010

Atkinson East Claims

Report on Linecutting and

Geological Mapping

Completed During 1989

N.T.S. 32 E/13

Latitude: 49 48'N

Longitude: 79 33'W

January, 1990

Alan O'Connor, B.Sc.

List of Figures

Location, Access and Topography:

49 48'N/79 33'W

The project area, located 150km northeast of Cochrane, Ontario and approximately 18km south of the Detour Lake Gold Mine, is covered by N.T.S. map sheet 32 E/13(figs. 1,2). An all-weather gravel road from Cochrane to the Detour Lake Mine site can be used to access the general project area. From the mine site, the claim block can be reached via an old winter road which begins in the La sarre area and ends at the Detour Mine. For summer work, an amphibious, all-terrain vehicle, such as an Argo equipped with wide pad tracks, is the best form of ground transportation. During the winter months, skidders and tracked vehicles may be used to access the property.

Many of the lakes within the project area are amenable to the use of float and ski-equipped fixed wing aircraft which can be brought in from bases in La Sarre, Quebec or Cochrane,Ontario. Furthermore, regularly scheduled flights from Timmins to the Detour mine airstrip are available

Topographically the region is characterized by low 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 this region. Vegetation is typical of the boreal forest with much of the region covered by stands of black spruce and small areas of poplar. To date, there has been no harvesting of trees in this vicinity. The area is drained by small creeks and rivers with the Detour River being the largest in the district.

