



41104N70000 2.11552 MONGOWIN

GEOPHYSICAL REPORT  
ON THE  
McMillan Gold Mine Property  
Mongowin Township  
Sudbury Mining District  
Ontario, Canada

**RECEIVED**

AUG 29 1988

FOR  
Mill City Gold INC. MINING LANDS SECTION

Prepared by:  
J. C. Grant  
Exsics Exploration Ltd.  
August, 1988





41104NW0008 2.11552 MONGOWIN

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### Summary

The following information was taken by a report written by Ken Lapierre, HBSC, Report on the McMillan Gold Mine, Mongowin Twp, Sudbury Mining District, Ont., April 15, 1986.

The property consists of a block of 36 contiguous unpatented mining claims located in Mongowin Township, Concession III, lots 7 to 12 inclusive, Sudbury Mining District, Ontario, Canada. The Claim group is underlain by the Gowganda Formation and Lorrain Formation within the Huronian Supergroup. The Gowganda Formation hosts most gold deposits in the region.

Historical documents indicate that the McMillan Gold Mine Ltd. commenced shaft sinking in 1927 upon the successful completion of 5 surface holes drilled in 1926. All 7 levels opened up intersected gold bearing quartz veins. Diamond drilling below the 875' level intersected economic gold values over good mining widths. From August 13, 1934 to March 29, 1937, production totalled 10,590 ounces of gold from 60,139 tons of ore for an average recovered grade of 0.176 ounces/ton.

Recent observations from a program of underground sampling and geological mapping by Loki Resources Incorporated outlined 4 gold bearing vein systems of interest. First, the Lakeshore Pit Vein System ("H/C"Zone) returned an apparent grade of 0.245 oz/ton from stope panel samples located on the 750' level. Other levels recorded channel samples from trace up to 0.470 oz/ton over a 5.0' width and panel samples from trace up to 0.717

oz/ton. Secondly, the Fault/Shear Zone System ("D Zone ") returned an average grade of 0.328 oz/ton over a 3.2' width and an undetermined length from the 525' and 625' levels. Thirdly, the "J" Zone Structure located on the 525' level, of this zone graded 0.203 oz/ton over a 3.8' width. Panel samples returned gold values from trace up to 1.44 oz/ton. Fourthly, Pit #2 Vein System returned no gold values of economic importance. Geological observations indicate that most gold bearing vein systems are associated with fault/shear zone environments and at pelite/quartzite contacts. The main "H/C" Zone appears to terminate against the northeast trending Fault/Shear Zone System. Its faulted extension may be the "J" Zone Structure.

### Introduction

A program of linecutting, Magnetometer survey and VLF-EM Survey was carried out on a group of 36 contiguous, unpatented mining claims in Mongowin Township for Mill City Gold Inc. The work was done jointly by Alquest Exploration Services and Exsics Exploration Limited, Timmins, Ontario, on a contract basis.

The purpose of the program was to detect and deliniate any conductive features such as shear and fault zones which would respond to the relatively high frequency VLF technique. The magnetic survey was designed to yield a high resolution plan of the magnetic susceptibility which would aid in both structural and geological interpretation of the property.

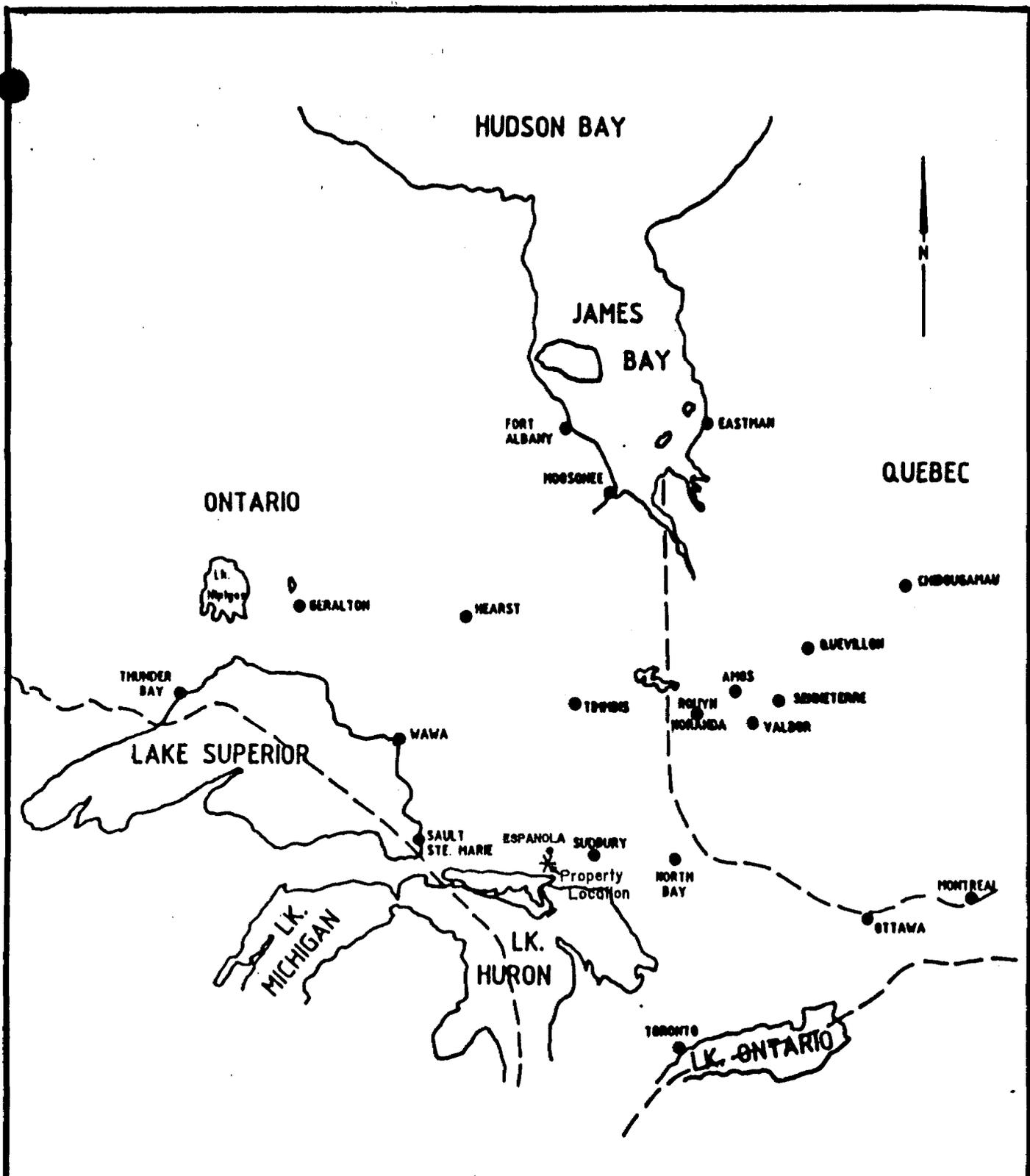
This report then will deal with the survey procedures, results and interpretation of the program.

