion

Reference to the OGS airborne geophysical map (OGS 1984 - map 80594) indicates a large number of weak input EM anomalies scattered throughout Bowman Twp., including the areas covered by the three claim blocks in this survey. Results from the VLF survey seem to confirm the presence of several of these anomalies, along with the appearance of new ones in a few areas. It should also be noted that several of the weak airborne Input EM anomalies were not detected with the VLF survey.

Several weak VLF anomalies are present in each block and are depicted as "dashed" lines. These are most likely caused by conductive overburden, or are caused by the effects of creeks or swamps that are coincident with the anomaly. The more prominent VLF anomalies are labeled with a reference letter in Figures 3 and 4, with each anomaly being briefly described as follows:

**Grid A - Anomalies A , B , and C**

These three anomalies are quite strong and coincide with some of the airborne Input EM anomalies. Anomaly "B" is slightly to the north but may be a faulted offset of a continuous conductor including all of A, B, and C. If this is true the conductor runs for at least 600 metres in strike length before it exits the property to the north west.

**Grid A - Anomaly D**

Although this anomaly is quite weak it does appear over a significant strike length of 400 metres and is coincident with some of the weak airborne Input EM anomalies.

**Grid A - Anomalies E , and G**

Each of these anomalies only appear on Line 15 east, however they are relatively strong and are adjacent to the eastern boundary of the claim. Future surveying of the adjoining ground to the east may confirm a longer strike length of these possible conductors.

**Grid A - Anomalies H and J**

Both of these anomalies have short strike lengths but are relatively strong and may represent valid conductors. It should be noted that both appear on parts of Line 11 east in an area that is the edge of an old farmers field. There may be the possibility of a man made culture response such as buried scrap metal or old buildings, although no direct evidence could be seen.

**Grid A - Anomaly I**

This anomaly has sections exhibiting strong VLF cross-overs, and it runs for at least 300 metres before exiting the claim to the north. A single weak airborne Input EM anomaly is coincident with part of "I" also.

---

**Grid B - Anomaly A**

This anomaly appears relatively strong and covers a strike length of at least 300 metres, however it may be complicated by an old abandoned dwelling that is located on the conductor between Lines 4 east and 5 east. The entire length of the anomaly is also located in a farmers field and may possibly be caused by buried man made features, although no direct evidence could be seen.

**Grid B - Anomaly B**

This anomaly extends for at least 200 metres and is quite strong. It is also coincident with a single weak airborne Input EM anomaly

---

**Grid C - Anomaly A**

This anomaly appears relatively strong on both lines 32 west and 31 west with a possible weaker section being intersected on line 30 west (may be result of creek on this line). The conductor strikes out of the claim in a north westerly direction.



**Grid C - Anomaly B**

This anomaly is represented by three single line intersects of relatively strong conductors, where B-2 may be a faulted offset of B-1 and B-3. If so, this conductor strikes for at least 200 metres before it exits the claim boundary to the west. The anomaly may strike further to the south east on lines 29 west and 28 west , however the location of a main creek on line 29 west may disrupt the readings at that point.

**Grid C - Anomaly C**

This anomaly is a relatively weak anomaly with two sections being stronger on lines 29 west and 28 west. It is most likely caused by conductive overburden and the effects of small creeks (lines 30 west and 29 west), however it does appear on several lines and may cover a strike length of approximately 400 metres if it actually is a valid conductor.

**Recommendations**

Since the VLF survey was successful in delineating several possible conductors on all three claim blocks, and it also confirmed the presence of previously delineated airborne Input EM anomalies, it is recommended to follow up on the property with further geophysics such as an Induced Polarization survey. The VLF anomalies may represent possible bedrock conductors or structural features that would be more accurately defined with the IP survey. The IP survey would also provide better coverage for delineating anomalies that represent disseminated sulphide conductors which could have easily been missed by previous EM surveys on the claims.

Depending on the results of such future geophysics it would be highly recommended to test any resultant anomalies with diamond drilling.

**Statement of Qualifications**

I, David V. Jones of P.O. Box 1513, South Porcupine, Ontario, certify that :

1. I have been actively practicing in the mining exploration business as a Contractor & Prospector since 1983, including performing geophysical surveys such as those outlined in this report,
2. I have no direct interest in the properties mentioned in this report,
3. I am a graduate of Lakehead University with an Honours Bachelor of Science in Forestry degree (1981).