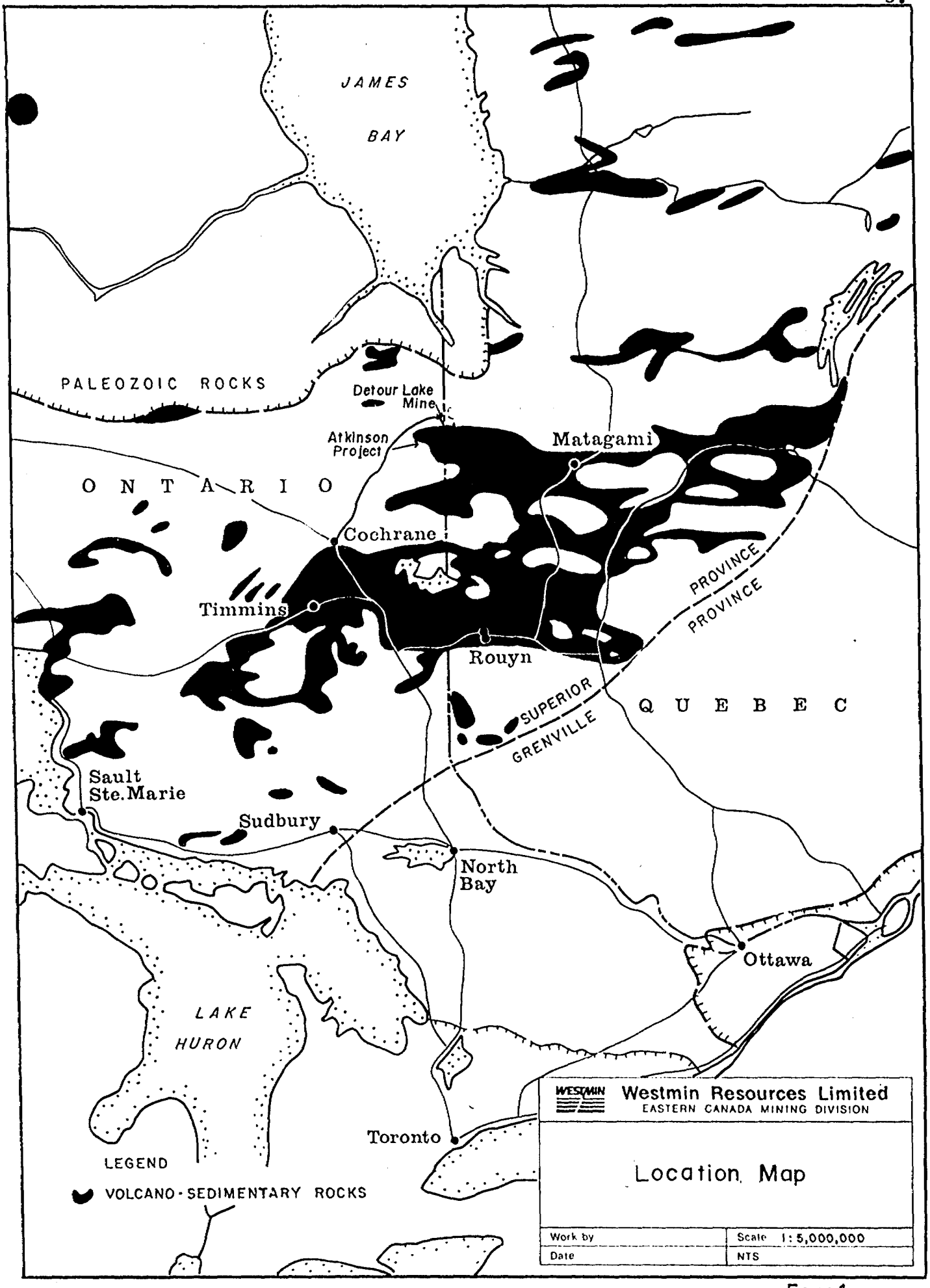

JAMES
BAY
PALEOZOIC ROCKS
Detour Lake
Mine
Atkinson
Project
Matagami
ONTARIO
Cochrane
Timmins
Rouyn
PROVINCE
PROVINCE
SUPERIOR
GRENVILLE
QUEBEC
Sault
Ste. Marie
Sudbury
North
Bay
Ottawa
LAKE
HURON
Toronto
LEGEND
VOLCANO-SEDIMENTARY ROCKS
WESTMIN
Westmin Resources Limited
EASTERN CANADA MINING DIVISION
Location Map
Work by
Scale 1:5,000,000
Date
NTS