Reference is made to the property geology but a detailed correlation with the survey results will be done at a later date.

### Location

The property is located in Mongowin Township, Concession III, in all parts of lots 7-12 inclusive, Sudbury Mining Division, Ontario at 46 degrees, 08 minutes north latitude, 81 degrees, 45 minutes longitude in the Township.

More specifically, Mongowin Township is located approximately 16 km southwest of Espanola and 75 km southwest of the City of Sudbury. (refer to figures 1 & 2 of this report)



		
<b>EXSICS EXPLORATION LTD.</b> P.O. Box 1000, P4M-7X1 Suite 13, Millinger Bldg, Thunder Ont. Telephone: 709-267-4551		
CLIENT: MILL CITY GOLD INC.		
PROPERTY: McMILLAN GOLD PROJECT		
TITLE:		
<b>LOCATION MAP</b>		
Fig. 1		
Date: Aug. 1988	Scale: 1" = 125miles	NTS:
Drawn:	Interp:	Job No.EE-103

### Access

Access to the property is west from Sudbury for 68 km along Highway #17, then south on Highway #6 for 20 km (through Espanola) to the waste disposal site turn off located on the west side of the highway. A bushroad then leads north for 1,000 feet, then proceeds 4 km west to the center of the claim group, House Lake and the McMillan minesite area. (figure 2)

### Personnel

The following people were directly involved with the project during January and February, 1988,

Dan Rifou	Geophysical Operator	Sturgeon Falls, Ont.
John Penttinen	Geophysical Operator	Timmins, Ont.
Steve Anderson	Geophysical Operator	Timmins, Ont.

The work was supervised by both J.C. Grant & R.J.Meikle of Exsics.

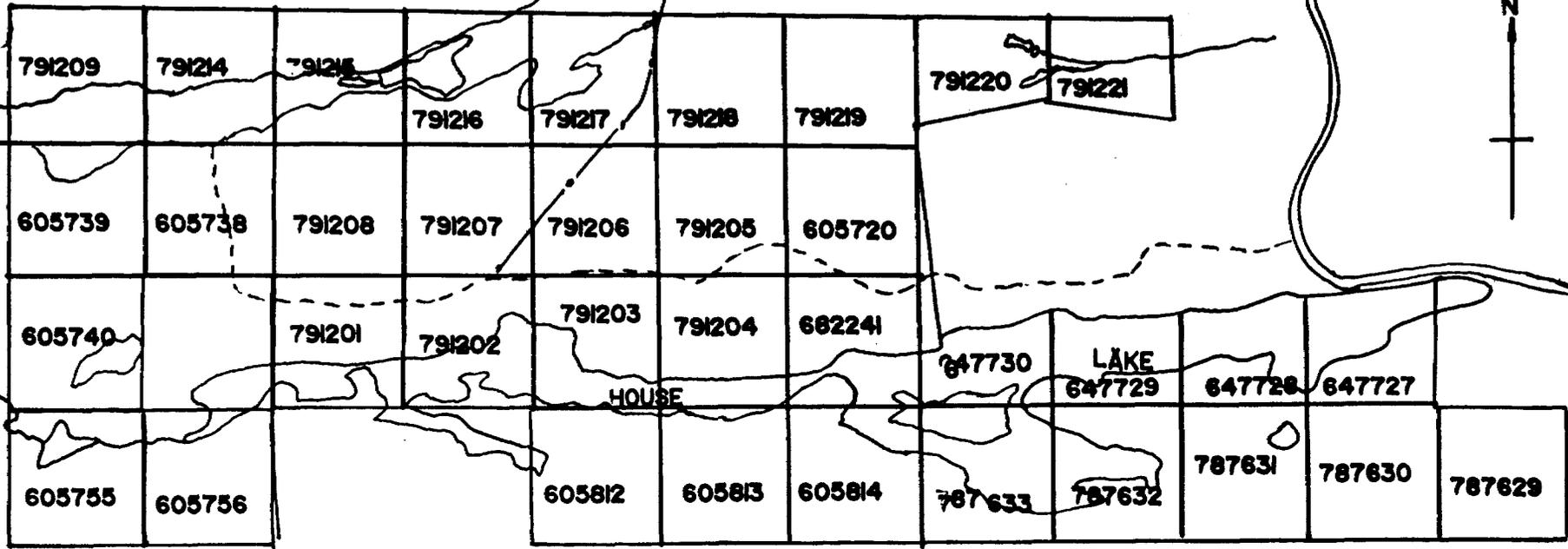
Claim Group

The group consists of 36 contiguous, unpatented mining claims located in Concession III, in all parts of Lots 7-12 inclusive of Mongowin Township, Sudbury Mining District, Ontario. No claim staker has been ascertained. The claim numbers are as follows:

<u>Claim Number</u>	<u>Date Recorded</u>	<u>Township</u>
S 605720	May 6/83	Mongowin
605738	Aug 29/83	"
605739	"	"
605740	Mar 2/84	"
605755	"	"
605756	"	"
605812	"	"
605813	"	"
605814	"	"
647727	Feb 4/83	"
647728	"	"
647729	"	"
647730	"	"
682241	Feb 15/83	"
787629	May 7/84	"
787630	"	"
787631	"	"
787632	"	"
787633	"	"

791201	Mar 2/84	"
791202	"	"
791203	"	"
791204	"	"
791205	"	"
791206	"	"
791207	"	"
791208	"	"
791209	Mar 16/84	"
791214	"	"
791215	"	"
791216	"	"
791217	"	"
791218	"	"
791219	"	"
791220	"	"
791221	"	"

Total claims in the group are 36.



 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1000, P4N-7X1 Suite 13, Hollinger Bldg. Timmins Ont. Telephone: 705-267-4151		
<b>PROPERTY: McMILLAN GOLD PROJECT</b>		
<b>TITLE: CLAIM GROUP</b>		
<b>MONGOWIN TOWNSHIP</b>		<b>FIG: 2</b>
<b>Date: AUG: 88</b>	<b>Scale: 1"=1/2 m.</b>	<b>NTS:</b>
<b>Drawn:</b>	<b>Interp:</b>	<b>Job No. F-103</b>

## Geology

The following "Regional Geology" and "Local Geology" are taken from a report on the property by Ken Lapierre HBSC, dated April 15/1986 titled "Report on the McMillan Gold Mine, Mongowin Township, Sudbury Mining District, Ontario."

