

2E13SE0001 2.14038 ATKINSON LAKE

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ATKINSON WEST PROPERTY ASSESSMENT REPORT ON LINECUTTING, GEOPHYSICS AND GEOLOGICAL MAPPING COMPLETED DURING 1990

2.14038

N.T.S. 32E/13 Latitude 49 53'N Longitude 79 40'W

June, 1990

Qual. 2.12993

Alan O'Connor, B.Sc.



2.14038 ATKINSON LAKE

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1.0 <u>Summary</u>:

The Atkinson West property consists of 8 contiguous mining claims which cover 128 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 airborne and ground geophysical surveys as well as diamond drilling completed by both Amoco and Getty Canadian Metals. During the summer of 1989, Westmin completed a program of linecutting (11.84 km) and geological mapping on the eastern portion of the claim group.

The 1990 program consisted of claim staking (2 claims), linecutting (4.72 km), VLF-EM16 (13.8 km) and geological mapping. The mapping program was confined to the two claims staked during the winter of 1990.

		MOLK BC	unundi y	
	Year	Cut-Line (km)	VLF-EM16 (km)	
	1989	11.84	_	
	1990	4.72	13.8	
-	Total:	16.56	13.8	

Table 1

Work Summary

2.0 <u>Recommendations</u>:

Results from both the previous diamond drilling and the 1990 geophysical program indicate that additional work in the form of diamond drilling (450m/3holes) is required to test the economic potential of this property. A budget of approximately 75,000 dollars is proposed.





Fig. 2

3.0 <u>Introduction</u>:

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 West 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 mine site can be used to reach the general project area. A winter road which leads from the minesite to Lac Gagnon near La Sarre, Quebec passes within 3 km of 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 Although the road is no longer maintained, it is still in good condition enabling the use of an amphibious, tracked vehicle, such as an Argo, for access.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. An old drill road joins the main road with the grid.

Float and ski equipped fixed wing aircraft may be used to access Atkinson Lake which is located one kilometre to the east 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 West group consists of 8 contiguous mining claims which cover an area of 128 ha (fig.3). Westmin Mines Ltd. holds a 100% equity interest in the property (Table 2).

3.3 Previous Work:

- 1974 (Report #22): Amoco drilled 2 diamond drill holes on the property for a total of 436.8 metres. These holes intersected graphitic metasediments hosted within siliceous metasediments.
- 1982 (Report #32): Getty Canadian Metals conducted ground EM (Max-MinII) and magnetometer surveys over the property and completed 833.1 metres of diamond drilling in 5 holes. Rock types encountered during this drill program consisted of metasediments, graphitic metasediments and amphibolite.

1989: Westmin Mines Limited completed a program of linecutting (11.84 km) and geological mapping which covered the entire property.

3.4 1990 Work Programme:

During March of 1990, 2 claims were staked at the west end of the Atkinson West claim block to cover the extension of a geophysical conductor. The summer work program consisted of linecutting (4.72 km) and geological mapping within the newly staked claims and the completion of a VLF-EM16 survey (13.8 km) over the entire Atkinson West grid.

ATKINSON WEST -PROPERTY STATUS

Location: Atkinson Lake Area (G-1626), Porcupine Mining Division, Ontario N.T.S. 32-E-13 Lat. 49 49'15"N Long. 79 37'W

Equity: Westmin Mines Limited 100%

<u>Claims</u>	Recording Date	Lease Due	Assessment Work Due	Filed Work
P.1114776	26 June 1989	26 June 1995	26 June 1991	40
P.1114777	26 June 1989	26 June 1995	26 June 1991	40
P.1114778	26 June 1989	26 June 1995	26 June 1991	40
P.1114779	26 June 1989	26 June 1995	26 June 1991	40
P.1114780	26 June 1989	26 June 1995	26 June 1991	40
P.1114781	26 June 1989	26 June 1995	26 June 1991	40
P.1128780	06 April 1990	06 April 1996	06 April 1991	Nil
P.1128781	06 April 1990	06 April 1996	06 April 1991	Nil
8 claims = 128	8 ha (320 ac)			240 days

Date: 18 September 1990

Atkinson West, Ontan Page 1 of 1

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4.0 <u>Regional Geology</u>:

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.

9.

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. Finnaly, the area 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 Linecutting:

A program of linecutting (4.72 km) was completed on the two recently acquired claims at the west end of the claim block. This required extending the baseline 800 m from line 1400 W to line 2200 W. Crosslines were turned off at an angle of 90 degrees from the baseline and were cut to the property boundary. A station spacing of 20 metres was used for the grid. With this recent linecutting program, the total amount of cut line on the Atkinson West property is 16.56 km.