Figure 1

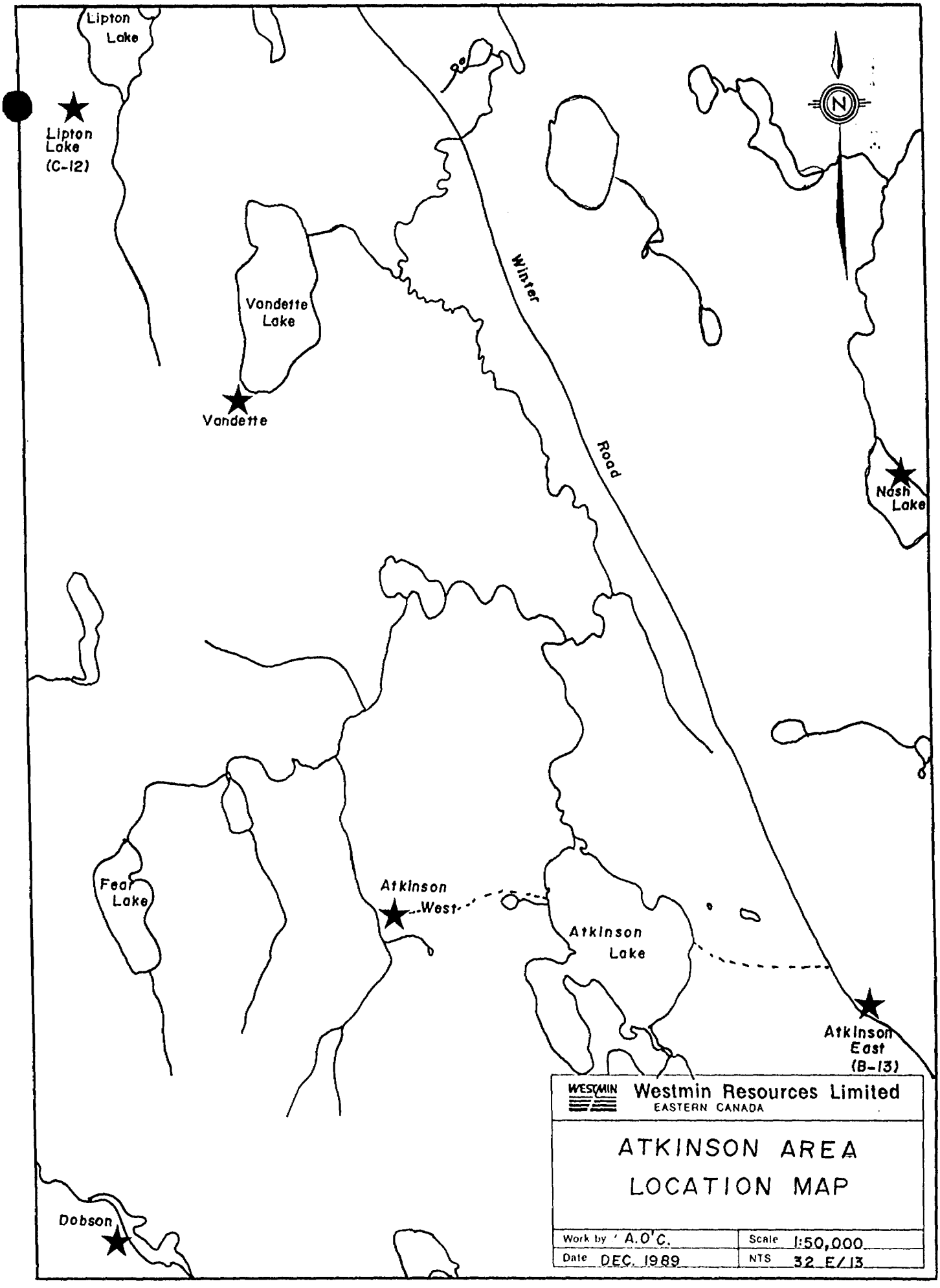

Lipton Lake
Lipton Lake (C-12)
Vandette Lake
Vandette
Winter Road
Nash Lake
Fear Lake
Atkinson West
Atkinson Lake
Atkinson East (B-13)
Dobson
N
WESTMIN
Westmin Resources Limited
EASTERN CANADA
ATKINSON AREA
LOCATION MAP
Work by A.O'C.
Scale 1:50,000
Date DEC. 1989
NTS 32 E/13

Figure 2.

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%

Claims	Recording Date	Lease Due	Assessment Work Due	Work Filed
P.1090093	1 March 1989	1 March 1995	*1 March 1991	**20
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

* Approval pending.