Respectfully submitted by



David V. Jones, Hon.B.Sc.For.  
Prospector - Exploration Contractor

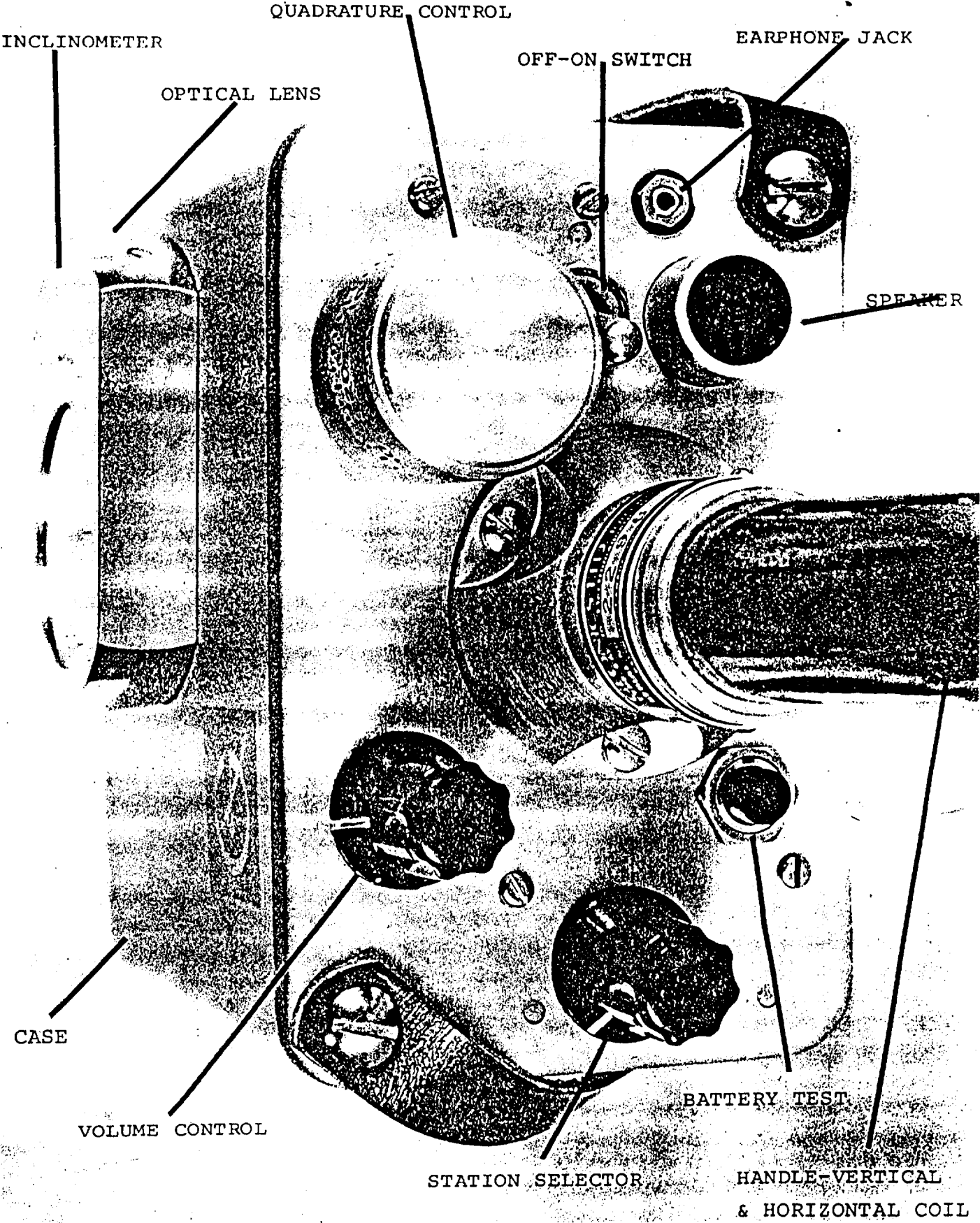
Date of report completion : Jan 5/99

**References**

**OGS 1984**, Airborne Electromagnetic and Total Intensity Magnetic Survey, Matheson-Black River Area, Bowman Township, district of Cochrane; by Questor Surveys Limited for the Ontario Geological Survey, Map 80594, Scale 1:20,000, Survey and Compilation March to July 1983.

**Appendix A :**  
**VLFF Operating Procedures**

# FIG. 1 EM 16



INCLINOMETER

OPTICAL LENS

QUADRATURE CONTROL

OFF-ON SWITCH

EARPHONE JACK

SPEAKER

CASE

VOLUME CONTROL

STATION SELECTOR

BATTERY TEST

HANDLE-VERTICAL  
& HORIZONTAL COIL

EM16 SPECIFICATIONS

MEASURED QUANTITY	In-phase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity).
SENSITIVITY	In-phase : ±150% Quad-phase : ± 40%
RESOLUTION	±1%
OUTPUT	Nulling by audio tone. In-phase indication from mechanical inclinometer and quad-phase from a graduated dial.
OPERATING FREQUENCY	15-25 kHz VLF Radio Band. Station selection done by means of plug-in units.
OPERATOR CONTROLS	On/Off switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
POWER SUPPLY	6 disposable 'AA' cells.
DIMENSIONS	42 x 14 x 9cm
WEIGHT	Instrument: 1.6 kg Shipping : 4.5 kg

FIELD PROCEDUREOrientation & Taking a Reading

The direction of the survey lines should be selected approximately along the lines of the primary magnetic field, at right angles to the direction to the station being used. Before starting the survey, the instrument can be used to orient oneself in that respect. By turning the instrument sideways, the signal is minimum when the instrument is pointing towards the station, thus indicating that the magnetic field is at right angles to the receiving coil inside the handle. (Fig.11).

To take a reading, first orient the reference coil (in the lower end of the handle) along the magnetic lines. (Fig.12) Swing the instrument back and forth for minimum sound intensity in the speaker. Use the volume control to set the sound level for comfortable listening. Then use your left hand to adjust the quadrature component dial on the front left corner of the instrument to further minimize the sound. After finding the minimum signal strength on both adjustments, read the inclinometer by looking into the small lens. Also, mark down the quadrature reading.

While travelling to the next location you can, if you wish, keep the instrument in operating position. If fast changes in the readings occur, you might take extra stations to pinpoint accurately the details of anomaly.

The dials inside the inclinometer are calibrated in positive and negative percentages. If the instrument is facing  $180^\circ$  from the original direction of travel, the polarities of the readings will be reversed. Therefore, in the same area take the readings always facing in the same direction even when travelling in opposite way along the lines.

The lower end of the handle, will as a rule, point towards the conductor. (Figs.13 & 14) The instrument is so calibrated that when approaching the conductor, the angles are positive in the in-phase component. Turn always in the same direction for readings and mark all this on your notes, maps, etc.

THE INCLINOMETER DIALS

The right-hand scale is the in-phase percentage (ie.  $H_s/H_p$  as a percentage). This percentage is in fact the tangent of the dip angle. To compute the dip angle simply take the arc-tangent of the percentage reading divided by 100. See the conversion graph on the following page.

The left-hand scale is the secant of the slope of the ground surface. You can use it to "calculate" your distance to the next station along the slope of the terrain.

- (1) Open both eyes.
- (2) Aim the hairline along the slope to the next station to about your eye level height above ground.
- (3) Read on the left scale directly the distance necessary to measure along the slope to advance 100 (ft) horizontally.

We feel that this will make your reconnaissance work easier. The outside scale on the inclinometer is calibrated in degrees just in case you have use for it.

