

MAP NO.: ASSESSMENT REPORT  
106D 16 PROSPECTUS  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 093124  
MINING DISTRICT: MAYO  
TYPE OF WORK: GEOCHEMICAL

REPORT FILED UNDER: PAMICON DEVELOPMENTS LTD

DATE PERFORMED: SEPT 1, 1992

DATE FILED: JUNE 11, 1993

LOCATION: LAT.: 65°07'N

AREA: BEAR RIVER

LONG.: 134°32'W

VALUE \$: 2,700

CLAIM NAME & NO.: CLEAVLAND 1-6 (YB28580-585)

WORK DONE BY: MICHAEL A. STAMMERS

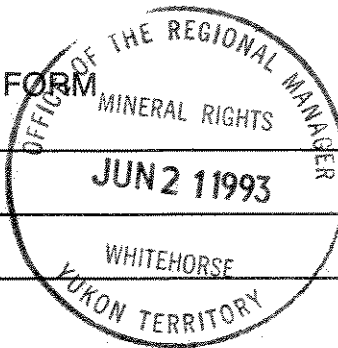
WORK DONE FOR: WESTMIN RESOURCES LTD.

DATE TO GOOD STANDING:


REMARKS: BRECCIAS BEING EVALUATED FOR OLYMPIC DAM TYPE CU  
U, AU, AG MINERALIZATION. 1 GRAB SAMPLE AND 13 LITHOGEOCHEMICAL  
SAMPLES WERE COLLECTED FROM THE PROPERTY



TRANSMITTAL FORM



M.R. file no.
R.M.M.R. file no.
Date forwarded <b>JUN 15 1993</b>

From Mining Recorder at: **MAYO, YUKON**

To Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name	
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name	Lease no.
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name	Lease no.
<input type="checkbox"/> SECURITY DEPOSIT		
<input type="checkbox"/> FINANCIAL ABILITY		
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From	To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner	
<input type="checkbox"/> DIAMOND DRILL LOGS	Claims	Claim sheet no.
<input checked="" type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims <i>Cleveland 1-6</i>	Claim sheet no. <i>106-D-16</i>
	Type of report <i>Geochemical</i>	Submitted by <i>Pamicon Developments Ltd / Michael A. Stammers.</i>
	Cis. work performed on	\$ req. for ren. application <i>2700.00</i>

Please return one numbered copy and index card for our files.

*[Signature]*  
Signature

REPLY ACTION

Date returned

**09312**

Signature



1992 GEOCHEMICAL REPORT  
ON THE  
CLEVELAND 1-6 MINERAL CLAIMS



Mayo Mining District  
Yukon Territory  
NTS 106D/16  
64°53' North Latitude  
134°18' West Longitude

*(mirrored text from reverse side)*  
- Prepared for -  
**WESTMIN RESOURCES LTD.**

*(mirrored text from reverse side)*  
- Prepared by -  
**MICHAEL A. STAMMERS, P. Geo.**

**093124**

DATE WORK PERFORMED: September 1, 1992

DATE OF REPORT: December, 1992

# 1992 GEOCHEMICAL REPORT ON THE CLEVELAND 1-6 MINERAL CLAIMS

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## 1.0 INTRODUCTION

The Cleveland 1-6 claims are located in the Wernecke Mountains, approximately 165 kilometres north-northeast of Mayo in east central Yukon (Figure 1). The Wernecke Mountains are cored by at least 14,000 metres of generally fine-grained terrigenous and carbonate rocks of Helikian age that have been penetrated by mineralized breccias and cut by mafic sills and dykes. Exploration to date in the Wernecke Mountains has been directed sporadically at copper from the early 1900s until the discovery of uranium mineralization associated with hematite breccias in 1974. Occurrences of copper and breccia-related copper-gold-cobalt mineralization have been noted in the basin, but were largely by-passed in the search for uranium and lead-zinc deposits between 1974 and 1980. The geological setting of the Wernecke Mountains is excellent for hosting Olympic Dam copper-uranium-gold-silver breccia type and the Cleveland property was acquired on this basis.

Lithogeochemical sampling and geological mapping work was carried out over the Cleveland property on September 1, 1992. This work program was conducted jointly by Pamicon Developments Ltd. and Equity Engineering Ltd. for Westmin Resources Ltd. The same companies have been retained to report on the field-work.

## 2.0 LIST OF CLAIMS

The Cleveland property comprises 6 contiguous quartz mineral claims, located in the Mayo Mining District (Figure 2). Government records indicate that the following claims are owned by M. Stammers of North Vancouver, B.C. Separate documents indicate that they are held under option by Westmin Resources Ltd.

### Claim Data

2	<u>Claim Name</u>	<u>Record Numbers</u>	<u>Record Date</u>	<u>Expiry Date*</u>
	Cleveland 1-6	YB28580-28585	July 5, 1992	December 31, 1997

\*Subject to approval of assessment work covered by this report.

