



32E13SE0101 2.13966 ATKINSON LAKE

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2.13966

ATKINSON EAST (B-13)
ASSESSMENT REPORT
ON VLF-EM16 COMPLETED
DURING THE SUMMER OF 1990

RECEIVED

FEB 27 1991

MINING LANDS SECTION

N.T.S. 32E/13
Latitude 49 53'N
Longitude 79 33'W

June, 1990

Alan O'Connor, B.Sc.



32E135E0101 2.13966 ATKINSON LAKE

010C

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File name: atkeast.rep

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1.0 Summary:

The Atkinson East property consists of 10 contiguous mining claims which cover 160 ha in the Atkinson Lake district, Detour Lake Mine area in northeastern Ontario. The property is located 150 km NE of Cochrane, Ontario and 25 km south of the Detour Lake Mine.

Previous work on the property consists of both airborne and ground geophysical surveys as well as diamond drilling completed by Getty Canadian Metals, Selco and Noranda Exploration. During the summer of 1989, Westmin completed a program of linecutting (13.4 km) and geological mapping.

The 1990 work program consisted of a VLF-EM16 survey completed over the entire grid (13.26 km).

Table 1

Work Summary

Year	Cut-Line (km)	VLF-EM16 (km)
1989	13.4 km	-
1990	-	13.26
Total:	13.4	13.26

2.0 Recommendations:

Results from an interpretation of previous geophysical surveys and from previous diamond drilling indicate that additional work in the form of diamond drilling is warranted to test the economic potential of the property. A 2 hole/300m drilling campaign is proposed at a cost of approximately 45,000 dollars.