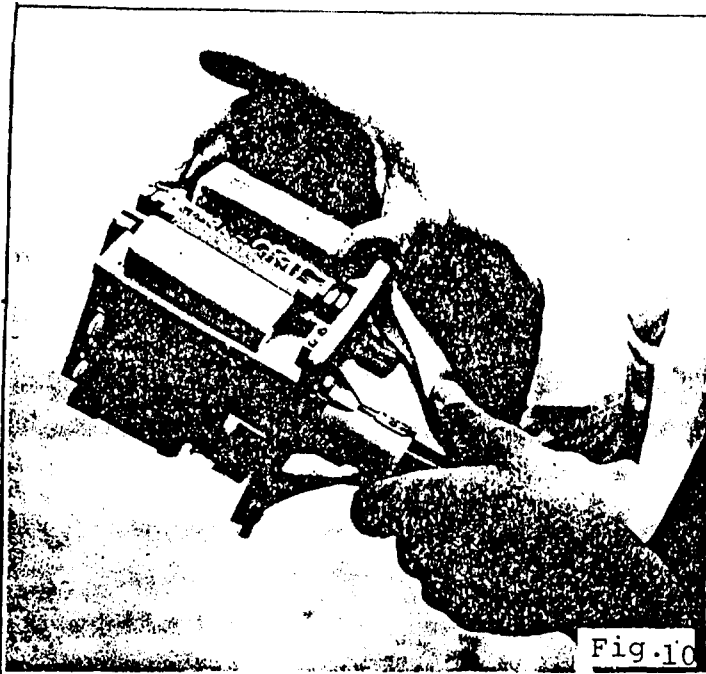


Fig.10

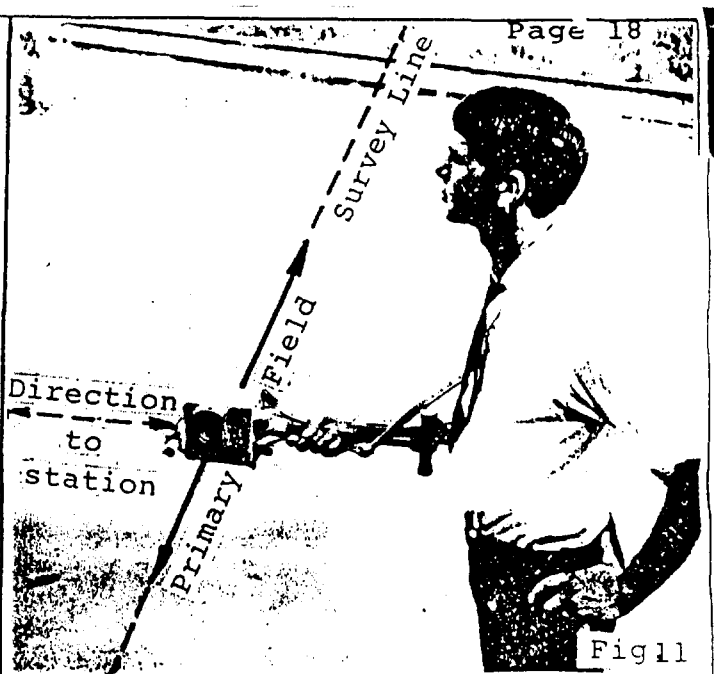


Fig.11

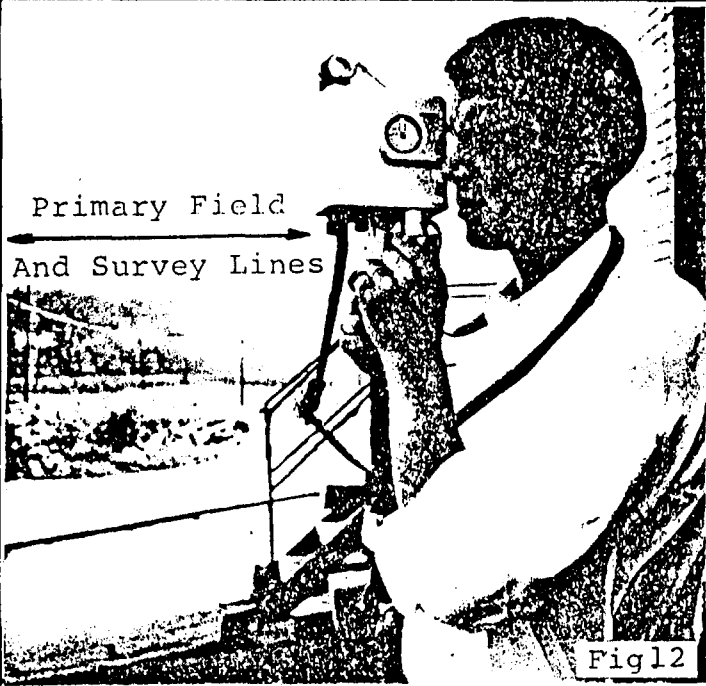


Fig.12

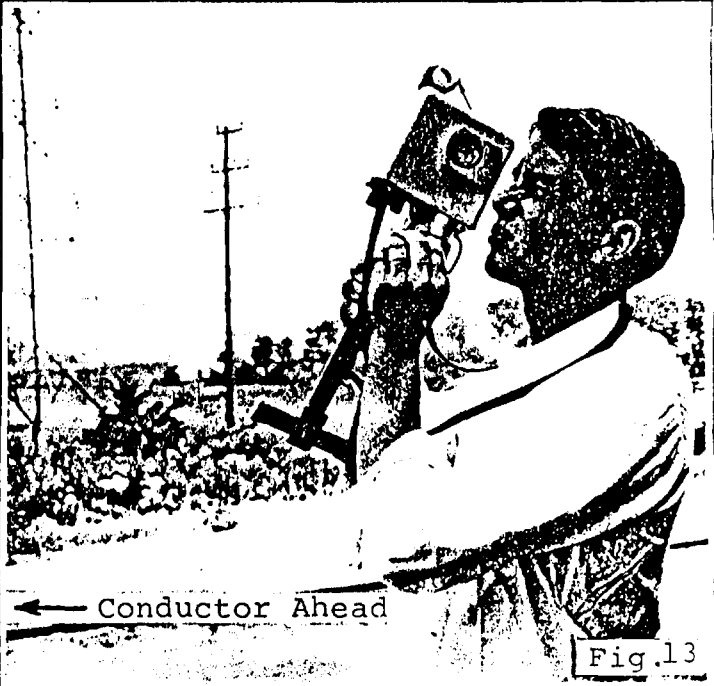


Fig.13

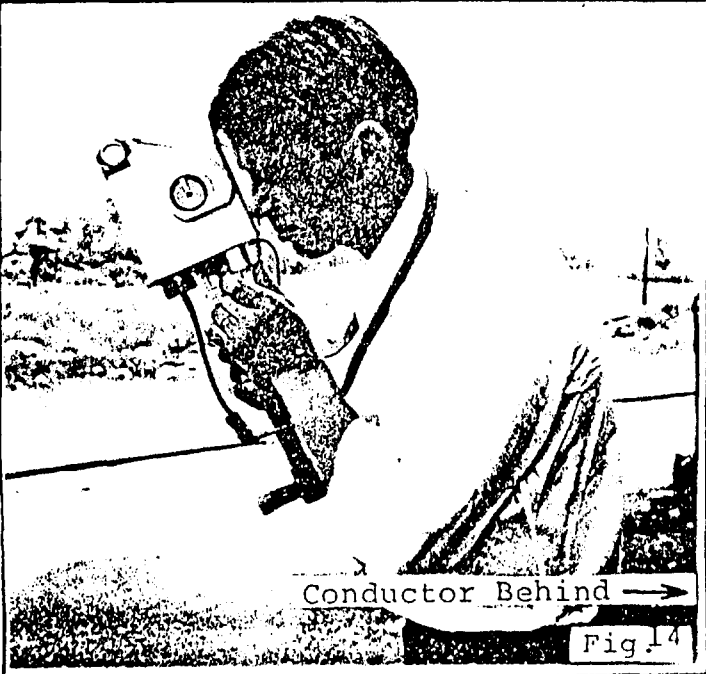


Fig.14

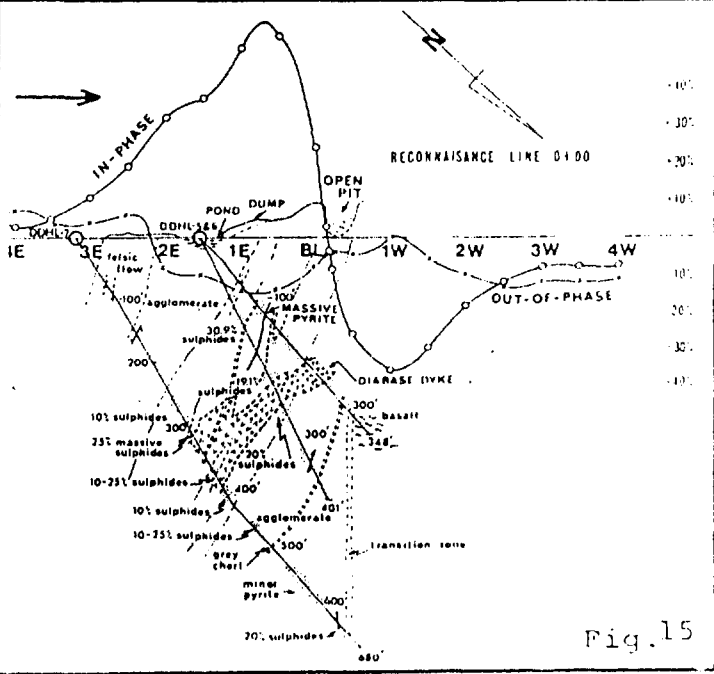


Fig.15



**Appendix B :**

**Surface rights owners & notices of intent to perform work**



**CROSS LAKE MINERALS LTD.**

210 - 800 West Pender Street  
Vancouver, B.C. V6C 2V6

Tel: (604) 688-5448

Fax: (604) 688-5443

E-mail: [crosslak@intergate.bc.ca](mailto:crosslak@intergate.bc.ca)

December 15, 1998

Provincial Recording Office  
Ministry of Northern Development and Mines  
3rd Floor, 933 Ramsey Lake Road,  
Sudbury, Ontario  
P3E 6B5

Dear Sir/Madam:

**RE: BOWMAN TOWNSHIP PROPERTY**  
**- Notice of Intention to Perform Assessment Work**

Enclosed are four Notices of Intention to Perform Assessment Work relative to mining claims L1223759, L1223760 and L1223761 located in Bowman Township, Larder Lake Mining Division.

Cross Lake Minerals Ltd. is the recorded holder of the subject mining claims but the work will be carried out by Pelangio-Larder Mines, Limited as optionee of the property.

Yours very truly,

**CROSS LAKE MINERALS LTD.**

Erik Andersen  
Vice President, Land

Encl:

cc: Kevin Filo, Pelangio-Larder Mines, Limited  
Dave Jones, Forpro Resources Ltd.

c:\...bowman\claims-11

COPY



Ministry of Northern Development and Mines

COPY

Notice of Intention to Perform Assessment Work

To 1051989 ONTARIO INC./GEORGE BOURGEOIS P.O. BOX 308, RAMORE, ONT. POK 1R0

being the registered holder(s) of the surface rights of:

LOT 6, NORTH CONCESSION 3, BOWMAN TOWNSHIP

Lot/Concession/Township/Area

recorded as Mining Claim(s)

L 1223759

I, CROSS LAKE MINERALS LTD. of 210-800 WEST PENDER STREET VANCOUVER, B.C. V6C 2V6

being the holder of the above-mentioned mining claim(s) give notice as follows:

- 1. A review of the parcel register/abstract of title for the above-mentioned lands confirms that you are the registered holder of the surface rights to the lands. the intention of Pelangio-Larder Mines, Limited (Optionee of the claim)
2. It is my intention to carry out ground assessment work on the lands, commencing on/or about in accordance with the Mining Act.

Dated at VANCOUVER, B.C., this 15th day of DECEMBER 19 98 CROSS LAKE MINERALS LTD.

per: Signature of Recorded Holder of Mining Claim(s)