WESTMIN RESOURCES LIMITED

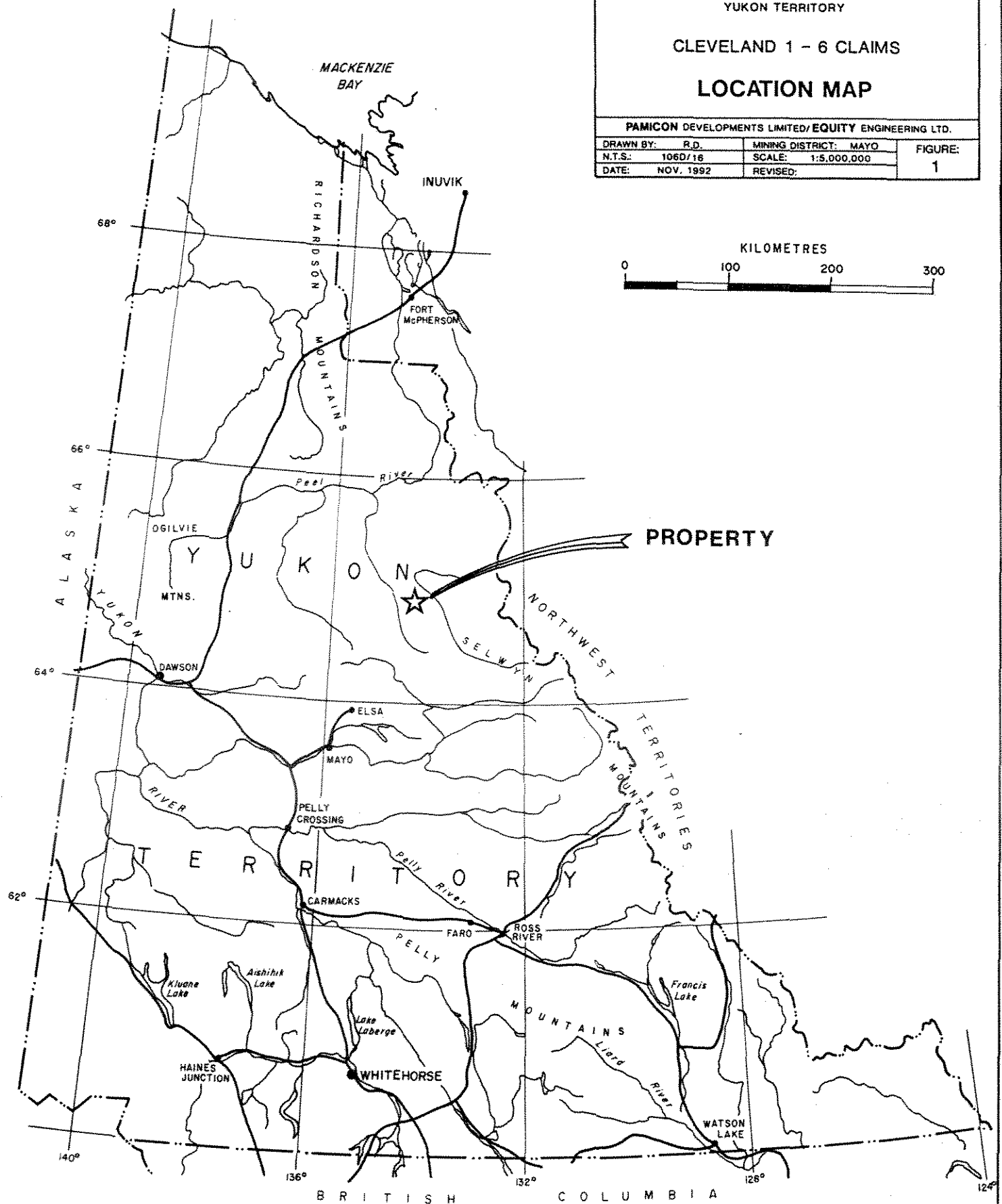
FAIRCHILD LAKE PROJECT  
YUKON TERRITORY

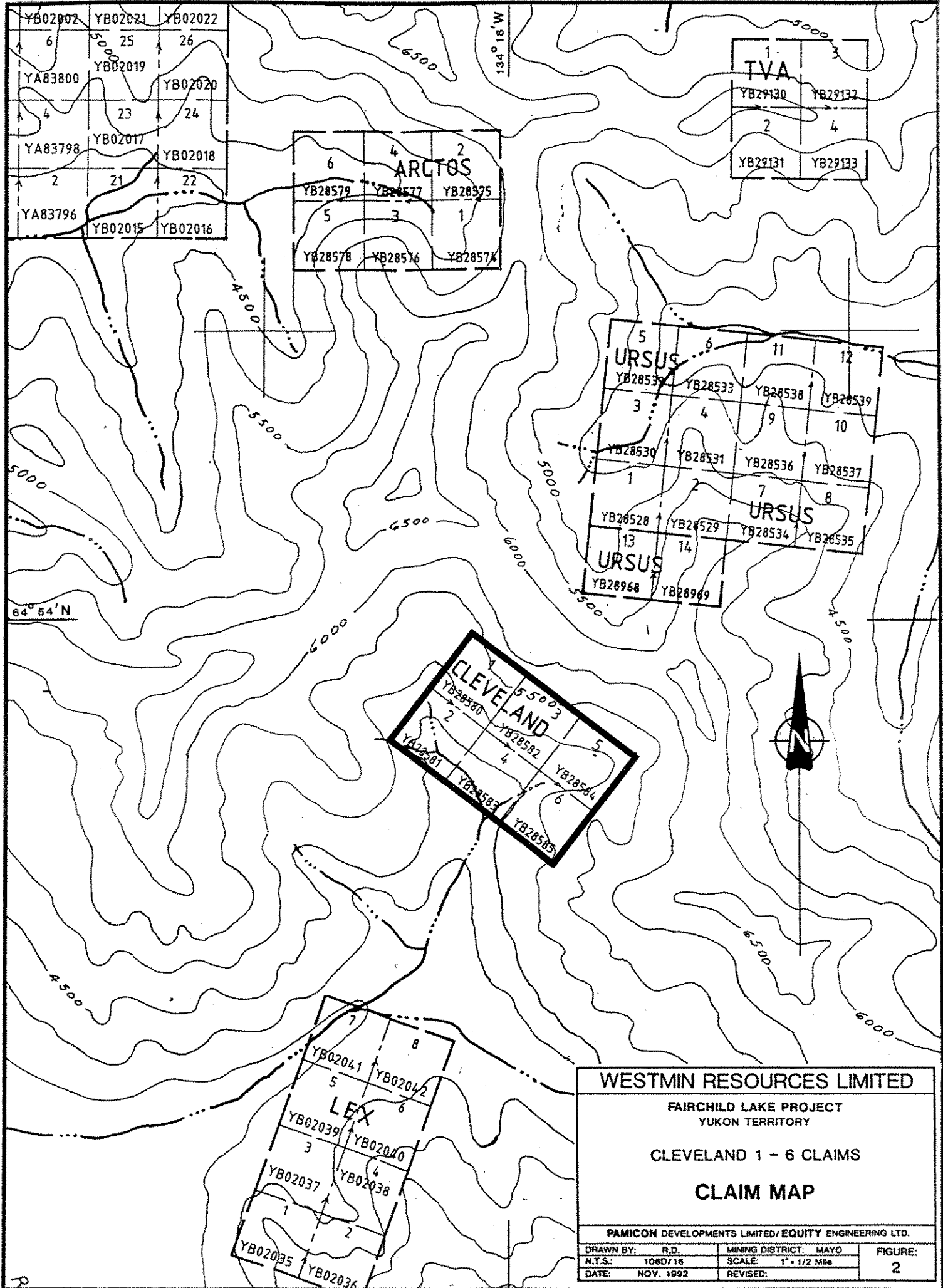
CLEVELAND 1 - 6 CLAIMS

LOCATION MAP

PAMICON DEVELOPMENTS LIMITED/EQUITY ENGINEERING LTD.