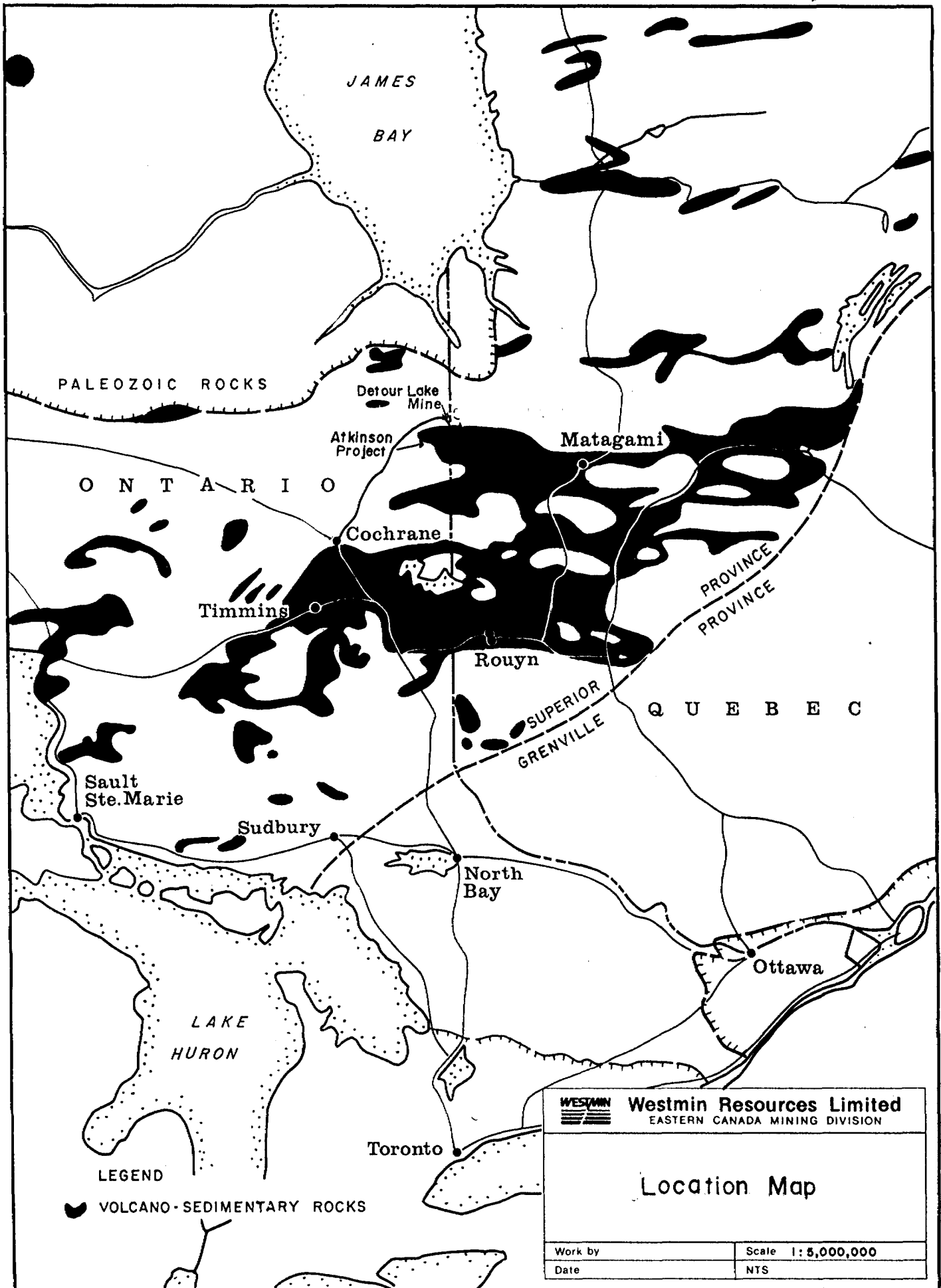
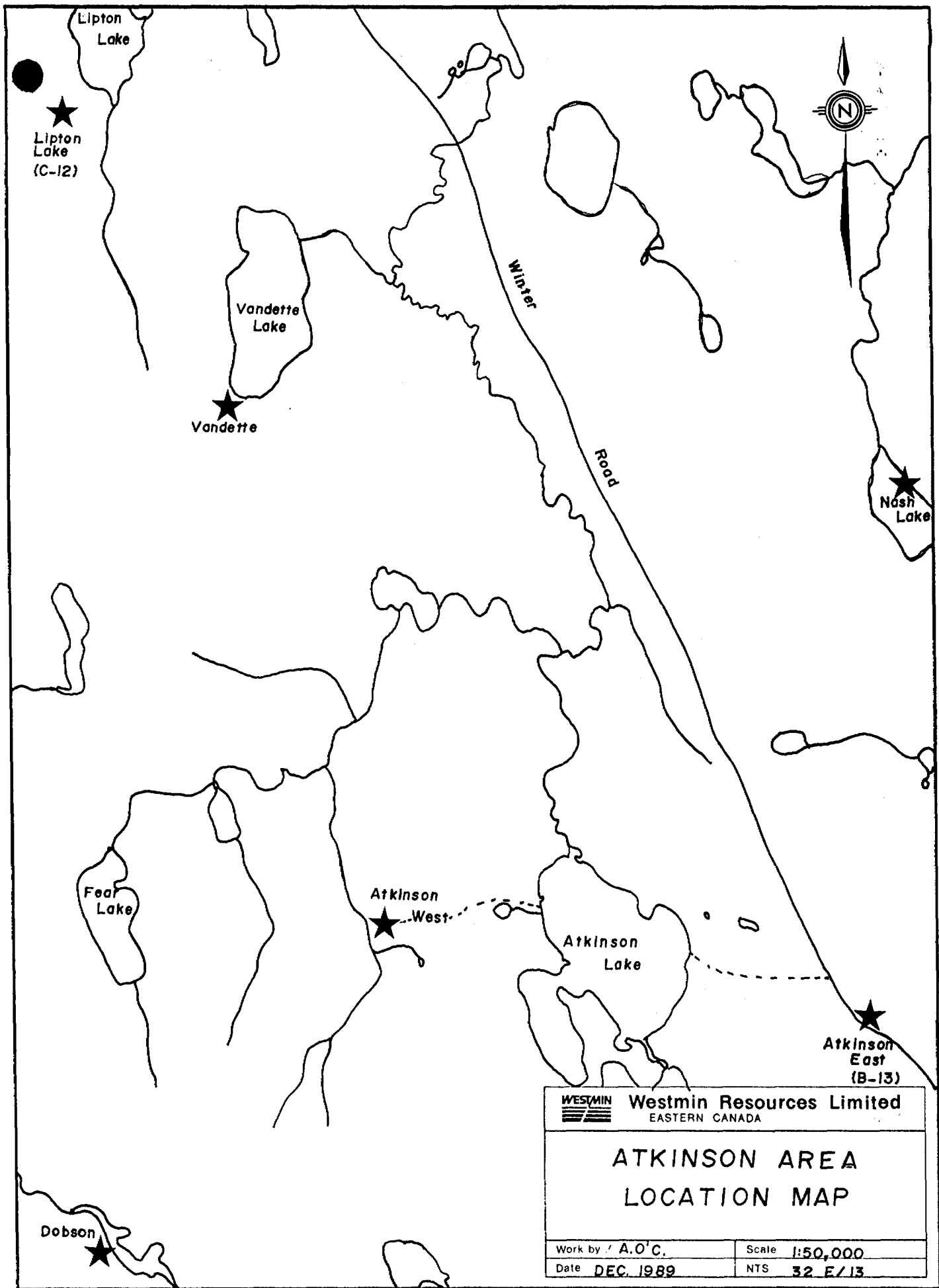