Note: The Mining Act reads as follows:

If there is an owner of the surface rights of the land comprising a mining claim, where a holder of the mining claim first proposes to do ground assessment work on such land, the holder shall give notice in the prescribed form to the owner of the surface rights of the holder's intention to perform work.

A person who has given notice under this section may enter on the lands and perform the work at any time immediately following the day the notice is given.

0242 (02/96)

Send Top Sheet To Surface Rights Holder

Certificate Confirming Notice of Intention to Perform Assessment Work

Transaction number

I, Erik Andersen, Vice President, Land of Cross Lake Minerals Ltd. of Vancouver, B.C. certify that the annexed notice of my intention to perform assessment work was sent by registered mail to the holder of the surface rights on December 15, 1998.

Dated at Vancouver, B.C., this 15th day of December 19 98

0242 (02/96)

Signature of Recorded Holder of Mining Claim(s)



Ministry of Northern Development and Mines

Notice of Intention to Perform Assessment Work

COPY

To ERNEST DAMBROWITZ/THEODORE PURNIS of P.O. BOX 45, MATHESON, ONT. POK 1N0

being the registered holder(s) of the surface rights of:

NORTH HALF LOT 2, NORTH HALF CONCESSION 3, BOWMAN TOWNSHIP

Lot/Concession/Township/Area

recorded as Mining Claim(s)

L 1223761

I, CROSS LAKE MINERALS LTD. of 210-800 WEST PENDER STREET VANCOUVER, B.C. V6C 2V6

being the holder of the above-mentioned mining claim(s) give notice as follows:

- 1. A review of the parcel register/abstract of title for the above-mentioned lands confirms that you are the registered holder of the surface rights to the lands.
the intention of Pelangio-Larder Mines, Limited (Optionee of the claim)
2. It is my intention to carry out ground assessment work on the lands, commencing on/or about Dec. 17, 1998, in accordance with the Mining Act.

Dated at VANCOUVER, B.C., this 15th day of DECEMBER 19 98

CROSS LAKE MINERALS LTD.

per: [Signature] Signature of Recorded Holder of Mining Claim(s)

Note: The Mining Act reads as follows:

If there is an owner of the surface rights of the land comprising a mining claim, where a holder of the mining claim first proposes to do ground assessment work on such land, the holder shall give notice in the prescribed form to the owner of the surface rights of the holder's Intention to perform work.