DRAWN BY:	R.D.	MINING DISTRICT:	MAYO	FIGURE:
N.T.S.:	106D/18	SCALE:	1:5,000,000	1
DATE:	NOV. 1992	REVISED:		





YB02002	YB02021	YB02022
6	25	26
YA83800	YB02019	YB02020
4	23	24
YA83798	YB02017	YB02018
2	21	22
YA83796	YB02015	YB02016

6	4	2
<b>ARCTOS</b>		
YB28579	YB28577	YB28575
5	3	1
YB28578	YB28576	YB28574

1	
<b>TVA</b>	
YB29130	YB29132
2	4
YB29131	YB29133

5	6	11	12
<b>URSUS</b>			
YB28539	YB28533	YB28538	YB28539
3	4	9	10
YB28530	YB28531	YB28536	YB28537
1	2	7	8
<b>URSUS</b>			
YB28528	YB28529	YB28534	YB28535
13	14		
<b>URSUS</b>			
YB28968	YB28969		

1	55003
<b>CLEVELAND</b>	
YB28580	YB28582
2	4
YB28581	YB28583
	6
	YB28584
	YB28585

7	8
YB02041	YB02042
5	6
<b>LEX</b>	
YB02039	YB02040
3	4
YB02037	YB02038
1	2
YB02035	YB02036

<b>WESTMIN RESOURCES LIMITED</b>			
FAIRCHILD LAKE PROJECT YUKON TERRITORY			
CLEVELAND 1 - 6 CLAIMS			
<b>CLAIM MAP</b>			
PAMICON DEVELOPMENTS LIMITED/EQUITY ENGINEERING LTD.			
DRAWN BY:	R.D.	MINING DISTRICT:	MAYO
N.T.S.:	1060/16	SCALE:	1" = 1/2 Mile
DATE:	NOV. 1992	REVISED:	
			FIGURE: <b>2</b>

### 3.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Cleveland property is located in the Wernecke Mountains of east central Yukon, approximately 165 kilometres north-northeast of Mayo (Figure 1). The claim group is located 26 kilometres west-southwest of Fairchild Lake at the headwaters of a south flowing tributary of Bear River. Coordinates are 64°53' north latitude and 134°18' west longitude.

The project area is accessible from Mayo by float plane to either Fairchild or Gillespie Lake and by wheeled aircraft to the 800 metre long, gravel airstrip at Bear River. Other airstrips in the area are no longer serviceable. The village of Mayo has scheduled air service from Whitehorse and is located on the Silver Trail Highway (#11), a branch of the Klondike Highway (#2).

Access during the 1992 field program was by DC3 aircraft from Mayo to the Bear River airstrip and thence by helicopter 7.5 kilometres northeast to a basecamp established on the company's Mica claims. The Cleveland property lies 5.5 kilometres west-northwest of the basecamp.

The Wind River winter tote road originating near Elsa, was built through the project area during the 1950s to access oil and gas exploration sites to the north and in the early 1960s was utilized again during work on the Snake River (Crest) iron deposit. In the late 1960s several spur trails and airstrips were constructed providing access to the Dolores Creek, Wind River, and Bonnet Plume copper prospects and to the Bear River iron deposit. The winter road was used by Pan Ocean Oil during their coal and uranium exploration program in 1979 and 1980.

Elevations on the Cleveland property range from 1250 to 1860 metres above sea level and relief is moderate to locally steep. All of the property lies above tree line. Climate in the area is characterized by long, cold winters and short warm summers with June, July and August the best months for exploration.

#### 4.0 AREA HISTORY

The first copper occurrences were noted by trappers working in the region at the turn of the century. In 1935, the McCluskey Lake copper occurrences were staked and the Bonnet Plume and Wind River area received sporadic exploration for copper over the next 20 years. Exploration activity was stimulated in the early 1960s when California Standard Company through their subsidiary Crest Exploration Limited worked on their world class banded iron deposit in the Snake River area. Drilling outlined 18.6 billion tonnes averaging 47% iron in the Hadrynian Rapitan Group. (Yeo, 1986).

In the early 1960s, the first copper showing was found at Dolores Creek by L. Brown. Bonnet Plume River Mines Ltd. conducted exploration from 1967 to 1969, at which time limited diamond drilling was completed (Laznicka and Edwards, 1979).

In 1971, the discovery of zinc-lead showings in the Mackenzie Mountains to the east brought exploration activity to the southeastern portion of the Wernecke Mountains. Continued lead-zinc exploration in the Proterozoic basin led to the discovery of uranium mineralization in 1974 by Archer, Cathro and Associates Ltd. In the period 1975 to 1980, a number of major companies (i.e. Urangesellschaft, Noranda) and joint ventures (i.e. Wernecke Joint Venture, Mountaineer Mines-Pan Ocean Oil Ltd.) were involved in exploration of breccia-related uranium mineralization. At this time, Pan Ocean drilled coal reserves on their leases to outline in excess of 500 million tonnes of low sulphur, high volatile bituminous coal in Cretaceous strata in the Bonnet Plume Basin located north of the Wernecke Mountain Range.

The 1980s saw very limited work throughout the project area. Archer Cathro, Texaco and Cyprus Gold embarked on limited exploration campaigns to test the gold potential of some of the known uranium or copper occurrences. The lack of recent exploration activity has allowed most of the staked areas to come open. On the Cleveland property, no record of work or previous claims is known.