6.0 Geological Survey:

All lines on the recently acquired ground were traversed, however no outcrop was found. The area is covered by muskeg and stands of black spruce with small areas of sparsely vegetated swamp. One drill pad (hole DL-82-10) was located on line 1500 W at 230 S. From the assessment files, the drill record indicates that this hole, which was drilled to a depth of 123.1 metres, intersected graphitic metasediments, siliceous metasediments and amphibolite.

7.0 VLF-EM16 Survey:

A VLF-EM16 survey was completed over the entire grid for a total of 13.8 km. A Geonics instrument was used for the survey with Seattle, Washington used as a transmitting station. Readings were taken facing north at a 20 metre station spacing. Several east-west trending conductors were delineated by the survey, most of which have generally low peak to trough amplitudes. One conductor (100E-700E/250S) shows a good reverse quadrature effect and may therefore represent a bedrock source.

Respectfully submitted by:

el OC

Alan J. O'Connor, B.Sc.

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Certification

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

- I hold a Bachelor of Science degree (geology) received in 1985 from the University of Western Ontario.
- I have practised my profession as a project geologist in the mining industry on a fulltime 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.

Johns, G.W., (1982)

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



Ministry of Northern Development and Mines

Geophysical-Geological-Geochemical Technical Data Statement

File	
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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) LINE CUTTING	G. GEOLOGICAL, GEOPHYSICAL	
Township or Area Atkinson	Loke Area (G-1626)	MINING CLAIMS TRAVERSED
Claim Holder(s) WESTMIN	RESCURCES LIMITED	List numerically
Survey Company WESTMIN	MINES LIMITED	P 1114776
Author of Report ALAN C	MGH 3W3	ρ. <u>(11477</u> 7
Address of Author <u>312 ST. CLAR</u>	ENS AUE, TORONTO, ONT.	0 1114778
Covering Dates of Survey June	$\frac{4-5}{(\text{lineculting to office})}$	
Total Miles of Line Cut4.7	2 km	P 1114774
		P 1114780
SPECIAL PROVISIONS	DAYS	ρ 1114781
CREDITS REQUESTED	Geophysical per claim	P 1128380 *
ENTER 40 days (includes	Electromagnetic2O	
line cutting) for first	Magnetometer	P 1128781
survey.	-Radiometric	
ENTER 20 days for each	-Other	* denotes work lapplied
additional survey using same grid.	Geological <u> </u>	
	Geochemical	to those claims
AIRBORNE CREDITS (Special provi	sion credits do not apply to airborne surveys)	marked
MagnetometerElectromagi (enter of	hetic Radiometric	
DATE: April 3/91 SIGNA	ATURE Author of Report or Agent	
	0 12002	
Res. GeolQualit	fications $2,12915$	
Previous Surveys	Claim Halder	
The No. Type Date		
]		
·····		
		TOTAL CLAIMS_X

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

<u>(</u>	<u>GROUND SURVEYS</u> – If more than one survey, specify	data for each type of survey	\bullet
N	umber of Stations	Number of Readings	
S	tation interval	Line spacing	
P	rofile scale	1 8	
C	ontour interval		
	Instrument		
II	Accuracy – Scale constant		
SNE	Diurnal correction method		
MAC	Base Station check-in interval (hours)		·····
K ⊂4	Base Station location and value		
NETIC	Instrument VLF - EM16 (GEON Coil configuration	nes)	
AG	Coil separation		
MO	Accuracy Accuracy	n - Pa,	<u> </u>
TR	Method:	Shoot back 🗆 In line	🖾 Parallel line
LEC	FrequencySEattle, (spec) dehing ton	
띠	Parameters measured In-phase + out-	of phase	
<u>GRAVITY</u>	Instrument Scale constant Corrections made Base station value and location		
	Elevation accuracy		······································
	Instrument		
	<u>Method</u>	🔲 Frequency Domain	
	Parameters – On time	Frequency	
겁	- Off time	Range	
IVI	– Delay time		
ISI	- Integration time		
RES	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 — in	clude 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)	Aug a 6 aug (1)
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	ANALYTICAL METHODS					
Type of Sample(Nature of Material)	Values expressed in: per cent					
Average Sample Weight	— p. p. b.					
Method of Collection	Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)					
Soil Horizon Sampled	Others					
Horizon Development	Field Analysis (tests)					
Sample Depth	Extraction Method					
Terrain	Analytical Method					
	Reagents Used					
Drainage Development	Field Laboratory Analysis					
Estimated Range of Overburden Thickness	No. (tests)					
	Extraction Method					
·	Analytical Method					
	Reagents Used					
SAMPLE PREPARATION	Commercial Laboratory (tests)					
(includes drying, screening, crusning, asning)	Name of Laboratory					
Mesh size of fraction used for analysis	Extraction Method					
	Analytical Method					
	Reagents Used					
	General					
General						