Figure 1




 Westmin Resources Limited EASTERN CANADA	
ATKINSON AREA LOCATION MAP	
Work by / A.O.C.	Scale 1:50,000
Date DEC. 1989	NTS 32 E/13

Fig. 2

3.0 Introduction:

This report details the work completed during the 1990 field program and presents an evaluation of the data collected. The report is based upon data gathered by Westmin personnel during June of 1990.

3.1 Location, Access and Topography:

The Atkinson East property is located approximately 150 km northeast of Cochrane, Ontario (N.T.S. 32 E/13) near the Quebec-Ontario border and 25 km south of the Detour Lake minesite (figs. 1,2). An all-weather gravel road which connects Cochrane with the Detour Lake minesite can be used to reach the general project area. A winter road which leads from the minesite to Lac Gagnon near La Sarre, Quebec bisects the claim block. Although the road is no longer maintained, it is still in good condition enabling the use of an amphibious tracked vehicle, such as an Argo, for access. Snowmobiles and heavy equipment (skidders, etc) may be used in the winter.

Float and ski equipped fixed wing aircraft may be used to access Atkinson Lake which is located two kilometres to the west of the property. Fixed and rotary winged aircraft bases are located in both Cochrane, Ontario and La Sarre, Quebec.

Topographically, the region is characterized by little relief with much of the area covered by fen and string bog. Outcrop is sparse due to a blanket of overburden and muskeg which extends over a large portion of the Detour Lake region. Vegetation is typical of the boreal forest with most of the region covered by stands of black spruce and, occasionally, small groves of poplar. To date, there has been no harvesting of trees for economic purposes in this vicinity. The area is drained by small creeks and rivers with the Detour River being the largest in the district.

3.2 Land Status:

The Atkinson East group consists of 10 contiguous mining claims which cover an area of 160 ha (fig.3). Westmin Mines Ltd. holds a 100% equity interest in the property (Table 2).

3.3 Previous Work:

1968 (O.D.M. Report #30): Selco drilled one diamond drill hole (hole #1) to a depth of 178.6 metres while exploring for nickel and copper. This hole intersected mafic and altered ultramafic (talc-carbonate) metavolcanics and gabbroic intrusions.

1979 (O.D.M. Report #30): A single diamond drill hole completed by Noranda Exploration on the Atkinson East claim block (B-13) intersected metasedimentary rocks and graphite.