## 5.0 1992 EXPLORATION PROGRAM

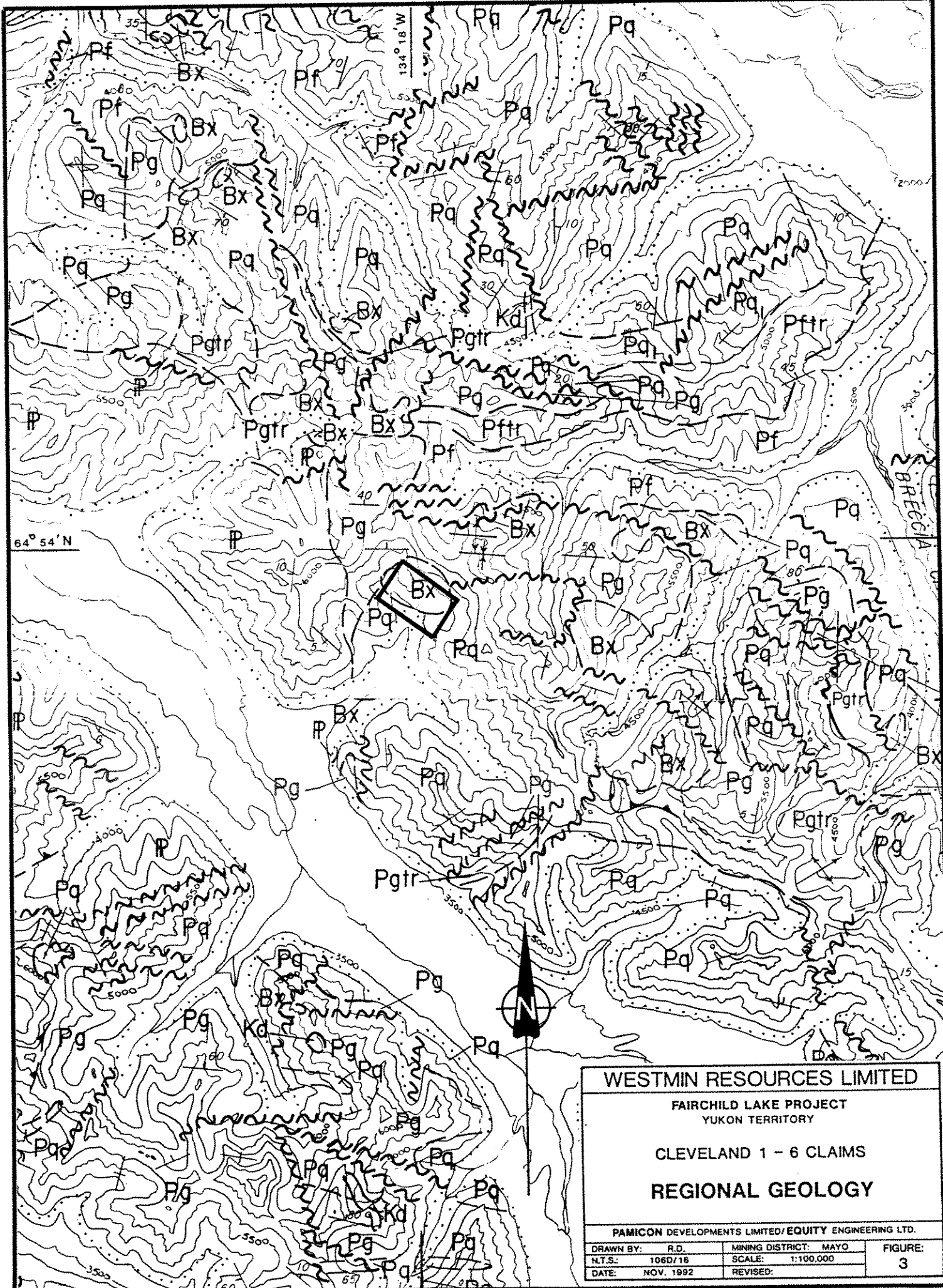
On September 1, 1992, Westmin Resources Ltd. carried out a preliminary exploration program on the Cleveland property, consisting of lithochemical sampling and geological mapping. The program was designed to determine the potential for an Olympic Dam copper-uranium-gold-silver breccia type deposit. A total of 13 lithochemical and 1 grab samples was taken.

Lithochemical samples were taken approximately 100 metres apart, generally along contours where outcrop exposures and talus slopes were accessible for sampling. The purpose of these samples was threefold: (1) to determine the tenure of copper mineralization as a bulk tonnage target, (2) to locate areas where chalcocite may be present, and (3) to define geochemical trends within the hematite breccias and into the surrounding sedimentary rocks. Rock sample descriptions and analytical certificates are found in the appendices. Rock samples were analyzed geochemically for gold, lanthanum, uranium and 24-element ICP. Samples exceeding 10,000 ppm copper were assayed. In the field, sample locations were marked by a metal tag and a combination of pink and blue flagging. Approximate UTM coordinates were derived from known topographical features combined with altimeter derived elevations and compass and hipchain measurements for each sample site.

Geological mapping was carried out on a scale of 1:10,000 and was generally limited to the lithochemical sample lines.

## 6.0 REGIONAL GEOLOGY (Figure 3)

This summary of the regional geology is based on work by Delaney (1985) and by Pamicon Developments Ltd. (unpublished, 1977). References to earlier work are cited by Delaney. Work in progress by Thorkelson for 1:50,000 mapping of NTS 106D/16 is expected to be published in 1993 jointly by Yukon and Canada governments.



**WESTMIN RESOURCES LIMITED**  
 FAIRCHILD LAKE PROJECT  
 YUKON TERRITORY

**CLEVELAND 1 - 6 CLAIMS**

**REGIONAL GEOLOGY**

PAMICON DEVELOPMENTS LIMITED/EQUITY ENGINEERING LTD.

DRAWN BY: R.D.	MINING DISTRICT: MAYO	FIGURE: 3
N.T.S.: 106D/16	SCALE: 1:100,000	
DATE: NOV. 1992	REVISED:	

# LEGEND

(to accompany Figure 3)

## LITHOLOGIES

### QUATERNARY

Q Unconsolidated glacial and alluvial deposits.

### CRETACEOUS(?)

Kd Diabase

Kdi Diorite

### PALEOZOIC

P Carbonate and siliciclastic sediments, undivided.

### PROTEROZOIC

Pp *Pinguicula Group*: Carbonate and siliciclastic sedimentary rocks and lesser volcanics.

Bx *Hematite breccia*

### WERNECKE SUPERGROUP

Pg *Gillespie Lake Group*: Buff-, orange-, grey-, and locally maroon-weathering dolomite, dolomite terrigenous admixtures, limestone, claystone, mudstone, siltstone and fine sandstone.

Pqtr Transitional Zone: Interbedded dolomite and dark siltstone/shale with characteristic striped appearance.

Pq *Quartet Group*: Dark grey- and grey-weathering siltstone, mudstone, claystone and fine sandstone (wavy bedded); locally quartzites.




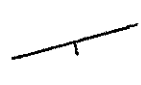

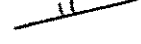



Pq<sub>1</sub> Black shale with sandstone and shale interbeds, quartzite.

Pq<sub>2</sub> Pyritic quartzite.

Pf *Fairchild Lake Group*: Light grey-, greenish grey-, and locally dark grey-weathering shale, siltstone (80%), fine sandstone and limestone (20%); locally phyllites, schists and slates.

Pftr Transitional Zone: Shale and brown-weathering dolomite with limestone marker unit, pyritic black shale.

## SYMBOLS

-  Geological contact (defined, approximate, assumed)
-  Thrust fault (defined, approximate)
-  Fault (defined, assumed)
-  Bedding attitude defined (G-gentle, M-moderate, S-steep)
-  Bedding overturned
-  Bedding tops unknown
-  Anticlinal axis (arrow indicates plunge)
-  Synclinal axis (arrow indicates plunge)
-  Limits of unconsolidated glacial and alluvial deposits

The Wernecke Mountains are cored by at least 14,000 metres of generally fine-grained terrigenous and carbonate rocks of Helikian age that have been penetrated by hematite breccias and cut by mafic sills and dykes. The entire succession has been named the Wernecke Supergroup and has been divided into three groups (oldest to youngest): Fairchild Lake Group, Quartet Group and Gillespie Lake Group. To the east and south, the Hadrynian Pinguicula Group unconformably overlies the Wernecke Supergroup. Paleozoic strata bound the western margin and Cretaceous and Tertiary sediments fill the area to the north in the Bonnet Plume Basin.