** P.1090093 not covered 100% by survey.

Date: 05 February 1990

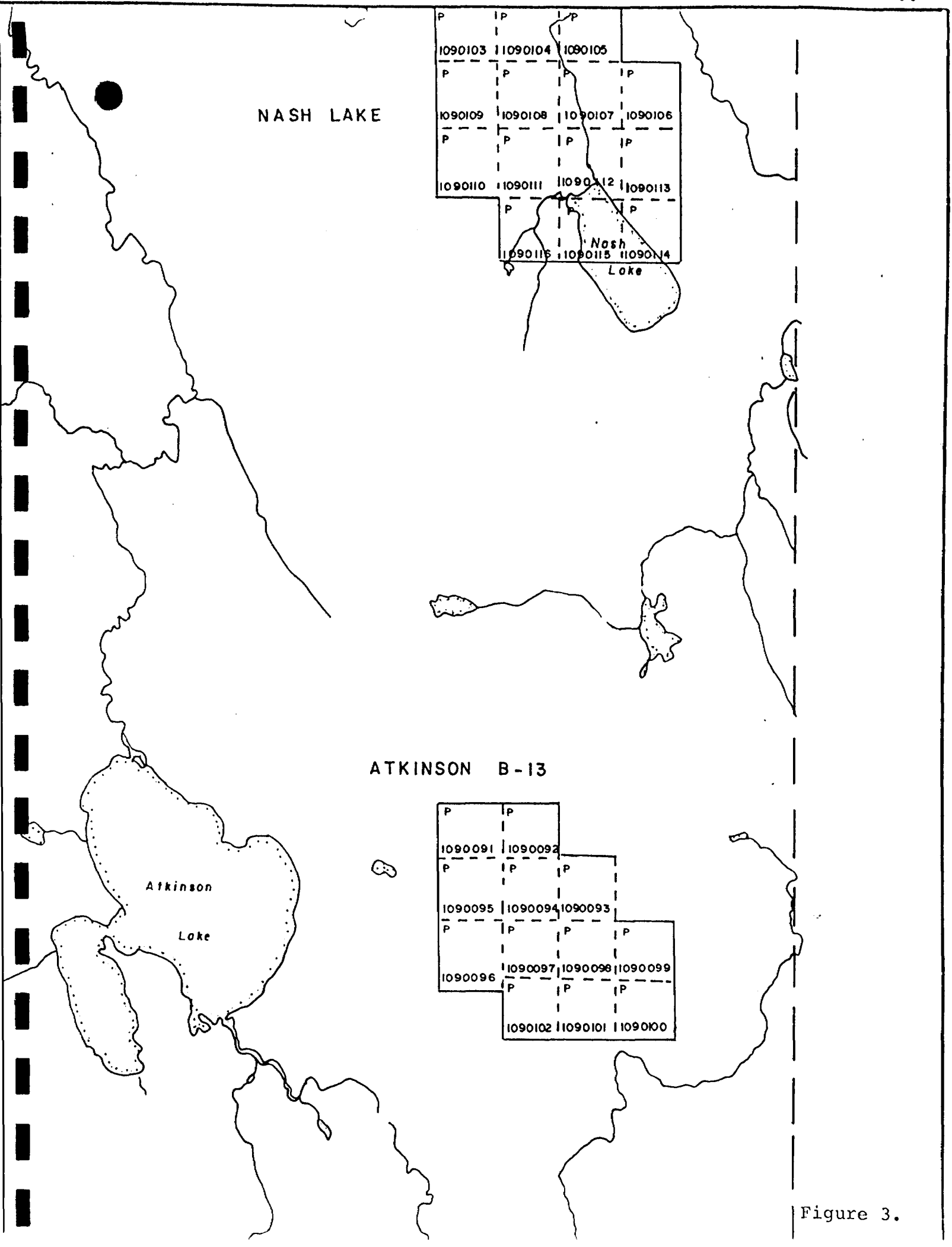

NASH LAKE
1090103
1090104
1090105
1090109
1090108
1090107
1090106
1090110
1090111
1090112
1090113
1090116
1090115
1090114
Nash
Lake
ATKINSON B-13
1090091
1090092
1090095
1090094
1090093
1090096
1090097
1090098
1090099
1090102
1090101
1090100
Atkinson
Lake

Figure 3.

5.0 Regional Geology:

The Atkinson area is underlain by the northern belt of a fol[illegible] 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 pyriclastics. 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 area possesses several diabase dykes which crosscut all other rocks and structures (Johns, 1982).

5.1 Economic Geology:

The most significant ore deposit in the project area is the Detour Lake gold mine which is located 18km to the north of the property.

The main zone of mineralization of the deposit is hosted within the basal part of the mafic flow sequence, the uupper 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

Previous Work

1968: Selco drilled one diamond drill hole which intersected mostly gabbro and ultramafics. This hole was drilled to a depth of 178.6 metres.

1982: Getty Canadian Metals drilled DL-82-03 which encountered mafic and altered ultramafic (talc-carbonate) volcanics. This hole was drilled to a depth of 261.2 metres.