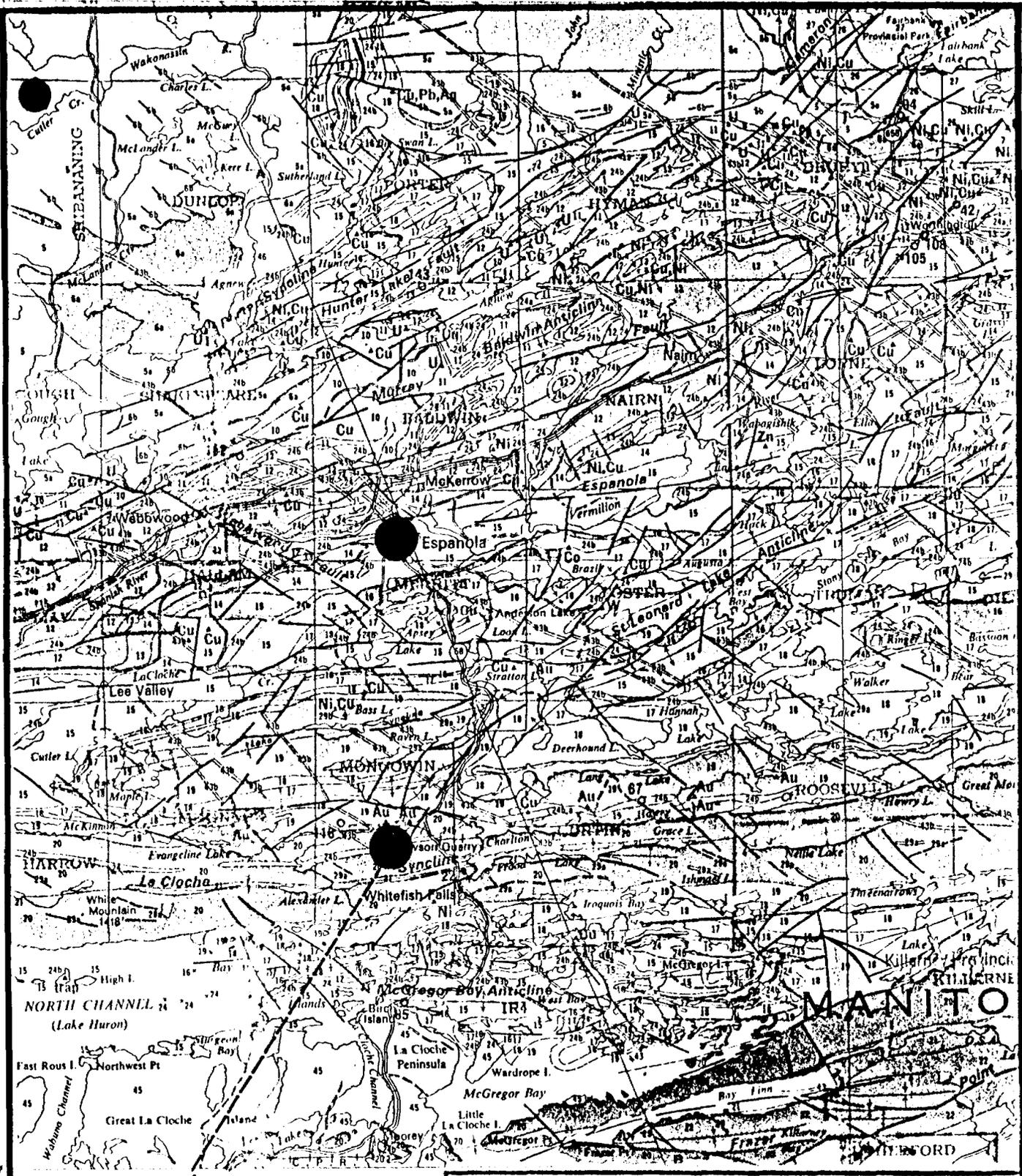
### A) Regional Geology

The geology of the Whitefish Falls and Espanola area consist predominately of Precambrian (Proterozoic) metasedimentary rocks that were later covered partially by unconsolidated Cenozoic deposits. The Precambrian rocks represent a 29,000 foot thick series of metasediments known as the Huronian Supergroup. This series of rocks are divided into 4 groups based on their cyclic evolution. From oldest to youngest the 4 groups are: Elliot Lake Group, Hough Lake Group, Quirke Lake Group and Cobalt Group. Each group generally represents a cyclic repetition of conglomerates, argillite(pelite) and sandstone(quartzite).

The Huronian Supergroup metasedimentary units were then intruded by sill-like bodies of Nipissing diabase, amphibolite dikes, ultramafic to granitic plutons then finally post tectonic diabase intrusions.

Structurally, the area lies within the Penokean fold belt of the Southern Province within the Canadian Shield. At least 3 series of deformational-metamorphic events altered the rocks in the region; 1) major east-west trending folds, 2) moderate east-west to northeast trending folds, 3) minor northwest to northeast trending folds.

11c  
46°15'  
11d  
45°0'