A complete table of formations including lithologies is presented on the legend following Figure 3. This map is a portion of the 1:100,000 regional geology plan completed by Pamicon Developments Ltd. in 1977.

The main structural components of the Wernecke terrane are the southeast trending fault splays (Deslauriers, Knorr and Snake River Faults) of the Richardson Fault Array. These faults are interpreted to be deep-seated, long-lived, vertical structures which have undergone considerable right lateral and vertical movement.

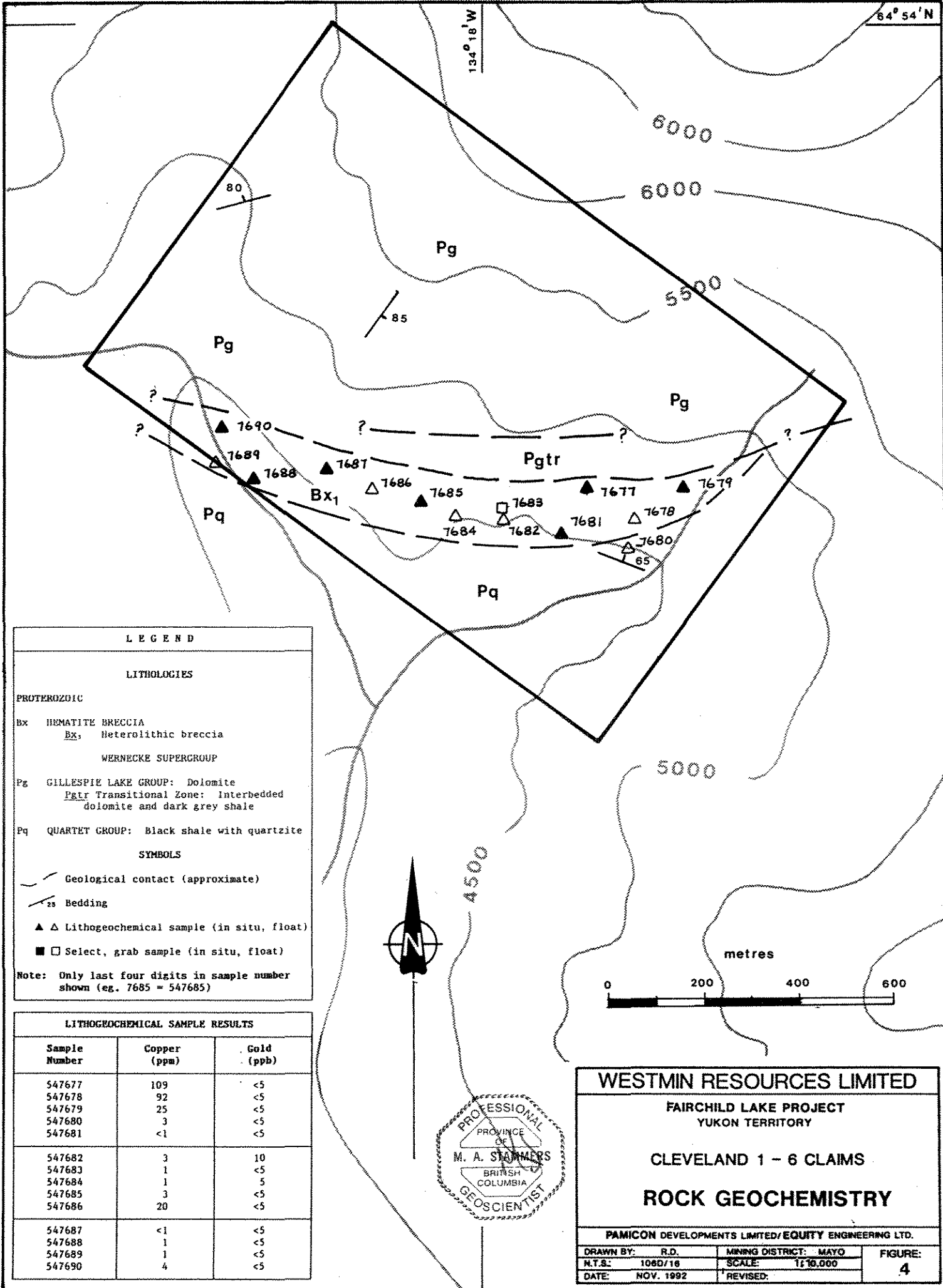
#### 7.0 PROPERTY GEOLOGY AND MINERALIZATION (Figure 4)

The Cleveland claim group is underlain by Gillespie Lake Group dolomite and minor dark grey shale in contact with Quartet Group black shale and quartzite. A heterolithic, hematite breccia body occupies the contact zone between the two groups and was the focus of the 1992 lithogeochem sampling program.

Where traversed, the Gillespie Lake unit comprised orange, grey and tan weathering, medium bedded dolomite with minor black chert nodules and minor interbeds of grey shale and/or siltstone. The distinctive Transitional Zone was also mapped and comprised interbedded orange weathering dolomite and black carbonaceous shale.

64° 54' N

134° 18' W



LEGEND

LITHOLOGIES

PROTEROZOIC

Bx HEMATITE BRECCIA  
Bx<sub>1</sub> Heterolithic breccia

WERNECKE SUPERGROUP

Pg GILLESPIE LAKE GROUP: Dolomite  
Pgtr Transitional Zone: Interbedded dolomite and dark grey shale

Pq QUARTET GROUP: Black shale with quartzite

SYMBOLS

- - - Geological contact (approximate)
- / - Bedding
- ▲ ▲ Lithogeochemical sample (in situ, float)
- □ Select, grab sample (in situ, float)

Note: Only last four digits in sample number shown (eg. 7685 = 547685)

LITHOGEOCHEMICAL SAMPLE RESULTS

Sample Number	Copper (ppm)	Gold (ppb)
547677	109	<5
547678	92	<5
547679	25	<5
547680	3	<5
547681	<1	<5
547682	3	10
547683	1	<5
547684	1	5
547685	3	<5
547686	20	<5
547687	<1	<5
547688	1	<5
547689	1	<5
547690	4	<5

WESTMIN RESOURCES LIMITED

FAIRCHILD LAKE PROJECT  
YUKON TERRITORY

CLEVELAND 1 - 6 CLAIMS

ROCK GEOCHEMISTRY

PAMICON DEVELOPMENTS LIMITED/EQUITY ENGINEERING LTD.