1982 (O.D.M. Report #32): Getty Canadian Metals drilled one hole (DL-82-03) to a depth of 261.2 metres. Rock types encountered in this hole consisted of mafic and altered ultramafic (talc-carbonate) metavolcanics.

1989: During June of 1989, Westmin Mines Ltd. completed a linecutting (13.4 km) and geological mapping program on the Atkinson East claim block. No outcrop was found.

3.4 1990 Work Program:

During June of 1990, a VLF-EM16 survey (13.26 km) was completed over the 10 claims of the Atkinson East (B-13) claim block. All work was carried out by Westmin personnel.

ATKINSON B 13 - PROPERTY STATUS

Location; Atkinson Lake Area (G-1626),
 Porcupine Mining Division, Ontario
 N.T.S. 32-E-13
 Lat. 49 49'N
 Long. 79 32'W

Equity: Westmin Mines Limited 100%

<u>Claims</u>	<u>Recording Date</u>	<u>Lease Due</u>	<u>Assessment Work Due</u>	<u>Work Filed</u>
P.1090093	1 March 1989	1 March 1995	1 March 1991	30
P.1090094	1 March 1989	1 March 1995	1 March 1991	40
P.1090095	1 March 1989	1 March 1995	1 March 1991	40
P.1090096	1 March 1989	1 March 1995	1 March 1991	40
P.1090097	1 March 1989	1 March 1995	1 March 1991	40
P.1090098	1 March 1989	1 March 1995	1 March 1991	40
P.1090099	1 March 1989	1 March 1995	1 March 1991	40
P.1090100	1 March 1989	1 March 1995	1 March 1991	40
P.1090101	1 March 1989	1 March 1995	1 March 1991	40
P.1090102	1 March 1989	1 March 1995	1 March 1991	40

10 claims = 160 ha

390 days

Work Required

 1 yr. 20 days
 2 yr. 40 days
 3 yr. 40 days
 4 yr. 40 days
 5 yr. 60 days

Tot: 200 days

Date: 18 September 1990

Atkinson B 13, Ontario
 Page 1 of 1

ATKINSON B-13

Atkinson

Lake

P	P	P	
1090095	1090094	1090093	
P	P	P	P
1090096	1090097	1090098	1090099
	P	P	P
	1090102	1090101	1090100

1: 31,680

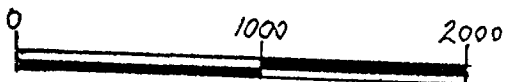


Fig 3

4.0

Regional Geology:

The Atkinson area is underlain by the northern belt of a folded supracrustal sequence with the main volcanic-sedimentary sequence occurring to the west in Quebec. The belt, which is Archean in age, has undergone regional and contact metamorphism ranging from upper greenschist to almandine-amphibolite facies rank.

The belt is composed of a metavolcanic-sedimentary sequence with a basal unit of felsic to intermediate volcanics. Overlying the felsic volcanics is a sequence of metasediments followed by mafic to intermediate flows and pyroclastics. Stratigraphically above this unit are interbedded felsic to intermediate volcanics and mafic to intermediate volcanics and metasediments. At the top of the stratigraphic sequence is a unit of metasediments with mafic flows and graphitic tuffs and metasediments which commonly contain anomalous concentrations of sulphides.

The area is surrounded by quartz-monzonite batholiths with a large gabbroic intrusion occurring in the Detour Lake area. Finally, the geology is intruded by several diabase dykes which crosscut all other rock types and structures (Johns, 1982).

4.1 Economic Geology:

The most significant ore deposit in the project area is the Detour Lake gold mine which is located 25 km to the north of the property. Currently this deposit contains 7.3 mt of ore grading 5.4 g/t Au.

The main zone of mineralization of the deposit is hosted within the basal part of the mafic flow sequence, the upper part of the ultramafic zone and within the intermediate and cherty tuff horizon located between the two preceding units. The gold is associated with chalcopyrite in the metavolcanic rocks as well as in the mineralized quartz veins which occur above the main zone (Johns, 1982).