**McMILLAN PROJECT**

↳ **SUDBURY-COBALT SHEET  
MAP 2361**

**GEOLOGICAL COMPILATION  
SERIES.**

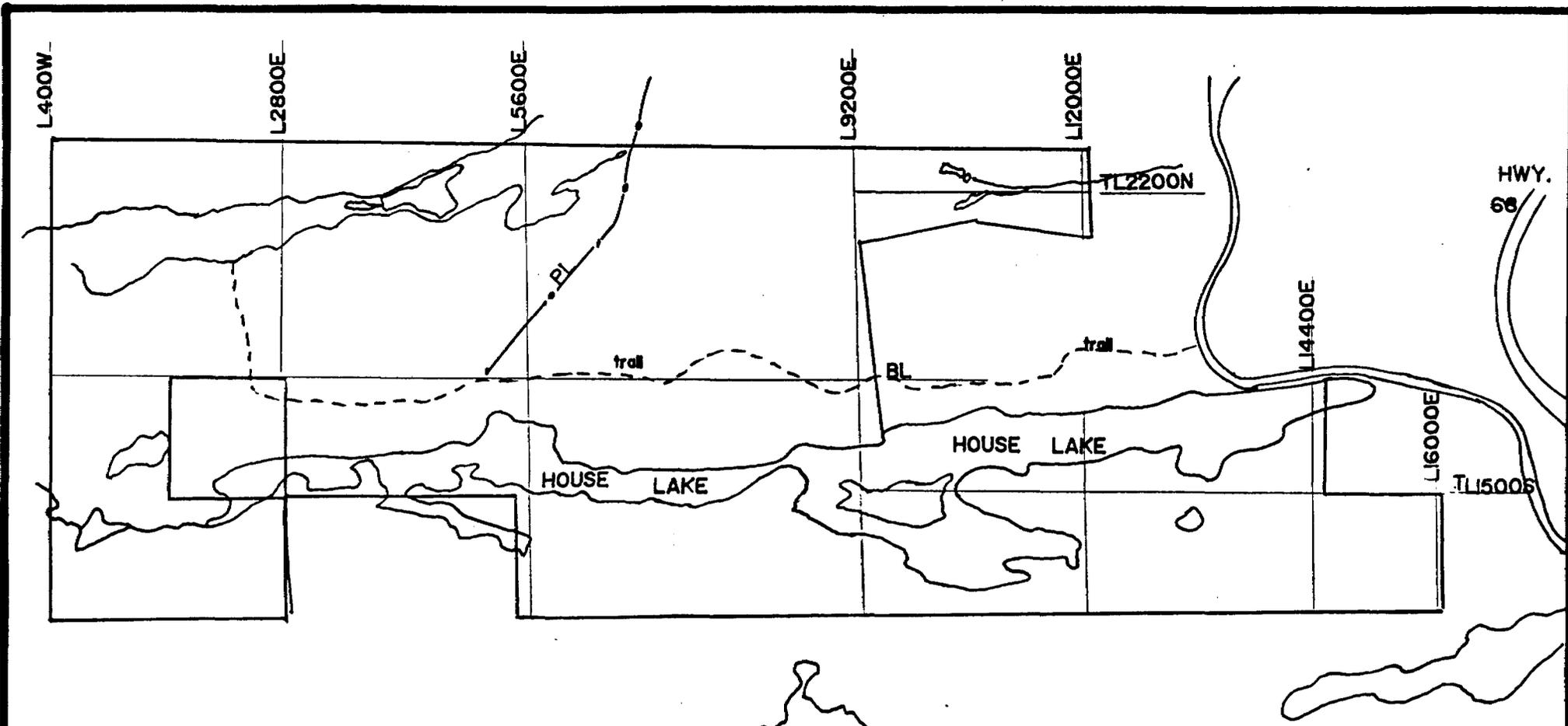


**EXSICS EXPLORATION LTD.**  
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Suite O, Hallinger Bldg, Timmins Ont.  
Telephone: 705-267-4351

**CLIENT: MILL CITY GOLD INC.**  
**PROPERTY: McMILLAN GOLD PROJECT**  
**TITLE:**

**AREA GEOLOGY MAP:: FIG: 3**

<b>Date: AUG: 88</b>	<b>Scale: 1" = 4 mile</b>	<b>NTS:</b>
<b>Drawn: JCG</b>	<b>Interp:</b>	<b>Job No. E-103</b>



 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg. Timmins Ont. Telephone: 705-267-451		
<b>PROPERTY: McMILLIN GOLD PROJECT</b>		
<b>TITLE:</b> <b>LINECUTTING GRID, MONGOWIN TWP:</b>		
<b>Date: AUG. 88</b>	<b>Scale: 1" = 1/2m.</b>	<b>NTS:</b>
<b>Drawn: JCG</b>	<b>Interp:</b>	<b>Job No. E-103</b>

FIG.4

Stratigraphic displacement of rock types range from tens of feet up to thousands of feet. Location of fault zones generally represent boundaries between structural domains. Faulting took place before, during and after the deformational-metamorphic events. At least 3 fault systems occur in the region; 1) major east-west trending faults possibly related to major east-west trending folds, 2) northeast trending faults, 3) northwest trending faults.

Regionally, the Gowganda Formation hosts the environment for the accumulation of gold bearing fluids. Research indicates that gold is associated with structurally and stratigraphically controlled environments.

B) Local Geology

The geology of the claim group consist predominantly of Gowganda and Lorrain Formation metasediments of the Cobalt Group within the Huronian Supergroup. The north and central claims are underlain by rocks of the Gowganda Formation. These rocks are steeply dipping east-west trending conglomerates and alternating bands of pelite and quartzite. The southern claims are underlain by rocks of the Lorrain Formation. These rocks are steeply dipping east-west trending impure quartzites that form the ridges south of House Lake.

Several diabase and amphibolite intrusions cross-cut all rocks of the claim group. Structurally, the metasediments form the limb connecting the LaCloche syncline to the south with the Fox Lake anticline to the north.

Gold ore at the McMillan property has generally been accepted as originating from a major anticlinal fold, trending northeast and plunging at 65 degrees. This mine fold is located east of the shaft under House Lake. The gold bearing quartz veins are apparently associated within and at the contacts of folded quartzite and pelite units in close proximity to diabase sills and dikes. Gold occurs in this native state and intimately associated with arseno-pyrite, pyrite, pyrrhotite and chalcopyrite.

#### Survey Parameters

##### Magnetometer Survey

A total of 40 miles were surveyed using the proton precession method measuring the Earth's total magnetic field. The results, corrected for diurnal variation, were plotted in plan form and contoured to outline trends of lower and higher magnetic susceptibility. The survey was carried out using the following parameters:

Instrument: EDA Instruments OMNI Plus-Portable proton Precession Magnetometer

EDA Instrument OMNI IV recording base station

Sensistivity: +/- 1 nano tesla

Parameters Measured: Earth's total mangetic field in nano-teslas.

Diurnal Correction Method: Compatible recording base station using a sample interval of 30 seconds.

Reading interval: 100 feet

Contour interval: 100 nano-teslas

Data Presentation: Plan, Contoured EM, Scale-1"-200

Map 1-Sheet 1

VLF-EM Survey

The VLF method is a high frequency (relatively) EM technique which employs the use of VLF transmitting stations which operate world wide for submarine communications. The magnetic field generated from these vertical antennas is horizontal and concentric. This primary field will induce a secondary field in any conductor properly coupled with the station direction. The VLF-EM method measures the vertical component of the secondary field. Therefore a station should be chosen which is on strike with the expected strike of the conductor one is searching for. This is called Maximum Coupling and in reality stations up to 45 degrees off strike can be used. Because of the high frequency of this method, weak conductive features will be detected, including some overburden features.

Therefore, interpretation of VLF data should be done discriminately and used in conjunction with other methods. Under some circumstances structural interpretation can be ascertained if some knowledge of the bedrock is available.