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Type of Survey(s)			Mir	aing Division		ownship or Area		
LINECUTTING G	EOLOGICAL	+ GEOPH	ISICAL F	BCLPIN	e e	TKINSON (1	AKE A	KEA (G-K2G)
Recorded Holder(s)	Res	OURCES		CINCOLL	<u> </u>	Prospecto	r's Licence	No.
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For first survey:	Geophysical	Claim	Prefix	Number	Prefix	Number	Prefix	Number
Fotos (O dours, (This isoludos	- Electromagnetic	20	ΙΡΙ	1114776		TATES OF	SUR	UEV
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For each additional survey:	Other					JUNE T	5/10	
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I hereby certify that I have a pe after its completion and annexe	rsonal and intimate know d report is true.	wledge of the fac	ts set forth in th	his Report of Work, h	naving perfo	rmed the work or with	essed sam	e during and/or
Name and Address of Person C	Certifying	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
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Westmin Resources Limited Suite 904, 1055 Dunsmuir Street P.O. Box 49066, The Bentall Centre Vancouver, B.C., Canada V7X 1C4 604 681-2253 Telex: 04-51573 Telecopier: 604 681-0357

April 3, 1991

RECEIVED

APR 0 4 1991

VIA COURIER

Land Management Branch Mining Land Section Ministry of Northern Development and Mines 4th Floor, 159 Cedar Street Sudbury, Ontario P3E 6A5

Dear Sir:

RE: ASSESSMENT REPORT ON LINECUTTING, GEOPHYSICS AND GEOLOGICAL MAPPING COMPLETED DURING THE SUMMER OF 1990, ATKINSON WEST CLAIMS

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

Please note that on the form Westmin Resources Limited is shown as the recorded holder. On December 31, 1990 an amalgamation occurred between Westmin Mines Limited (WML) and Westmin Resources Limited (WRL). A name change, from WML to WRL, on all our Ontario claims and mining leases is being handled by a third party and I am unsure at present if the change has been made at all Mining Recorders' locations.

I hope you find everything in order.

Sincerely,

WESTMIN RESOURCES LIMITED

Janet M. S. Hopkins, B.Sc. Administrative Geologist

JMSH/blj JMSH/B91.001



79930'

REFERENCES AREAS WITHDRAWN FROM DISPOSITION M.R.O. - MINING RIGHTS ONLY S.R.O. - SURFACE RIGHTS ONLY -49°52'30" M.+ S. - MINING AND SURFACE RIGHTS THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MIN-ING CLAIMS SHOULD CON SULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOP-MENT AND MINES, FOR AD-DITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON LEGEND **______** HIGHWAY AND ROUTE No. OTHER ROADS _____ TRAILS -----4 . 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 · has a second second second MARSH OR MUSKEG MINES TRAVERSE MONUMENT **DISPOSITION OF CROWN LANDS** TYPE OF DOCUMENT SYMBO PATENT, SURFACE & MINING RIGHTS, SURFACE RIGHTS ONLY_ MINING RIGHTS ONLY LEASE, SURFACE & MINING RIGHTS SURFACE HIGHTS ONLY. MINING RIGHTS ONLY. LICENCE OF OCCUPATION - ----ORDER-IN-COUNCIL OC RESERVATION CANCELLED SAND & GRAVEL TTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 8. 1913, VESTED IN ORIGINAL PATENTEE BY THE PLOLAC LANDS ACT, R.S.O. 3970, CHAP. 380, SEC. 63, SUBSEC 1. + REMOTE TOURIST CAMP SCALE: 1 INCH = 40 CHAINS 2000 1000 41.KM) ; METRES . AREA ATKINSON LAKE M.N.R. ADMINISTRATIVE DISTRICT 46 COCHRANE MINING DIVISION PORCUPINE LAND TITLES / REGISTRY DIVISION COCHRANE Ministry of Land R Natural Management Resources Branch -49°45' Ontario · · · · · · · · · · · · Nymbor Date DECEMBER 1982 G-1626 49TT93 Received MARCH 19/14 · / - ·





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