Alteration in the vicinity of the deposit consists of:

- a) talc-carbonate alteration of the ultramafic rocks
- b) chloritic alteration of the basalts
- c) potassic alteration in the cherty tuff
- d) intense biotite alteration of the basalts

5.0 VLF-EM16 Survey:

A VLF-EM16 survey was completed over the entire grid for a total of 13.26 km. A Geonics instrument was used for the survey with Seattle, Washington used as a transmitting station for lines 1800E to 1500E and Cutler, Maine for the remaining lines. Readings were taken facing north at a 20 metre station spacing. Several weak, east-west trending conductors were delineated by the survey with peak to trough amplitudes generally in the order of 5%. The lack of sharp crossovers in the in-phase component, coupled with a relatively flat quadrature may indicate that most of the conductors defined by the survey may be related to overburden effects.

Respectfully submitted by:



Alan J. O'Connor, B.Sc.

Qualification
2.12993

rev

Certification

I, Alan J. O'Connor, of 312 St. Clarens Avenue,
Toronto, Ontario, M6H 3W3, certify that:

- 1) I hold a Bachelor of Science degree (geology)
received in 1985 from the University of Western
Ontario.
- 2) I have practised my profession as a project
geologist in the mining industry on a full-
time basis for five years.
- 3) I have conducted field work on this property,
and supervised the geological, geochemical and
geophysical work described in the report.
- 4) I have no financial interest in the property.

June, 1990


A.J. O'Connor, B.Sc.

References

Johns, G.W., (1982)

Geology of the Burntbush-Detour Lake
Areas. Ontario Geological Survey
Report 199.



Mining Act
Report of Work
(Geophysical, Geological and Geochemical St

32E135E0101 2.13966 ATKINSON LAKE

900

Type of Survey(s) Geophysical	Mining Division Porcupine	Township or Area Atkinson Lake Area G-1626
Recorded Holder(s) Westmin Mines Limited	2.13966	
Address 904-1055 Dunsmuir St., P.O. Box 49066, Bentall Ctre, Vancouver	Prospector's Licence No. T-4638	Telephone No. (604) 681-2253
Survey Company Westmin Mines Limited	B.C. V7X 1C4	
Name and Address of Author (of Geo-Technical Report) Alan O'Connor, 312 Clarens Ave., Toronto, Ontario M6H 3W3	Date of Survey (from & to) (see below) Day Mo. Yr.	

Credits Requested per Each Claim in Columns at right

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

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

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Other	

Total miles flown over claim(s):

Date: **Feb. 26/91** Recorded Holder or Agent (Signature): *[Signature]*

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
P.	1090093			Date of Survey	
P.	1090094			01/06/90; 06/06/90;	
P.	1090095			14/06/90 to 15/06/90	
P.	1090096				
P.	1090097				
P.	1090098				
P.	1090099				
P.	1090100				
P.	1090101				
P.	1090102				

RECEIVED
11/3

RECORDED
11/3

MINING LANDS SECTION
FEB 28 1991

Total number of mining claims covered by this report of work: **10**

Certification Verifying Report of Work

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

Name and Address of Person Certifying: **P.O. Box 49066, Bentall Centre**
Christopher J. Rockingham, 904-1055 Dunsmuir Street, Vancouver, B.C. V7X 1C4

Telephone No.: **(604) 681-2253** Date: **February 26, 1991** Certified By (Signature): *[Signature]*

For Office Use Only

Total Days Cr. Recorded 200	Date Recorded FEB 28 1991	Mining Recorder <i>[Signature]</i> Robert Bentley
Date Approved as Recorded	Provincial Manager, Mining Lands SEE REVISED WORK STATEMENT	

Received Stamp

RECEIVED
"P"
FEB 28 1991
@ 11:00am *[Signature]*



Date April 26/91

Mining Recorder's Report of Work No. W.9106.059

Recorded Holder
Westmin Mines Limited

Township or Area
Atkinson Lake Area

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic <u>20</u> days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days	P.1090094-102 incl.
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.	