DRAWN BY: R.D.	MINING DISTRICT: MAYO	FIGURE: 4
N.T.S.: 106D/16	SCALE: 1:10,000	
DATE: NOV. 1992	REVISED:	

The Quartet Group rocks were examined at only three localities and comprised dark grey slaty shales with minor siltstone. At one locality a thick bed of orthoquartzite was exposed.

The sill-like body of heterolithic hematite breccia is approximately 100 m wide and appears to be terminated to the east but continues to the west off the property. This matrix supported breccia generally contains between 5 and 20% specular hematite and locally 1 to 3% magnetite. Fragments of dolomite and shale up to 10 cm long are pervasively altered to jasper (silicification and hematization) and albite.

Mineralization as noted includes abundant specular hematite, minor magnetite and at one location a single talus block of breccia containing trace chalcopyrite and malachite was observed.

#### 8.0 ROCK GEOCHEMISTRY (Figure 4)

A total of 13 lithogeochemical samples and 1 grab sample was collected from the Cleveland claims. Where possible, bedrock was sampled every 100 metres and if absent coarse talus was substituted. Figure 4 gives sample type, tag number and a table of results including copper, and gold.

Results for all elements generally appear below or at background levels known from previous work in the area. Copper values are very low, ranging from <1 to 109 ppm with 10 of 14 values less than or equal to 4 ppm Cu. Cobalt results vary between <1 to 13 ppm and gold values range from <5 (12 samples) to 10 ppb. A single anomalous value of 270 ppm lanthanum was returned from the grab sample of massive specular hematite.

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The Cleveland 1-6 mineral claims were staked in June 1992 to cover a hematite breccia body during the course of an acquisition program pursuing Olympic Dam type copper-gold-uranium-silver deposits. Total time spent on the property was limited to one man day, resulting in an incomplete evaluation. Results of the mapping and lithochemistry sampling program failed to locate significant or anomalous copper mineralization on the property in the targeted breccia body. Only limited further work including prospecting and rock sampling on the property is advised.

Respectfully submitted,



Michael A. Stammers, P.Geo.

APPENDIX I

BIBLIOGRAPHY

## BIBLIOGRAPHY

Delaney, G.D. (1981): The Mid-Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory; in Proterozoic Basins of Canada, Geological Survey of Canada, Paper 81-10, p. 1-23.

Delaney, G.D. (1985): The Middle Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory; unpublished Ph.D. Thesis, University of Western Ontario, 373 pp.

Laznicka, P. and R.J. Edwards (1979): Dolores Creek, Yukon - A Disseminated Copper Mineralization in Sodic Metasomatites; in Economic Geology, Vol. 74, p. 1352-1370.

Pamicon Developments Ltd (1977) Unpublished Company Report

Yeo, G.M. (1986): Iron-Formation in the Late Proterozoic Rapitan Group, Yukon and Northwest Territories; in Mineral Deposits of the Northern Cordillera, Canadian Institute of Mining and Metallurgy Special Vol. 37, p. 142-153.

APPENDIX II

LIST OF PERSONNEL

LIST OF PERSONNEL  
CLEVELAND 1-6 MINERAL CLAIMS  
AUGUST 10 TO SEPTEMBER 10, 1992

M. Stammers 711, 675 West Hastings Street Vancouver, B.C. V6B 1N4	Senior Geologist	3 days
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K. Parsons c/o TNTA Carmacks, Yukon	Cook	.5 days
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APPENDIX III

COST STATEMENT

CANADA ) In the matter of an evaluation program on the Cleveland 1-6  
 ) Mineral Claims

I, Mike Stammers for Pamicon Developments Ltd., 711, 675 West Hastings Street, Vancouver, B.C. do solemnly declare that a program consisting of lithochemical sampling and geological mapping was carried out on the Cleveland Mineral Claims during the period August 10 to September 10, 1992.

The following expenses were incurred during the course of this work and in the compilation and reporting of the results:

**WAGES**

M. Stammers (Sr. Geologist) - 3 days @ \$375.00	\$ 1,125.00	
711, 675 West Hastings Street		
Vancouver, B.C. V6B 1N4		
K. Parsons (Cook) - .5 days @ \$250.00	125.00	
c/o TNTA		
Carmacks, Yukon		
		<hr/>
		\$ 1,250.00

**HELICOPTER**

Flight Time - .6 hours @ \$600.00	\$ 360.00	
Fuel	95.54	
		<hr/>
		455.54

**ASSAYS**

14 rock samples @ \$14.95		209.30
---------------------------	--	--------

**GENERAL EXPENSES**

Travel, Accommodation and Meals	\$ 80.15	
Airfares	62.00	
Camp Food	79.06	
Camp Fuel	5.14	
Camp Rental	119.50	
Radio Rental	16.70	
Field Equipment Rental	9.80	
Equipment Fuel	2.88	
Truck Rental	42.01	
Field Equipment and Supplies	82.97	
Maps and Reproductions	15.56	

Expediting	20.79	
Telephone and Communications	14.35	
Fixed Wing	480.00	
Freight	16.73	
Legal Fees (notarizing claims forms)	1.27	
Clerical (UTM's, etc.)	45.90	
Report	1,057.89	
Management Fee	<u>542.93</u>	<u>2,695.63</u>
	Subtotal	4,610.47
GST		<u>322.73</u>
TOTAL THIS PROJECT		<u>\$ 4,933.20</u>

## Notes:

1. Wages are based on man days spent on the property and prep time charges.
2. Helicopter charges are based on actual hours flown.
3. Assay charges are based on actual numbers of samples from the property.
4. General expenses (all other costs) are pro rated according to man days allocated to each property, which in this case is 2% of the total budget.

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in )  
 the Province of British Columbia this )  
27<sup>th</sup> day of JANUARY, 1993.)

*Heike Stumm*

*H.S.M.*

A Commissioner for Oaths for, or  
 Notary Public for the Yukon Territory

## APPENDIX IV

### ROCK SAMPLE DESCRIPTIONS

#### MINERALS AND ALTERATION TYPES

AS	arsenopyrite	BA	barite	BI	biotite
CA	calcite	CB	Fe-carbonate	CC	chalcocite
CL	chlorite	CP	chalcopyrite	CY	clay
DI	diopside	EP	epidote	GA	garnet
GE	goethite	GL	galena	HE	hematite
HS	specularite	JA	jarosite	MC	malachite
MG	magnetite	MN	Mn-oxides	MS	sericite
PO	pyrrhotite	PY	pyrite	QZ	quartz
SI	silica	SP	sphalerite	TT	tetrahedrite

#### ALTERATION INTENSITIES

s strong                      m medium                      w weak                      tr trace

NOTE: Copper values are shown in either parts per million (whole numbers) or as a percentage (decimal numbers)

Property : CLEVELAND

NTS : 106D/16

Date : 12/06/92

Sample No.	Location :	7196 610 N	Type :	Chip/comp	Alteration :	CL, KF, SI, HE	Au	Co	Cu	La	U	W
		533 630 E	Strike Length Exp. :	m	Sulphides :	<1%CP, <1%MG, 10-30%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547677	Elevation:	1645 m	Sample Width :	m	Oxides :	MC	<5	10.	109.	70.	<10	20.
	Orientation:	/	True Width :	m	Host :	Wernecke breccia						

Comments : Nice looking hematite breccia (hetero). Note jasper and albite clasts. Some real scarlet red sections. Located approximately 160m SE of claim posts 5-8.