The VLF-EM survey was carried out using the following parameters:

Instrument EDA OMNI Plus, VLF Receiver

Transmitter Station-Cutler Maine (NAA)

Parameter Measured-In-Phase Dip Angles



### Conductor A

This zone represents a long formational type conductor striking in an east-northeast-east direction from Line 400W/900N to L9600E/2375N.

The zone appears to be contained in a swampy marsh-type environment which may relate to a fault structure and contact zone between the Gowganda Formation and Quirke Lake Group (refer to Map 2361, Sudbury-Cobalt Sheet, Geological Compilation Series, 1"-4 miles).

The magnetics for this feature were typical to the type of responses noted with fault structures and or contact zones. The magnetics show direct to flanking correlation all along the zones strike length.

### Conductor B

This zone is also representative of a long formational type response closely parallelling the strike of zone A. This feature strikes from L4800E/1500N to L1200E/2600N where it continues off the grid to the northeast.

The magnetics show direct correlation with sections of the zone all along its strike length.

Another explanation of B may show that this zone actually terminates on line 9600E/1800N and that section of the zone between lines 10000E to 12000E may in fact be on extension of Zone A which has been faulted or sheared and shifted south.

Zone B may relate to a legitimate bedrock response possible graphitic horizons or sulphide lenses within the sediments.

### Conductor C & D

These two conductors closely parallel each other and may in fact relate to narrow graphitic or sulphide lenses within the sediments. Zone C strikes east-west across lines O/BL to L1200E/200S and may in fact strike as far as lines 2800E/3700E. Because of the lack of information on claim 831744 this is only speculation at this time.

Zone D also strikes east-west across lines 400W/250S to L800/400S.

Neither of these zones have direct magnetic association however they appear to be between two magnetic trends which parallel the strike of the zones.

### Conductor E

This zone again parallels the strike of Zones A & B but does not have the same uniformity as A or B.

The feature strikes northeast across lines 1600E/100N to L4400E/1000N and has good magnetic signature with its entire strike length.

The east end of the zone strikes into but not across a southeast striking magnetic trend which is probably representative of a diabase dike. This dike is well defined in the magnetic map and is also represented by conductor H of the VLF-EM plots.

Zone E most probably relates to a legitimate bedrock conductor composed of either graphitic or sulphide horizons within the sediments.

### Conductor F

This structure is somewhat weaker on its west extension but is becoming quite strong as it strikes east into claim 831144. The zone, although spotty, probably strikes from LO/1400S to L1200E/1000S. There is no direct magnetic association with this feature

### Conductor G

Zone G is also a weak, questionable source at this time. It may in fact relate to weak cross structure of unknown composition.

The zone strikes southeast across lines 3200E/100N to 4400E/600S. There is no magnetic correlation with the feature where the east extension strikes up to but not into a moderate high feature.

### Conductor H

As stated earlier, this feature appears to relate to a diabase dike feature striking southeast across lines 5000E/500N to 7600E/600S. This is good magnetic signature with the entire feature.

### Conductor I

This feature strikes southeast across lines 56000E/100S to 6400E/525S and closely parallels Zone H and the suspected dike. There is a closely, north flanking mag high on line LW00E/200S with the remainder of the zone magnetically quiet.

The zone may be representative of a legitimate bedrock stringer type zone or the southwest edge of the dike.

Conductor J

This feature strikes east-west across lines 6800E/650N to 7600E/675N where it appears to divide into two parallel zones striking across line 9200E/700N and 200N and off of the grid to the east.

There is no magnetic association with the conductor. The feature may relate to graphitic lenses within the sediments.

Conductor K

This zone strikes east-west across lines 800E/1650S to 2000E/1850S and has moderate to good magnetic association along its entire strike length.

It may in fact relate to a contact zone between the Gowganda and Lorrain Formations.

Conductor L

This feature also strikes east-west from lines 400W/2000S to 2800E/2050S and off of the grid to the east. The zone has moderate to good magnetic signature and may relate to a legitimate bedrock zone within the contact zone between the above mentioned two formations.

Conductor M

This feature represents another long formational type structure striking east-northeast across lines 5600E/1425S to 14400E/400S and off of the grid to the east. The entire zone is contained within House Lake and there is good magnetic signature with all of the strike length.

This zone is most significant as it probably relates to the structure which is hosting the ore for the McMillan mine. K. Lapierre's report states Gold ore at the McMillan property has generally been accepted as originating from a major anticlinal fold, trending northeast and plunging at 65 degrees. This mine fold is located east of the shaft under House lake. If this information is accurate, then Zone M becomes the major target area.

#### Conductor N

This feature also strikes east-northeast across lines 5600E/2300S to 8800E/1750S. The western extension has no magnetic correlation, however, the eastern extension strikes into a good magnetic structure striking into Zone M.

This zone may represent a legitimate bedrock response possible sulphide lenses or shears within the sediments.

#### Conductor O

This feature strikes Southeast across lines 9200E/1950S to 11600E/2700S and off of the grid to the southeast. There is some spotty mag highs with the zone. The strike of this zone may have been controlled by the presence of the diabase dike coming in to the northeast across lines 9600E/1600S to 10400E/2050S.

#### Conductor P

This feature strikes east-southeast across lines 10800E/2175S to 13600E/2550S and off of the grid to the southeast.

The zone has no magnetic correlation but does strike off of the magnetic trend which represents the assumed diabase dike.

The zone may relate to a legitimate bedrock response possible graphitic or pyritic in nature.

#### Conductor Q and R

These two features strike east-northeast across lines 13600E/2250S to 16000E/2600S. They are contained within a moderate magnetic trend which is probably representative of the contact area of the Gowganda and Lorrain formations. The irregularity in the zones strike conformity may be due to minor NW-SE faulting and shearing along strike. The zones may relate to legitimate bedrock conductors.

#### Conclusions and Recommendations

The majority of the conductors have been lettered and described in this report. Several of the more weaker zones have not been discussed at this time.

All of the zones appear to be similar in that they relate to long formational type conductors usually associated with structural features such as faulting and as shearing, both being quite prevalent on the property as per K. Lapierre's report which has been quoted earlier in this text.

There has been no attempt by the author to make any of the zones priority save for zone M.

There are several magnetic features which generally strike east-west to northeast with the odd trend striking southeast. These features correlate with possible shear and fault zones with the southeast trend representing diabase dikes.

The following are recommendations based on the magnetometer and VLF-EM results:

1) It is strongly recommended that the VLF data be filtered using Fraser's Method. This would result in a plan map outlining the obvious conductor axis and other more subtle inflections which could be structurally important. Also the data can be correlated much easier with the magnetic and geological data available.

2) The results of both surveys should be closely correlated with all known geological data with emphasis on the areas of the two gold showings. If the geophysical results can be correlated with known geological contacts and shear zones, it will help extrapolate the same in areas of unknown geology.