A person who has given notice under this section may enter on the lands and perform the work at any time immediately following the day the notice is given.

0242 (02/96)

Send Top Sheet To Surface Rights Holder

Certificate Confirming Notice of Intention to Perform Assessment Work

Transaction number [ ]

Erik Andersen, Vice President, Land of Cross Lake Minerals Ltd. of Vancouver, B.C. certify that the annexed notice of my intention to perform assessment work was sent by registered mail given to the holder of the surface rights on December 15, 1998. (Date)

Dated at Vancouver, B.C., this 15th day of December 19 98

[Signature] Signature of Recorded Holder of Mining Claim(s)

0242 (02/96)



Ministry of Northern Development and Mines

Notice of Intention to Perform Assessment Work **COPY**

To MARA KULNIEKS / AINA PAVLOVICS of P.O. BOX 291, MATHESON, ONT. POK 1N0

being the registered holder(s) of the surface rights of:

NORTH HALF LOT 2, NORTH HALF CONCESSION 3, BOWMAN TOWNSHIP  
Lot/Concession/Township/Area

recorded as Mining Claim(s)

L 1223761

I, CROSS LAKE MINERALS LTD. of 210-800 WEST PENDER STREET VANCOUVER, B.C. V6C 2V6

being the holder of the above-mentioned mining claim(s) give notice as follows:

1. A review of the parcel register/abstract of title for the above-mentioned lands confirms that you are the registered holder of the surface rights to the lands.  
the intention of Pelangio-Larder Mines, Limited (Optionee of the claim)
2. It is ~~my intention~~ to carry out ground assessment work on the lands, commencing on/or about Dec. 17, 1998 in accordance with the Mining Act.

Dated at VANCOUVER, B.C., this 15th day of DECEMBER 19 98  
CROSS LAKE MINERALS LTD.

per: [Signature]  
Signature of Recorded Holder of Mining Claim(s)

Note: The Mining Act reads as follows:

If there is an owner of the surface rights of the land comprising a mining claim, where a holder of the mining claim first proposes to do ground assessment work on such land, the holder shall give notice in the prescribed form to the owner of the surface rights of the holder's intention to perform work.  
A person who has given notice under this section may enter on the lands and perform the work at any time immediately following the day the notice is given.

0242 (02/96) Send Top Sheet To Surface Rights Holder

**Certificate Confirming Notice of Intention to Perform Assessment Work**

Transaction number

I, Erik Andersen, Vice President, Land of Cross Lake Minerals Ltd. of Vancouver, B.C. certify that the annexed notice of ~~my~~ <sup>the</sup> intention to perform assessment work was ~~given~~ <sup>sent by registered mail</sup> to the holder of the surface rights on December 15, 1998.  
(Date)

Dated at Vancouver, B.C., this 15th day of December 19 98

[Signature]  
Signature of Recorded Holder of Mining Claim(s)



Ministry of Northern Development and Mines

COPY

Notice of Intention to Perform Assessment Work

To JOHN & BOYD OLIVER of P.O. BOX 426, MATHESON, ONT. POK 1N0

being the registered holder(s) of the surface rights of:

LOT 1, SOUTH HALF CONCESSION 3, BOWMAN TOWNSHIP

Lot/Concession/Township/Area

recorded as Mining Claim(s)

L 1223760

I, CROSS LAKE MINERALS LTD. of 210-800 WEST PENDER STREET VANCOUVER, B.C. V6C 2V6

being the holder of the above-mentioned mining claim(s) give notice as follows:

1. A review of the parcel register/abstract of title for the above-mentioned lands confirms that you are the registered holder of the surface rights to the lands.

2. It is my intention to carry out ground assessment work on the lands, commencing on/or about Dec 17, 1998 in accordance with the Mining Act.

Dated at VANCOUVER, B.C., this 15th day of DECEMBER 19 98

CROSS LAKE MINERALS LTD.

per:

Signature of Recorded Holder of Mining Claim(s)

Note: The Mining Act reads as follows:

If there is an owner of the surface rights of the land comprising a mining claim, where a holder of the mining claim first proposes to do ground assessment work on such land, the holder shall give notice in the prescribed form to the owner of the surface rights of the holder's intention to perform work.

A person who has given notice under this section may enter on the lands and perform the work at any time immediately following the day the notice is given.

0242 (02/98)

Send Top Sheet To Surface Rights Holder

Certificate Confirming Notice of Intention to Perform Assessment Work

Transaction number

I, Erik Andersen, Vice President, Land of Cross Lake Minerals Ltd. of Vancouver, B.C. certify that the annexed notice of my intention to perform assessment work was sent by registered mail to the holder of the surface rights on December 15, 1998.

Dated at Vancouver, B.C., this 15th day of December 19 98

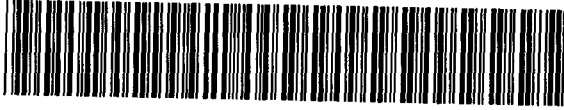
Signature of Recorded Holder of Mining Claim(s)

0242 (02/98)

**Figure 3 : VLF EM 16 Profiles - Grids A & B**

**Figure 4 : VLF EM 16 Profiles - Grid C**

Transaction Number (office use) W9980.00028 Assessment Files Research Imaging
---



42A08NW2009 2.19122 BOWMAN 900

Sections 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, this work and correspond with the mining land holder. Questions about this collection and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.  
- Please type or print in ink.

**1. Recorded holder(s) (Attach a list if necessary)**

**2.19122**

Name CROSS LAKE MINERALS LTD.	Client Number 122562
Address 210-800 WEST PENDER ST. VANCOUVER, B.C. V6C 2V6	Telephone Number (604) 688-5448 Fax Number (604) 688-5443
Name	Client Number
Address	Telephone Number
	Fax Number

**2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.**

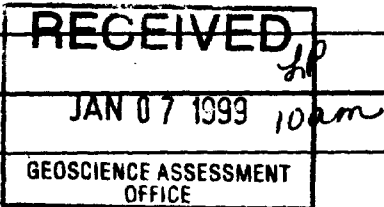
Geotechnical: prospecting, surveys, assays and work under section 18 (regs)       Physical: drilling stripping, trenching and associated assays       Rehabilitation

Work Type - VLF-EM16 GEOPHYSICAL - GRID	Office Use Commodity Total \$ Value of Work Claimed 5600 NTS Reference
Dates Work Performed From 18 DEC 98 To 05 JAN 99 ✓	Mining Division harder lake Resident Geologist District Kirkland lake
Global Positioning System Data (if available) Township/Area BOWMAN TWP. M or G-Plan Number 7-333	

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;  
- provide proper notice to surface rights holders before starting work;  
- complete and attach a Statement of Costs, form 0212;  
- provide a map showing contiguous mining lands that are linked for assigning work;  
- include two copies of your technical report.