1989 Program

The summer program for 1989 on the Atkinson East grid consisted of linecutting (13.4km) and geological mapping (1:2000). No outcrop was found. Ten of the 12 claims within the Atkinson East block were covered by the linecutting and geological surveys.

Geology and Physiography: (Fig. 4)

A traverse of all the lines on the grid was completed, however no outcrop was found. Vegetation on the grid consists of:

a) 80% thick black spruce stands with an average diameter (breast height) of >10 cm.

b) 15% sporadic stands of stunted black spruce with an average diameter breast height of <10 cm.

c) 5% alders

The La Sarre-Detour Lake winter road crosses through the centre of the property(see fig.4).

Extrapolation of data from previous diamond drilling indicates that the Atkinson East grid is underlain by east-west trending ultramafic to mafic volcanics with a small amount of metasediments in the norhteastern section of the grid. A magnetic high in the northeastern part of the grid may represent a large mafic intrusive body. The conductive zone in the southern area of the claim block, drilled by Noranda in 1979, is, in part, a graphitic horizon hosted within a metasedimentary (sandstone, siltstone) unit.

Respectfully submitted,

Alan J. O'Connor, B.Sc.
February 7, 1990.

Reviewed

References

Johns, G.W., (1982) Geology of the Burntbush-Detour Lake Areas. Ontario Geological Survey Report #199.

Certification

I, Alan J. O'Connor, of 312 St. Clarens Avenue, Toronto, Ontario, M6H 3W2, 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 four 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.

January, 1990

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

Ontario

900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Section
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

Tel: (416) 965-4888

Your File: W9006.083
Our File: 2.13088

May 28, 1990

Mining Recorder
Ministry of Northern Development & Mines
60 Wilson Avenue
TIMMINS, Ontario
P4N 2S7

Dear Sir:

Re: Notice of Intent dated April 20, 1990 for a Geological Survey submitted on Mining Claims P 1090093 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,

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

DM:zm
Encl:

cc: Mr. G. H. Ferguson
Mining & Lands Commissioner

Resident Geologist
TIMMINS, Ontario

Westmin Mines Limited
TORONTO, Ontario

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File 2.13088

Date April 20/1990

Mining Recorder's Report of Work No. W9006-083

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	P.1090094 to 1090102 incl.
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 40 days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☑ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ 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

30 days Geological 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) - 60.

626 (85/12)

Ministry of Northern Development and Mines
Ontario

Mining Act

Report of Work
(Geophysical, Geological and Geochemical Surveys)

2.13088
DOCUMENT No. W9006.083

Instructions
- Please type or print.
- Refer to Section 77, the Mining Act for assessment work requirements and maximum credits allowed per survey type.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Technical Reports and maps in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

RECEIVED
MAR 08 1990
MINING LANDS SECTION

Type of Survey(s): Geological & Linecutting	Mining Division: Porcupine	Township or Area: Atkinson Lake (G-1626)
Recorded Holder(s): Westmin Mines Limited		Prospector's Licence No.: T-4638
Address: 25 Adelaide St.E., #1400, Toronto, Ont. M5C 1Y2		Telephone No.: (416) 364-8116
Survey Company: Westmin Mines Limited		
Name and Address of Author (of Geo-Technical Report): A.J.O'Connor, 25 Adelaide St.E.,#1400,Toronto, Ont.M5C 1Y2		Date of Survey (from & to): 11 06 89 / 16 06 89 (Day, Mo., Yr.)

Credits Requested per Each Claim in Columns at right

		Days per Claim
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	
	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	40
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Other	
Total miles flown over claim(s).		