3) An Induced Polarization survey is recommended to test favourable areas along the various VLF conductor horizons. The extent of the I.P. coverage should be determined only after a geological correlation is carried out. A closely spaced 'a' spacing of 50 feet using a Dipole-Dipole array is recommended. If after recommendations 1 and 2, it is still unclear as to what areas should be detailed, a reconnaissance Gradient Array should be carried out over the more geologically favourable areas. This array is more cost effective for larger survey coverage and a limited Dipole-Dipole survey could be used to detail any interesting anomalies.

Respectfully submitted,



J. C. Grant C.E.T., F.G.A.C.

Geophysicist,

Exsics Exploration Ltd.

2.5347

References:

Lapierre, K. J. (1985)

Geological and Historical Report on the McMillan Gold Mine  
Claim Group, Mongowin Township-Sudbury Mining District, Ont.,  
Canada. 23 P

Winter, L. D. S. (1984)

Geological Report on the McMillan Gold property, Mongowin  
Twp, District of Sudbury for Sanfred Resources Ltd. 23 F.

Geological Compilation Series: Sudbury-Cobalt sheet scale 1"-4  
miles. Map 2361

CERTIFICATE OF QUALIFICATIONS

I, John Charles Grant do hereby certify:

1. that I am a geophysicist and reside at Lot 2 Martineau Avenue, Kamiskotia Lake, Timmins, Ontario.
2. that I am a Fellow of the Geological Association of Canada.
3. that I am a member of the Certified Engineering Technologist Association.
4. that I graduated from Cambrian College of Applied Arts and Technology, Sudbury Campus in 1975 with an Honour's diploma in Geology Technology.
5. that I have practised my profession continuously for 13 years.
6. that my report on McMillan Gold Mine Property, Mongowin Township, MILL CITY GOLD INC. is based on work carried out under my supervision.
4. I hold no specific or special interest in the described property. I have been retained as a Consulting Geophysicist for "the property".

Dated this 15th day of Aug, 1988  
at Timmins, Ontario

John C. Grant, C.E.T., F.G.A.C.



**APPENDIX A**

# OMNI PLUS VLF/Magnetometer System



## Major Benefits of the OMNI PLUS

- Combined VLF/Magnetometer/Gradiometer System
- No Orientation Required
- Three VLF Magnetic Parameters Recorded
- Automatic Calculation of Fraser Filter
- Calculation of Ellipticity
- Automatic Correction of Primary Field Variations
- Measurement of VLF Electric Field



## Specifications

Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	$\pm 15\%$ relative to ambient field strength of last stored value
Display Resolution	0.1 gamma
Processing Sensitivity	$\pm 0.02$ gamma
Statistical Error Resolution	0.01 gamma
Absolute Accuracy	$\pm 1$ gamma at 50,000 gammas at 23°C $\pm 2$ gamma over total temperature range
Standard Memory Capacity	
Total Field or Gradient	1,200 data blocks or sets of readings
Tie-Line Points	100 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from $-40^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ . The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors.
RS-232 Serial I/O Interface	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	6,000 gammas per meter (field proven)
Test Mode	A. Diagnostic testing (data and programmable memory) B. Self Test (hardware)
Sensor	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Gradient Sensors	0.5 meter sensor separation (standard), normalized to gammas/meter. Optional 1.0 meter sensor separation available. Horizontal sensors optional.
Sensor Cable	Remains flexible in temperature range specified, includes strain-relief connector
Charging Time (Base Station Mode)	Programmable from 5 seconds up to 60 minutes in 1 second increments
Operating Environmental Range	$-40^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ ; 0-100% relative humidity; weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid battery cartridge or belt; rechargeable NiCad or Disposable battery cartridge or belt; or 12V DC power source option for base station operation.
Battery Cartridge/Belt Life	2,000 to 5,000 readings, for sealed lead acid power supply, depending upon ambient temperature and rate of readings
Weights and Dimensions	
Instrument Console Only	2.8 kg, 238 x 150 x 250mm
NiCad or Alkaline Battery Cartridge	1.2 kg, 235 x 105 x 90mm
NiCad or Alkaline Battery Belt	1.2 kg, 540 x 100 x 40mm
Lead-Acid Battery Cartridge	1.8 kg, 235 x 105 x 90mm
Lead-Acid Battery Belt	1.8 kg, 540 x 100 x 40mm
Sensor	1.2 kg, 56mm diameter x 200mm
Gradient Sensor	
(0.5m separation-standard)	2.1 kg, 56mm diameter x 790mm
(1.0m separation-optional)	2.2 kg, 56mm diameter x 1300mm
Standard System Complement	Instrument console; sensor; 3-meter cable, aluminum sectional sensor staff, power supply, harness assembly, operations manual.
Base Station Option	Standard system plus 30 meter cable
Gradiometer Option	Standard system plus 0.5 meter sensor

EDA Instruments Inc.  
4 Thorncliffe Park Drive  
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(303) 422 9112

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#171

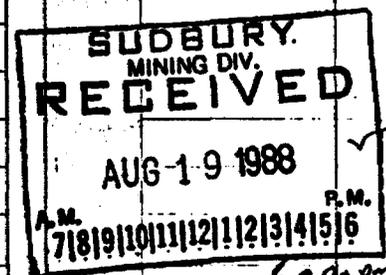
Type of Survey(s) <b>MAGNETOMETER (ground)</b>	Township or Area <b>MONGOWIN</b>
Claim Holder(s) <b>MILL CITY GOLD INC.</b>	Prospector's Licence No. <b>T. 1647</b>
Address <b>850 - 11012 MACLEOD TRAIL S., CALGARY, ALTA., T2J 6A5</b>	
Survey Company <b>EXSICS EXPLORATION LIMITED</b>	Date of Survey (from & to) Day Mo. Yr. <b>01 02 88</b> Day Mo. Yr. <b>29 02 88</b>
Name and Address of Author (of Geo-Technical report) <b>J. C. GRANT, P.O. BOX 1880, TIMMINS, ONTARIO, P4N 7X1</b>	
Total Miles of line Cut <b>34.8</b>	

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	
	- Magnetometer	<b>20</b>
	- Radiometric	
	- Other	
	Geological	
For each additional survey: using the same grid: Enter 20 days (for each)	Geochemical	
	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Man Days  Complete reverse side and enter total(s) here	- Other	
	Geological	
	Geochemical	
	Geophysical	
	- Electromagnetic	
Airborne Credits  Note: Special provisions credits do not apply to Airborne Surveys.	- Magnetometer	
	- Radiometric	
	Electromagnetic	
	Magnetometer	

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
S	605738		S	791220	
	605739			791221	
	605740				
	605755				
	605756				
	605812				
	605813				
	605814				
	791201				
	791202				
	791203				
	791204				
	791205				
	791206				
	791207				
	791208				
	791209				
	791214				
	791215				
	791216				
	791217				
	791218				
	791219				



Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  ÷ 15 = Total Days Credits

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

Total number of mining claims covered by this report of work. **25**

For Office Use Only

Total Days Credits Recorded **500** Date Recorded **August 22/88** Mining Recorder **J.C. Miller**

Date Approved as Recorded  Branch Director

Date **Aug. 19/88** Recorded Holder or Agent (Signature) **L.D. Winter**

Certification Verifying Report of Work **AGENT.**

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



Ministry of Northern Development and Mines

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

DOCUMENT No.  
W8807-172

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
- Do not use shaded areas below.