**3. Person or companies who prepared the technical report (Attach a list if necessary)**

Name DAVID V. JONES	Telephone Number (705) 235-2474
Address BOX 1513, SOUTH PORCUPINE, ONT. P0N1H0	Fax Number (705) 235-2213
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number



**4. Certification by Recorded Holder or Agent**

I, J. KEVIN FILO (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent <i>J. Kevin Filo</i>	Date JAN 5/99
Agent's Address 535 BARTLEMAN ST., TIMMINS, P4N 4X2	Telephone Number 705-268-0371 Fax Number 705-268-5894

Received April 07/1999



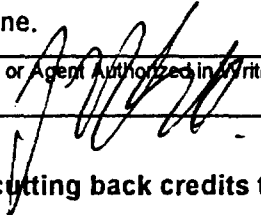
5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the r land where work was performed, at the time work was performed. A map showing the contiguous link must accompan form.

W9980.00028

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of to be distributed at a future date
eg TB 7827	16 ha	\$28,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$ 4,000	0	\$4,892
1 1223759	4	1600	1600	—	—
2 1223760	8	3200	3200	—	—
3 1223761	2	800	800	—	—
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Column Totals	14	5600	5600	—	—

2.19122

I, J. KEVIN FILO (Print Full Name), do hereby certify that the above work credits are eligible 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:  Date: JAN 5/99

6. 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 prioritize the deletion of credits:

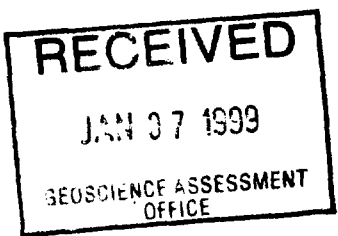
- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut 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.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)		

0241 (03/97)



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

2.19122

Work Type	Units of Work <small>Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.</small>	Cost Per Unit of work	Total Cost
GRID (25 METRE STATION COMPASS + FLAGGED)	24.9 KM.	\$ 90/KM	\$ 2,241
VLF-EM 16	22.0 KM	\$ 90/KM	\$ 1,980
MANUAL PLOTTING OF PROFILES	22.0 KM	\$ 20/KM	\$ 440
REPORT	—	—	\$ 572
Associated Costs (e.g. supplies, mobilization and demobilization).			
G.S.T FOR ALL OF ABOVE		7%	\$ 367
Transportation Costs			
Food and Lodging Costs			
Total Value of Assessment Work			\$ 5,600

RECEIVED  
JAN 07 1999  
GEOLOGICAL ASSESSMENT

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:

J. KEVIN FILO, 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 I am authorized to make this certification.

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

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

February 25, 1999

CROSS LAKE MINERALS LTD.  
210-800 WEST PENDER ST.  
VANCOUVER, B.C.  
V6C-2V6

Visit our website at:  
[www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm](http://www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm)

Dear Sir or Madam:

**Submission Number:** 2.19122

**Status**

**Subject: Transaction Number(s):** W9980.00028 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 [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.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:** 2.19122

**Date Correspondence Sent:** February 25, 1999

**Assessor:** Steve Beneteau

---

<b>Transaction Number</b>	<b>First Claim Number</b>	<b>Township(s) / Area(s)</b>	<b>Status</b>	<b>Approval Date</b>
W9980.00028	1223759	BOWMAN	Deemed Approval	February 22, 1999

**Section:**  
14 Geophysical VLF

**Correspondence to:**

Resident Geologist  
Kirkland Lake, ON

Assessment Files Library  
Sudbury, ON

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

Kevin Filo  
TIMMINS, ONTARIO, CANADA

CROSS LAKE MINERALS LTD.  
VANCOUVER, B.C.