Sample No.	Location :	7196 540 N	Type :	Chip/comp	Alteration :	CL, KF, MS, SI, HE	Au	Co	Cu	La	U	W
		533 730 E	Strike Length Exp. :	m	Sulphides :	<1%MG, 5-10%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547678	Elevation:	1630 m	Sample Width :	m	Oxides :	None	<5	8.	92.	40.	<10	20.
	Orientation:	/	True Width :	m	Host :	Wernecke breccia						

Comments : Lithogeochem composite grab/chip.

Sample No.	Location :	7196 610 N	Type :	Chip/comp	Alteration :	CL, KF, MS, SI, HE	Au	Co	Cu	La	U	W
		533 830 E	Strike Length Exp. :	m	Sulphides :	<2-5%MG, 5-20%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547679	Elevation:	1618 m	Sample Width :	m	Oxides :	None	<5	11.	25.	30.	<10	20.
	Orientation:	/	True Width :	m	Host :	Wernecke hematite breccia						

Comments : Good Wernecke hematite breccia. No copper evident. Lithogeochem sample.

Sample No.	Location :	7196 490 N	Type :	Float/comp	Alteration :	KF, MS, SI, HE	Au	Co	Cu	La	U	W
		533 720 E	Strike Length Exp. :	m	Sulphides :	20-60%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547680	Elevation:	1555 m	Sample Width :	m	Oxides :	None	<5	7.	3.	70.	<10	10.
	Orientation:	/	True Width :	m	Host :	Wernecke hematite breccia						

Comments : Very strong specularite. Note: no quartzite float here.

Sample No.	Location :	7196 510 N	Type :	Chip/comp	Alteration :	CL, KF, MS?, SI, HE	Au	Co	Cu	La	U	W
		533 580 E	Strike Length Exp. :	m	Sulphides :	1-5%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547681	Elevation:	1538 m	Sample Width :	m	Oxides :	None	<5	4.	<1	40.	<10	20.
	Orientation:	/	True Width :	m	Host :	Wernecke breccia						

Comments : 350m at 290o from end posts. 25m east of creek draw. Some local shearing. Lithogeochem sample.

Sample No.	Location :	7196 540 N	Type :	Chip/comp	Alteration :	HE	Au	Co	Cu	La	U	W
		533 450 E	Strike Length Exp. :	m	Sulphides :	90%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547682	Elevation:	1530 m	Sample Width :	m	Oxides :	None	10.	0.	3.	270.	<10	40.
	Orientation:	/	True Width :	m	Host :	Massive Hematite (specularite)						

Comments : Eight or ten large blocks of massive specularite coming out of the grass; weathers indistinguishable.

Property : CLEVELAND

NTS : 106D/16

Date : 12/06/92

Sample No. Location : 7196 540 N Type : Float/chip Alteration : CL, KF, MS, SI Au Co Cu La U W  
 533 450 E Strike Length Exp. : m Sulphides : 1-3%HS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547683 Elevation: 1538 m Sample Width : m Oxides : MN? <5 4. 1. 10. <10 10.  
 Orientation: / True Width : m Host : Wernecke hematite breccia  
 Comments : Lithogeochem composite chip. Sample located approximately 100m downslope from Cleveland 3-6 claim posts.

Sample No. Location : 7196 550 N Type : Float/chip Alteration : KF, MS, SI Au Co Cu La U W  
 533 350 E Strike Length Exp. : m Sulphides : 1-10%HS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547684 Elevation: 1525 m Sample Width : m Oxides : None 5. 6. 1. 60. <10 20.  
 Orientation: / True Width : m Host : Wernecke hematite breccia  
 Comments : Lithogeochem sample. Good local specularite; 550m west of end posts.

Sample No. Location : 7196 570 N Type : Chip Alteration : CB, CL, MS Au Co Cu La U W  
 533 290 E Strike Length Exp. : m Sulphides : trHS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547685 Elevation: 1500 m Sample Width : m Oxides : None <5 7. 3. 50. <10 20.  
 Orientation: / True Width : m Host : Wernecke breccia (sheared and altered)  
 Comments : Sample taken 650m from end posts; lithogeochem composite. Note: highly sheared area. Draw/creek is probable fault.

Sample No. Location : 7196 610 N Type : Float/chip Alteration : CL, KF, MS, SI Au Co Cu La U W  
 533 170 E Strike Length Exp. : m Sulphides : trHS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547686 Elevation: 1495 m Sample Width : m Oxides : None <5 9. 20. 10. <10 20.  
 Orientation: / True Width : m Host : Wernecke breccia  
 Comments : Lithogeochem composite. 750m from end posts at 270o.

Sample No. Location : 7196 650 N Type : Chip/comp Alteration : CA, CL, KF, SI, HE Au Co Cu La U W  
 533 080 E Strike Length Exp. : m Sulphides : 1-7%HS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547687 Elevation: 1461 m Sample Width : m Oxides : GE <5 5. <1 70. <10 20.  
 Orientation: / True Width : m Host : Wernecke hematite breccia  
 Comments : Lithogeochem composite. Took sample on prominent spur ridge.

Sample No. Location : 7196 630 N Type : Chip/comp Alteration : CL, KF, SI Au Co Cu La U W  
 532 930 E Strike Length Exp. : m Sulphides : <1%HS (ppb) (ppm) (ppm) (ppm) (ppm) (ppm)  
 547688 Elevation: 1328 m Sample Width : m Oxides : Insignificant <5 13. 1. 20. <10 10.  
 Orientation: / True Width : m Host : Wernecke breccia  
 Comments : Sample taken on north bank of creek from outcrop. Lithogeochem.

Property : CLEVELAND

NTS : 1060/16

Date : 12/06/92

Sample No.	Location :	Type :	Alteration :	Au	Co	Cu	La	U	W
	7196 670 N	Talus/float	CB, CL, KF, SI, HE						
	532 850 E	Strike Length Exp. : m	Sulphides : Insignificant	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547689	Elevation: 1340 m	Sample Width : m	Oxides : GE	<5	8.	1.	40.	<10	10.
	Orientation: /	True Width : m	Host : Wernecke breccia/metasomatite						

Comments : Purple-brown weathering. Southwest side of creek; 75m upstream from 547688. Lithogeochem sample.