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

15 days electromagnetic on P.1090093.

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) - 80.

2.13966

File _____



Ministry of Natural Resources

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geophysical
Township or Area Atkinson Lake Area (G-1626)
Claim Holder(s) Westmin Mines Limited

Survey Company Westmin Mines Limited
Author of Report Alan O'Connor
Address of Author 312 Clarens Ave., Toronto, Ontario M6H 3W3
Covering Dates of Survey June 1, 6, 14 to 15, 1990
(linecutting to office)
Total Miles of Line Cut _____

**SPECIAL PROVISIONS
CREDITS REQUESTED**

RECEIVED
FEB 27 1991
ENTER 40 days (includes
line cutting) for first
survey.

MINING LANDS SECTION
ENTER 20 days for each
additional survey using
same grid.

**DAYS
per claim**
Geophysical _____
-Electromagnetic 20
-Magnetometer _____
-Radiometric _____
-Other _____
Geological _____
Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Feb. 26, 1991 SIGNATURE: Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....
.....
.....
.....
.....

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P.	1090093
P.	1090094
P.	1090095
P.	1090096
P.	1090097
P.	1090098
P.	1090099
P.	1090100
P.	1090101
P.	1090102

If space insufficient, attach list

TOTAL CLAIMS 10

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations 681 Number of Readings 1362
Station interval 20 metres Line spacing 100 metres
Profile scale 1 cm = 20%
Contour interval N/A

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration N/A
Coil separation N/A
Accuracy +/- 1%
Method: [] Fixed transmitter [] Shoot back [] In line [X] Parallel line
Frequency Seattle, Washington, Cutler, Maine (specify V.L.F. station)
Parameters measured In-phase, quadrature

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location
Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument
Method [] Time Domain [] Frequency Domain
Parameters - On time Frequency
- Off time Range
- Delay time
- Integration time
Power
Electrode array
Electrode spacing
Type of electrode

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____



Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
4th Floor, 159 Cedar Street
Sudbury, Ontario
P3E 6A5

Telephone: (705) 670-7264
Fax: (705) 670-7262

Your File: W. 9106.059
Our File 2.13966

May 27, 1991

Mining Recorder
Ministry of Northern Development
and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir/Madam:

RE: Notice of Intent dated April 26, 1991 for Geophysical
(Electromagnetic) Survey on mining claims P.1090094
et al. in the Atkinson Lake Area.