---

W 333

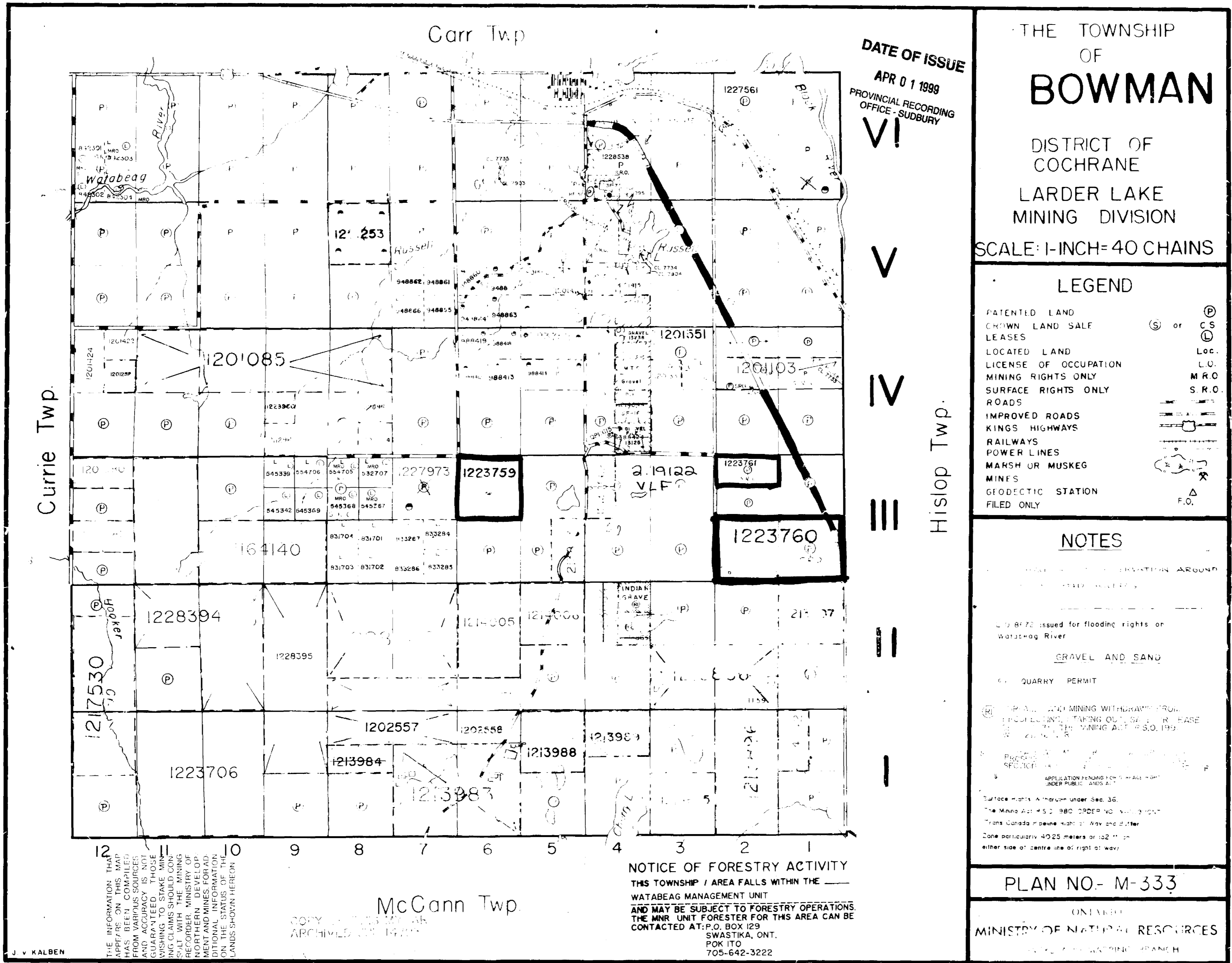
BOWMAN LWB

W 333

W 333

BOWMAN LWB

W 333



DATE OF ISSUE  
APR 01 1999  
PROVINCIAL RECORDING  
OFFICE - SUDBURY

VI

V

IV

III

II

I

THE TOWNSHIP  
OF  
**BOWMAN**  
  
DISTRICT OF  
COCHRANE  
LARDER LAKE  
MINING DIVISION  
  
SCALE: 1-INCH=40 CHAINS

**LEGEND**

PATENTED LAND	(P)
CROWN LAND SALE	(S) or (CS)
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	(IR)
KINGS HIGHWAYS	(KH)
RAILWAYS	(R)
POWER LINES	(P)
MARSH OR MUSKEG	(M)
MINES	(M)
GEOLECTIC STATION	(G.S.)
FILED ONLY	(F.O.)

**NOTES**

1. THE LOCATION OF THE QUARRY IS SHOWN BY A DOTTED LINE.

2. A 8472 issued for flooding rights on Wabeg River.

3. GRAVEL AND SAND

4. QUARRY PERMIT

5. MINING WITHDRAWAL FROM PRODUCTION STARTING OCT. 31, 1998. PLEASE REFER TO THE MINING ACT (R.S.O. 1990, c. 23) FOR DETAILS.

6. APPLICATION PENDING FOR SMALL HOPE UNDER PUBLIC LANDS ACT.

7. Surface rights withdrawn under Sec. 36, The Mining Act (R.S.O. 1990, c. 23) ORDER NO. 1000/98/01.

8. Trans Canada Pipeline right of way and buffer.

9. Zone particularly 40.25 meters or 132 ft from either side of centre line of right of way.

PLAN NO.- M-333

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
LARDER LAKE MINING DIVISION

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 NATURAL RESOURCES, LARDER LAKE DIVISION, ON THE STATUS OF THE LANDS SHOWN HEREON.

McCann Twp  
COPY OF THIS MAP ARCHIVED ON 11/19/98

NOTICE OF FORESTRY ACTIVITY  
THIS TOWNSHIP / AREA FALLS WITHIN THE \_\_\_\_\_  
WATABEAG MANAGEMENT UNIT  
AND MAY BE SUBJECT TO FORESTRY OPERATIONS.  
THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: P.O. BOX 129  
SWASTIKA, ONT.  
POK ITO  
705-642-3222