0011

Mining Act

Type of Survey(s) <b>MAGNETOMETER &amp; VLF-EM (ground)</b>	Township or Area <b>MONGOWIN TWP</b>
Claim Holder(s) <b>MILL CITY GOLD INC.</b>	Prospector's Licence No. <b>2.11552 T.1647</b>
Address <b>850-11012 MACLEOD TRAL S., CALGARY, ALTA, T2J 6A5</b>	
Survey Company <b>EXSICS EXPLORATION LIMITED</b>	Date of Survey (from & to) Day Mo. Yr. Day Mo. Yr. <b>01 02 88 29 02 88</b>
Total Miles of line Cut <b>5.2 miles</b>	
Name and Address of Author (of Geo-Technical report) <b>J.C. GRANT, P.O. BOX 1880, TIMMINS, ONTARIO, P4N 7X1</b>	

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	<b>40</b>
	- Magnetometer	<b>20</b>
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
Man Days Complete reverse side and enter total(s) here	Geological	
	Geochemical	
	Geophysical	
Airborne Credits	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
	<b>787629</b>				
	<b>787630</b>				
	<b>787631</b>				
	<b>787632</b>				
	<b>787633</b>				

RECEIVED

AUG 25 1988

MINING LANDS SECTION

SUBBURY MINING DIV. RECEIVED  
AUG 19 1988  
A.M. P.M.  
7|8|9|10|11|12|1|2|3|4|5|6  
6328

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  ÷ 15 = Total Days Credits

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

Total number of mining claims covered by this report of work. **5**

For Office Use Only

Total Days Cr. Recorded **300**

Date Recorded **August 22/88**

Date Approved or Re-recorded **31 Aug 88**

Mining Recorder **J.C. Grant**

Date **Aug. 19/88**

Recorded Holder or Agent (Signature) **L.D.S. Winter**

Certification Verifying Report of Work **AGENT.**

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

Name and Postal Address of Person Certifying  
**L.D.S. WINTER; NORWIN RESOURCES LTD., 560 NOTRE DAME AVE., SUBBURY, ONTARIO, P3C 5L2**

Date Certified **Aug. 19/88**

Certified by (Signature) **L.D.S. Winter**



Ministry of  
Northern Development  
and Mines

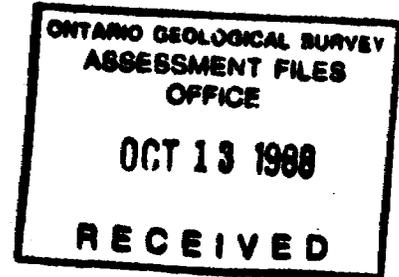
Ontario

Ministère du  
Développement du Nord  
et des Mines

September 26, 1988

Your File: W8807-171  
Our File : 2.11552

Mining Recorder  
Ministry of Northern Development and Mines  
Bag 3000  
200 Brady Street, 6th Floor, West Tower  
Sudbury, Ontario  
P3A 5W2



Dear Sir:

RE: Notice of Intent dated September 9, 1988.  
Geophysical (Electromagnetic & Magnetometer) Survey  
on Mining Claims S 605738 et al in the Township of  
Mongowin.

The assessment work credits, as listed with the above-mentioned  
Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so  
indicate on your records.

Yours sincerely,

W.R. Cowan, Manager  
Mining Lands Section  
Mines & Minerals Division

Whitney Block, Room 6610  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Telephone: (416) 965-4888

RM  
RM:sc

cc: Mill City Gold Inc.  
850-11012 MacLeod Trail S.  
Calgary, Alberta  
T2J 6A5

cc: Exsics Exploration Limited  
P.O. Box 1800  
Timmins, Ontario  
P4N 7X1  
Attention: J.C. Grant

cc: L.D.S. Winter  
Norwin Resources Ltd  
560 Notre Dame Avenue  
Sudbury, Ontario  
P3C 5L2

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario

cc: Resident Geologist  
Sudbury, Ontario



Recorded Holder  
Mill City Gold Inc.

Township or Area  
Mongowin Twp.

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer <u>20</u> days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	S605738 to 740 inclusive 605756 605812 to 814 inclusive 791201 to 209 inclusive 791214 to 221 inclusive

Special credits under section 77 (16) for the following mining claims

10 Days Magnetometer  
S605755

No credits have been allowed for the following mining claims

not sufficiently covered by the survey       insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.



Ministry of Northern Development and Mines

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

**DOCUMENT NO.**  
**W8807-171**

Mining Act

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." column.  
- Do not use shaded areas below.

(Oct 11)

Type of Survey(s) **MAGNETOMETER (ground)** Township or Area **MONGOWIN**  
 Claim Holder(s) **MILL CITY GOLD INC. 2-11552** Prospector's Licence No. **7.1647**  
 Address **850-11012 MACLEOD TRAIL S., CALGARY, ALTA., T2J 6A5**  
 Survey Company **EXSICS EXPLORATION LIMITED** Date of Survey (from & to) **01 02 88** Total Miles of line Cut **34.8**  
 Name and Address of Author (of Geo-Technical report) **J. C. GRANT, P.O. BOX 1880, TIMMINS, ONTARIO, P4N 7X1**

Credits Requested per Each Claim in Columns at right

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
S	605738		S	791220	
	605739			791221	
	605740				
	605755				
	605756				
	605812				
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	791218				
	791219				

**SUBURRY MINING DIV. RECEIVED**  
**AUG-19-1988**  
 AUG 19 1988 P.M.  
 7 18 19 20 21 22 23 24 25 26  
*B.S. 26 pm*

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  ÷ 15 = Total Days Credits

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

For Office Use Only

Total Days Cr. Recorded **500** Date Recorded **August 22/88** Mining Recorder **J.C. Miller**  
 Date Approved as Recorded **See revised statement** Branch Director **RM**