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number
P	1090093				
	1090094				
	1090095				
	1090096				
	1090097				
	1090098				
	1090099				
	1090100				
	1090101				
	1090102				

RECORDED
FEB - 8 1990

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

Date: 5 Feb. 1990
Recorded Holder or Agent (Signature): S.Kuprejanov

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: S.Kuprejanov, 25 Adelaide Street East, Suite 1400

Toronto, Ontario M5C 1Y2 | Telephone No. 416-364-8116 | Date: 5 February 1990 | Certified By (Signature): S.Kuprejanov

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
400	FEB 8/90	S.White Mining Recorder
	Date Approved as Recorded	Provincial Manager, Mining Lands
	See revised work statement	

Received Stamp
PORCUPINE MINING DIVISION
RECEIVED
FEB 8 1990

1362 (89/04)

Westmin Mines Limited
Suite 1400, 25 Adelaide Street East
Toronto, Ontario, Canada
M5C 1Y2
416 364-8116 FAX: 416 364-4920

Mines Westmin Limitée
Bureau 1400, 25, rue Adelaide est
Toronto (Ontario), Canada
M5C 1Y2
(416) 364-8116 FAX: 416 364-4920

REGISTERED MAIL

2.13088

February 12, 1990

Land Management Branch
Mining Land Section
Ministry of Northern Development and Mines
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

Dear Sir: RE: ASSESSMENT REPORT ON LINECUTTING AND GEOLOGICAL MAPPING COMPLETED DURING 1989, ATKINSON EAST CLAIMS

Please find enclosed in duplicate the above mentioned report and a form Technical Data Statement. The form Report of Work has been forwarded to the Mining Recorder Office in Timmins.

Thank you and I hope you will find everything in order.

Yours truly,

WESTMIN MINES LIMITED

Kuprejanov

(Mrs.) S. Kuprejanov
Administrative Geologist

SK/hmc
Encls.

Ontario

Ministry of Natural Resources

File _____

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) Geological and Linecutting

Township or Area Atkinson Lake Area (G-1626)

Claim Holder(s) Westmin Mines Limited

Survey Company Westmin Mines Limited

Author of Report A.J.O'Connor

Address of Author 25 Adelaide St.E.,Toronto, Ont.

Covering Dates of Survey 11 June - 16 June 1989
(linecutting to office)

Total Miles of Line Cut 13.4 km

SPECIAL PROVISIONS CREDITS REQUESTED		DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
	--Electromagnetic	
	--Magnetometer	
	--Radiometric	
ENTER 20 days for each additional survey using same grid.	--Other	
	Geological	40
	Geochemical	

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

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

DATE: 12 Feb.1990 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications 2.12993

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

TOTAL CLAIMS 10

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

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 _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

LOWER DETOUR LAKE G-1647

LITTLE DETOUR LAKE G-1645

KINGROY LAKE G-1643

79°45' — 79°30' — 49°52'30" — 49°45'

Vandette Lake — Little Detour River — Detour River — Monaghan Lake — Ards Lake — Atkinson Lake — Dodson Lake — Cuthbert Lake — Lorr Lake

PROVINCE OF QUEBEC / ONTARIO

156 M — 158 M — 157 M — 155 M — 154 M — 153 M — 152 M

2.13088

32E13SE0007 2.13088 ATKINSON LAKE

200

REFERENCES

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

RECEIVED AUG 10 1989

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	OC
RESERVATION	(R)
CANCELLED	(C)
SAND & GRAVEL	(S)

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

SCALE: 1 INCH = 40 CHAINS

FEET: 0, 1000, 2000, 4000, 6000, 8000
METRES: 0, 250, 1000 (1 KM), 2000 (2 KM)