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,

Ron. C. Gashinski,
Provincial Manager, Mining Lands
Mines & Minerals Division

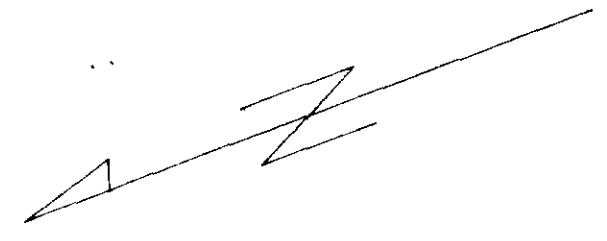
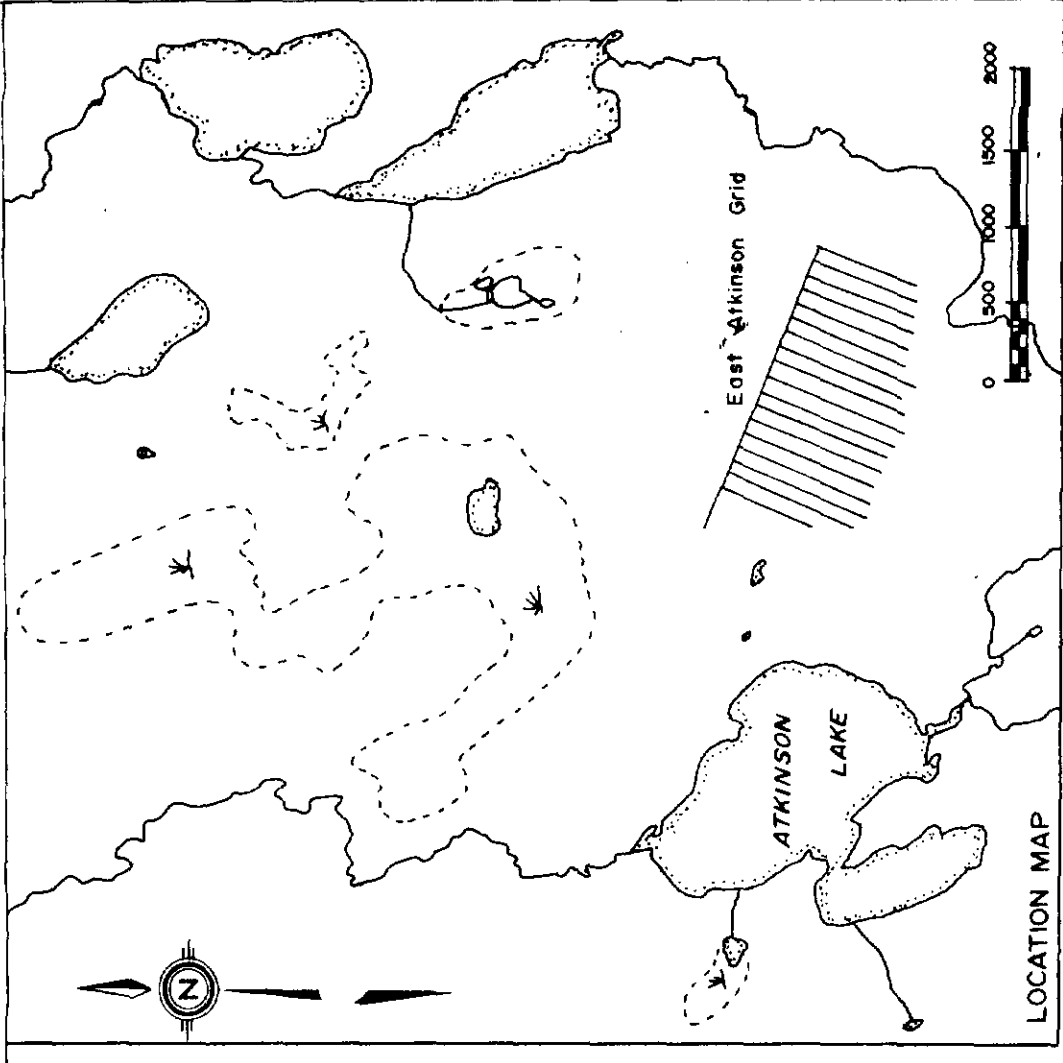
LJ/jl
Enclosure:

cc: Westmin Mines Limited
Vancouver, B. C.

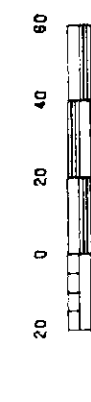
Mr. Alan O' Connor
Toronto, Ontario

Resident Geologist
Timmins, Ontario

✓ Assessment Files Office
Toronto, Ontario



LEGEND
 INSTRUMENT USED: SODERBERG VLF-FRE
 STATIONING: 1000
 STATION SPACING: 100 METERS
 LINE: 100-200-300-400-500-600-700-800-900
 SUBSTATIONS: 1000-1100-1200-1300-1400-1500-1600-1700-1800
 PASTING TO LEFT
 CONNECTOR RAILS



2.13966

WESTMIN MINES LTD.
 EASTERN EXPLORATION

ATKINSON PROJECT

ATKINSON EAST

GRID B-13

VLF-EM16 SURVEY

WORK BY: BURN O'CONNOR

DATE: JUNE 1980

SCALE: 1:2000

N.T.S. 32E/13

FIGURE 4