Date **Aug. 19/88** Recorder, Holder or Agent (Signature) **L.D.S. Winter**  
 Certification Verifying Report of Work **AGENT.**

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

Name and Postal Address of Person Certifying **L.D.S. WINTER, NORWIN RESOURCES LTD., 560 NOTRE DAME AVE., SUBURRY, ONTARIO, P3C 5L2**  
 Date Certified **Aug. 19/88** Certified by (Signature) **L.D.S. Winter**

Total number of mining claims covered by this report of work. **25**

MAP SYMBOLOLOGY

Aerial Cableway	Pipeline (above ground)
Boundary	Railroad
International	Single Track
Interprovincial	Double Track
District, Township Indian Reserve	Abandoned
Approximate	Turbine
Lot, Concession	Road
Approximate	Highway, County
Perk Boundary	Township
Bridge	Access (road of doubtful maintenance or significant driveway)
Road, Railroad	Trail, Beach Road (portage, atlay)
Building	Rapids
Chimney	Double line river with multiple rapids
Cliff, Pit, Pile	Double line river with multiple rapids
Contours	Reservoir
Interruption	River, Stream, Canal
Approximate	Approximate (dammed)
Depression	Direction of flow
Control Points	Rock
Horizontal	Significant
Vertical	Shoal
Culvert	Spot Elevation (true elevations) -300.0
Falls	Tower
Double line river	Transmission Line
Fence, Hedge, Wall	Pylon
Feature Outline (Construction features, etc.)	Tunnel
Flooded Land	Utility Poles
Lock	Wharf, Dock, Pier
Marsh or Swamp	Wooded Area
Mast	
Mine Head Frame	
Outcrop	

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY  
S.R.O. - SURFACE RIGHTS ONLY  
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
	W. 1/82	15/4/82	S.R.O.	148266

SAND AND GRAVEL

M.T.C. P.T. No. 48-17  
File 57694

LEGEND

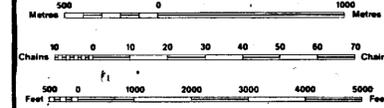
HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES: TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES: LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE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

DISPOSITION OF CROWN LANDS

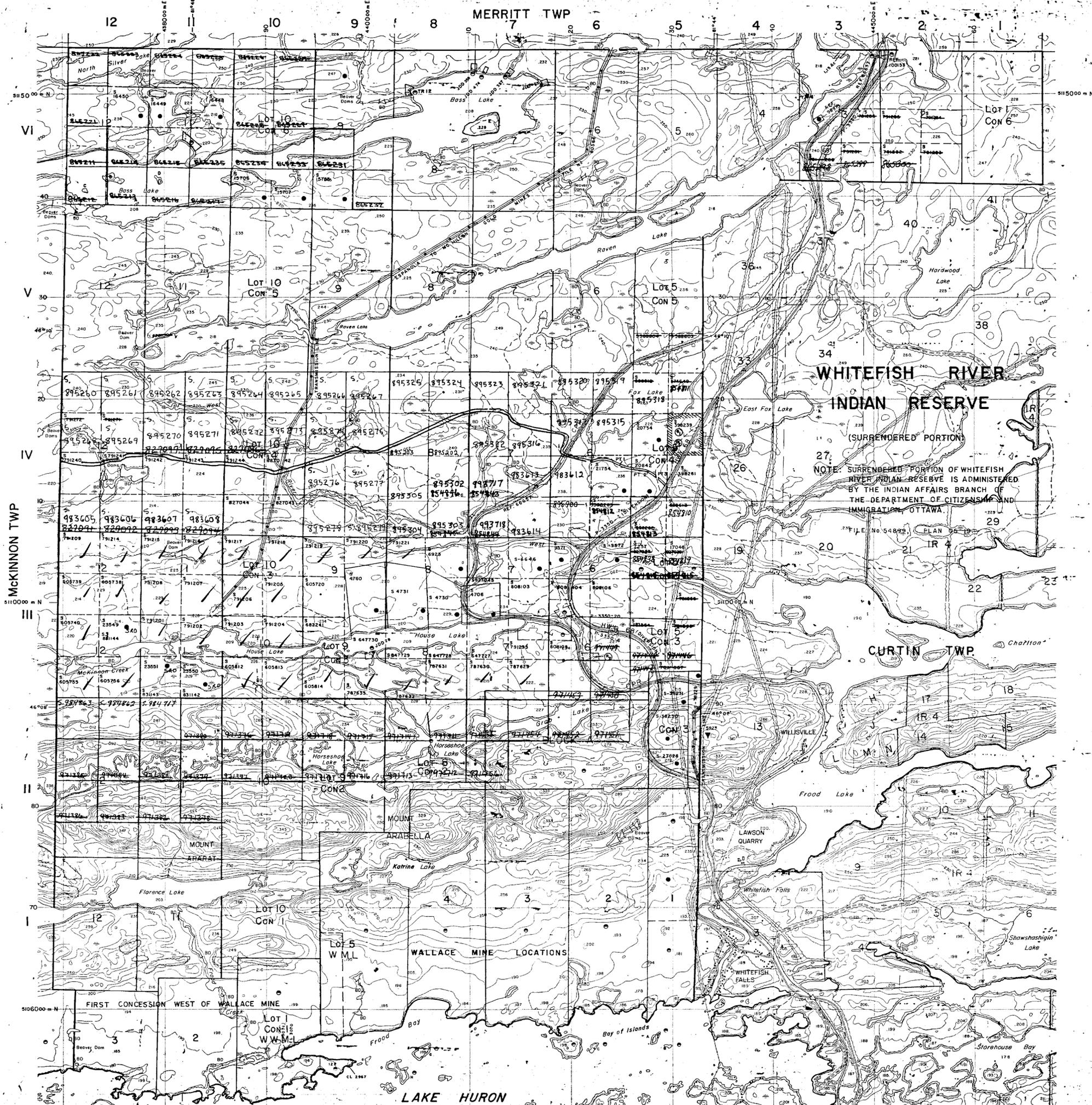
TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1910, CHAP. 380, SEC. 43, SUBSEC. 1.

GRID ZONE : 17



SCALE 1:20 000



TOWNSHIP  
**MONGOWIN**  
M.N.R. ADMINISTRATIVE DISTRICT  
ESPANOLA  
MINING DIVISION  
SUBDIVISION  
LAND TITLES / REGISTRY DIVISION  
SUBDIVISION

Ministry of Natural Resources  
Ontario  
Land Management Branch

Original  
Compilation: NOVEMBER, 1984  
Revised:  
Number  
**G-2899**



41104N0000 2.11522 MONGOWIN