AREA

ATKINSON LAKE

M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE

MINING DIVISION
PORCUPINE

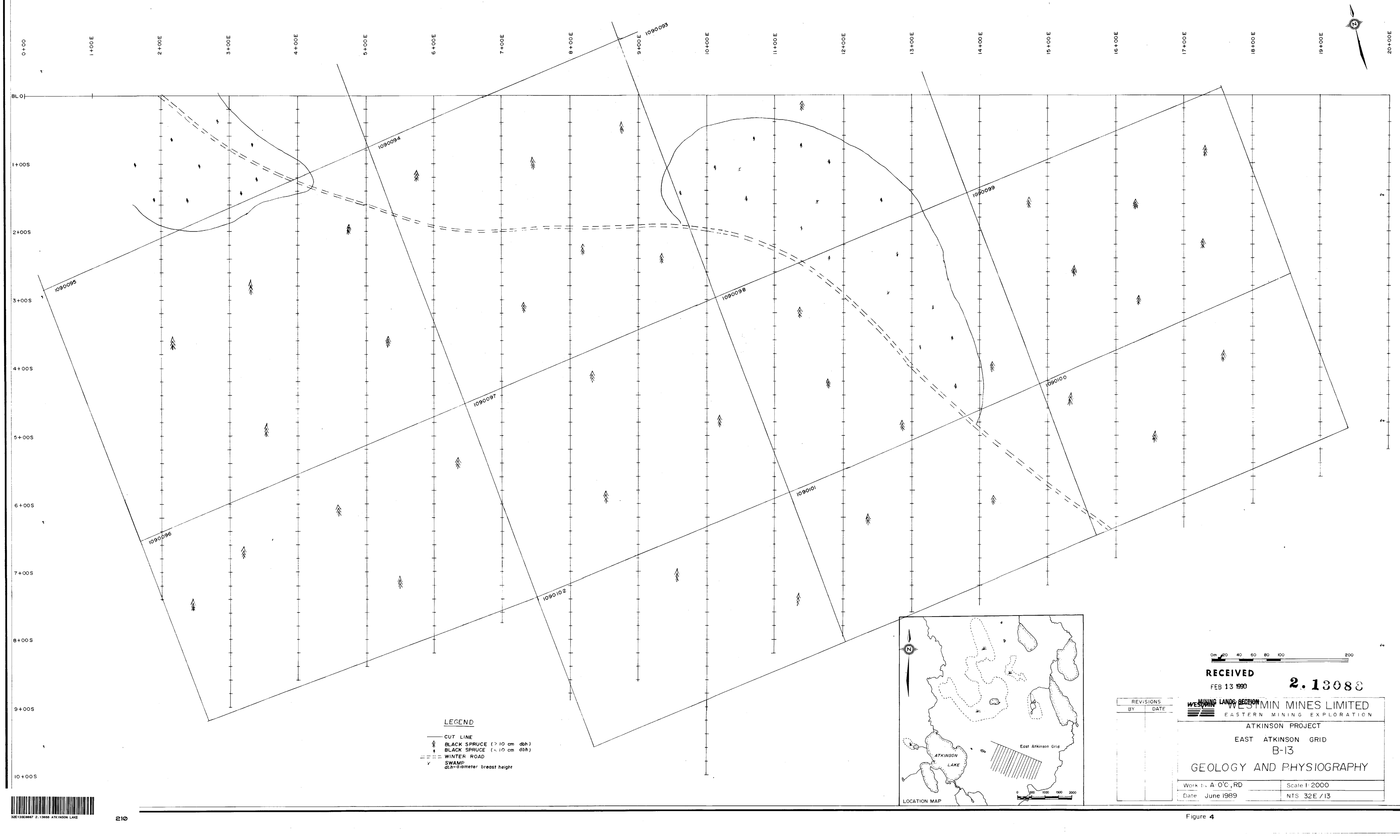
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources — Ontario — Land Management Branch

Date: DECEMBER 1982

Number: G-1626

497783 Received 11 Month 19 Year



2.13088

REVISIONS	
BY	DATE

WESTMIN MINES LIMITED
EASTERN MINING EXPLORATION

ATKINSON PROJECT

EAST ATKINSON GRID

B-13

GEOLOGY AND PHYSIOGRAPHY

Work by A.O'C., R.D.	Scale 1:2000
Date June 1989	NTS 32E/13

Figure 4