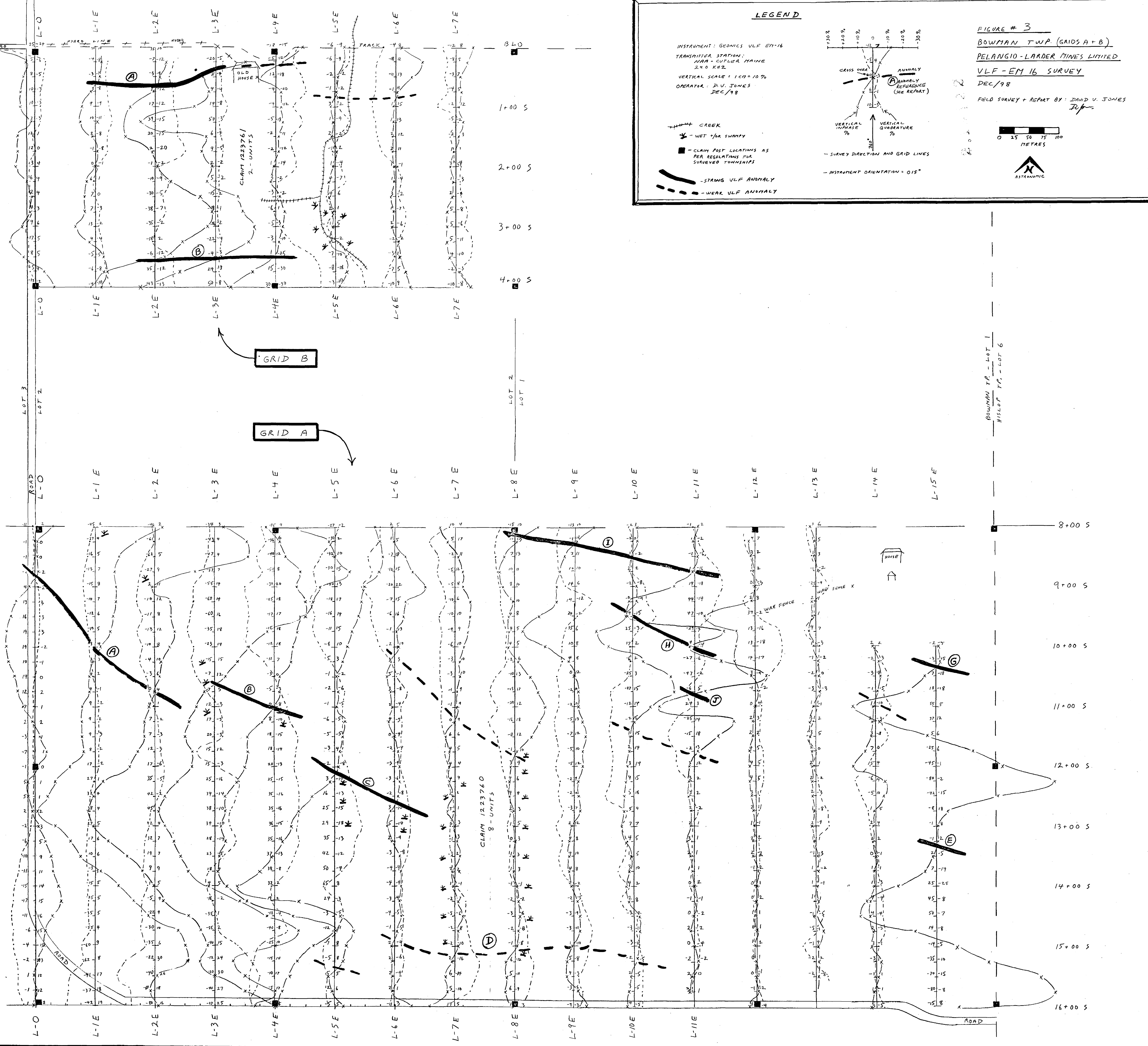


42A08RW2009 2.19122 BOWMAN 200

SOUTH 1/2 CONCESSION 4  
NORTH 1/2 CONCESSION 3

NORTH 1/2 CONCESSION 3  
SOUTH 1/2 CONCESSION 3

SOUTH 1/2 CONCESSION 3  
NORTH 1/2 CONCESSION 2



**LEGEND**

INSTRUMENT: GEOMYS VLF EM-16  
 TRANSMITTER STATION:  
 NAA - CUTLER MAINE  
 24.0 KHZ  
 VERTICAL SCALE: 1CM = 10%  
 OPERATOR: D.V. JONES  
 DEC/98

CREEK  
 WET / OR SWAMPY  
 CLAIM POST LOCATIONS AS PER REGULATIONS FOR SURVEYED TOWNSHIPS  
 STRONG VLF ANOMALY  
 WEAK VLF ANOMALY

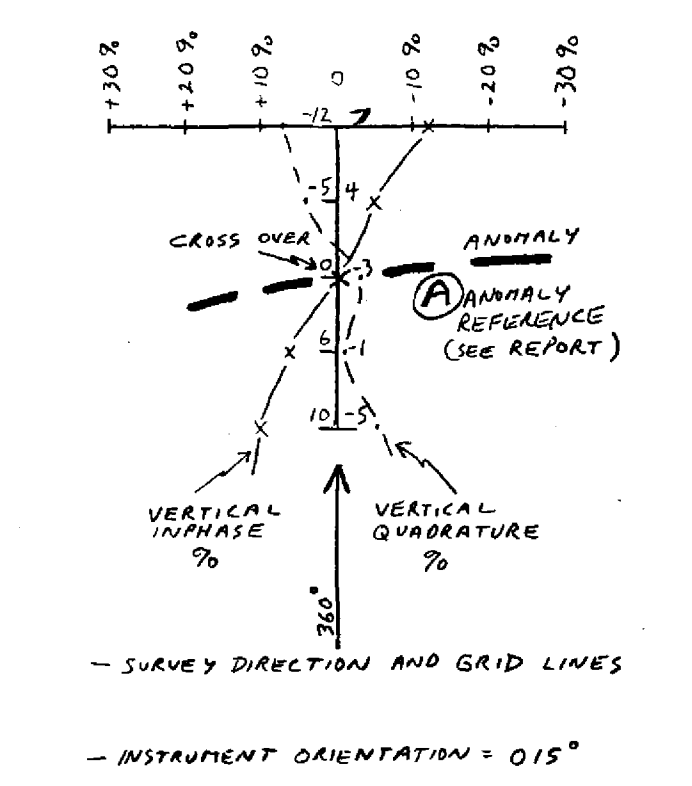


FIGURE # 3  
 BOWMAN TWP. (GRIDS A+B)  
 PELANGIO-LARDER MINES LIMITED  
 VLF-EM 16 SURVEY  
 DEC/98  
 FIELD SURVEY + REPORT BY: DAVID V. JONES  
*D.V.J.*

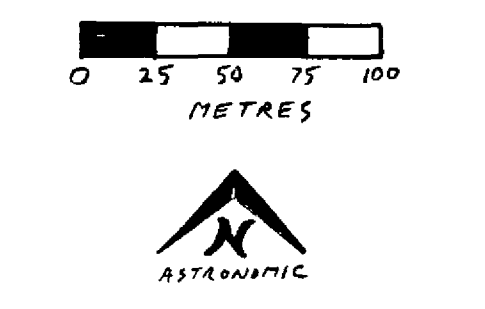
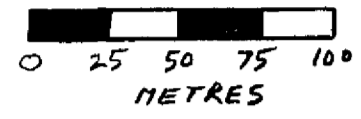
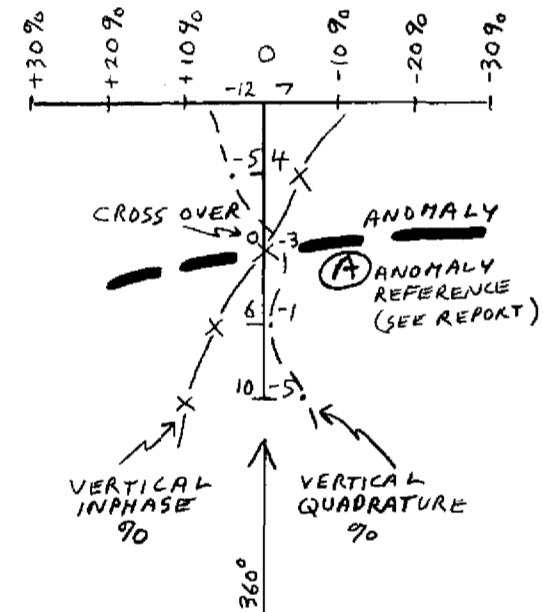


FIGURE # 4  
 BOWMAN TWP. (GRID C)  
 PELANGIO-LARDER MINES LIMITED  
 VLF-EM 16 SURVEY  
 DEC/98  
 2.19122



INSTRUMENT: GEONICS VLF EM-16  
 TRANSMITTER STATION:  
 NAA - CUTLER MAINE  
 24.0 KHZ  
 VERTICAL SCALE: 1CM = 10%  
 FIELD SURVEY + REPORT BY: DAVID V. JONES  
*Dvj*



- SURVEY DIRECTION AND GRID LINES
- INSTRUMENT ORIENTATION = 015°
- STRONG VLF ANOMALY
- WEAK VLF ANOMALY
- WET +/OR SWAMPY
- CLAIM POST LOCATIONS AS PER REGULATIONS FOR SURVEYED TOWNSHIPS
- CREEK