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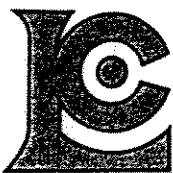
Sample No.	Location :	Type :	Alteration :	Au	Co	Cu	La	U	W
	7196 730 N	Chip/ocp	CL, KF, SI						
	532 860 E	Strike Length Exp. : m	Sulphides : 1-5%HS	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
547690	Elevation: 1350 m	Sample Width : m	Oxides : None	<5	10.	4.	30.	<10	20.
	Orientation: /	True Width : m	Host : Heterolithic breccia						

Comments : 75m upstream from 547689. Not tagged, outcrop in stream bed. Lithogeochem sample.

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APPENDIX V

ANALYTICAL PROCEDURES



# Chemex Labs Ltd.

Analytical Chemists

Geochemists

Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Phone: (604) 984-0221

Telex: 04-352597

Fax: (604) 984-0218

## 24-Element Geochemistry Package (24-ICP)

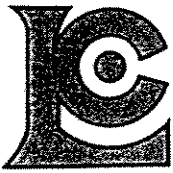
### Inductively-Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

The 24 element rock geochemistry package provides quantitative analysis of all major elements (except silicon) as well as most important trace elements.

A prepared sample (0.50g) is digested with perchloric, nitric and hydrofluoric acids to dryness. The residue is taken up in a volume of 25ml of 10% hydrochloric acid and the resulting solution is analyzed by inductively-coupled plasma atomic emission spectroscopy. Results are corrected for spectral interelement interferences.

For this project only uranium and lanthanum were also analyzed.

Chemex Code	Element	Detection Limit	Upper Limit
573	Aluminum	0.01 %	15 %
565	Barium	10 ppm	1 %
575	Beryllium	0.5 ppm	0.01 %
561	Bismuth	2 ppm	1 %
576	Calcium	0.01 %	25 %
562	Cadmium	0.5 ppm	0.05 %
569	Chromium	1 ppm	1 %
563	Cobalt	1 ppm	1 %
577	Copper	1 ppm	1 %
566	Iron	0.01 %	15 %
560	Lead	2 ppm	1 %
570	Magnesium	0.01 %	15 %
568	Manganese	5 ppm	1 %
554	Molybdenum	1 ppm	1 %
564	Nickel	1 ppm	1 %
559	Phosphorus	10 ppm	1 %
584	Potassium	0.01 %	10 %
578	Silver	0.5 ppm	0.02 %
583	Sodium	0.01 %	10 %
582	Strontium	1 ppm	1 %
579	Titanium	0.01 %	10 %
556	Tungsten	10 ppm	1 %
572	Vanadium	1 ppm	1 %
558	Zinc	2 ppm	1 %
	Uranium	10 ppm	1 %
	Lanthanum	10 ppm	1 %



# Chemex Labs Ltd.

*Analytical Chemists*

*Geochemists*

*Registered Assayers*

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Phone: (604) 984-0221

Telex: 04-352597

Fax: (604) 984-0218

## Gold

Fire Assay Collection/ Atomic Absorption Spectroscopy (FA-AA)

Chemex Code: 100

A 10g sample is fused with a neutral lead oxide flux inquarted with 6mg of gold-free silver and then cupelled to yield a precious metal bead.

These beads are digested for 30 mins in 0.5ml concentrated nitric acid, then 1.5ml of concentrated hydrochloric acid are added and the mixture is digested for 1 hr. The samples are cooled, diluted to a final volume of 5ml, homogenized and analyzed by atomic absorption spectroscopy.

Detection limit: 5 ppb

Upper Limit: 10,000 ppb

APPENDIX VI

CERTIFICATES OF ANALYSIS



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221

711 - 675 W. HASTINGS ST.  
VANCOUVER, BC  
V6B 1N4

Project : FAIRCHILD LAKE CLEVELAND  
Comments: CC: MURRAY JONES CC: DAVID CAULFIELD

Total : 2  
Cert. Date: 29-SEP-92  
Invoice No. :  
P.O. Number :  
Account : BM

	Au ppb	Ag ppm	Al %	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %
547677	<5	<0.2	6.54	1030	<0.5	12	3.62	0.5	10	69	109	5.86	6.57	2.37
547678	<5	<0.2	7.25	870	<0.5	6	1.31	<0.5	8	81	92	5.65	5.38	1.55
547679	<5	<0.2	6.90	1250	<0.5	6	3.81	1.0	11	72	25	6.60	6.98	2.03
547680	<5	<0.2	7.24	1350	<0.5	4	1.38	<0.5	7	84	3	4.99	7.55	1.20
547681	<5	<0.2	7.20	1170	<0.5	6	1.75	<0.5	4	72	<1	5.84	7.76	1.45
547682	10	<0.2	0.94	110	<0.5	<2	1.57	1.0	<1	94	3	14.54	0.67	0.62
547683	<5	<0.2	6.42	1120	<0.5	4	1.91	<0.5	4	85	1	4.71	6.95	1.60
547684	5	<0.2	6.97	1400	<0.5	4	1.48	0.5	6	77	1	5.61	7.14	1.22
547685	<5	<0.2	6.87	940	<0.5	8	4.17	0.5	7	70	3	5.49	6.55	2.55
547686	<5	<0.2	6.25	1150	<0.5	8	2.30	0.5	9	91	20	5.60	5.44	2.29
547687	<5	<0.2	7.30	1550	<0.5	6	0.68	0.5	5	72	<1	5.64	7.34	0.92
547688	<5	<0.2	6.94	1300	<0.5	4	1.68	0.5	13	73	1	4.80	7.57	1.76
547689	<5	<0.2	7.24	1440	<0.5	4	2.15	<0.5	8	73	1	4.08	6.46	1.65
547690	<5	<0.2	6.76	1140	<0.5	8	1.91	0.5	10	92	4	4.86	7.84	1.62

CERTIFICATION: *B. Caulfield*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

TO: PAMICON DEVELOPMENTS LIMITED  
 711 - 675 W. HASTINGS ST.  
 VANCOUVER, BC  
 V6B 1N4

Order No. :  
 Cert. No. :  
 Invoice No. :  
 P.O. Number :  
 Account : BM

Project : FAIRCHILD LAKE CLEVELAND  
 Comments : CC: MURRAY JONES CC: DAVID CAULFIELD

	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sr ppm	Tl %	V ppm	W ppm	Zn ppm	La ppm	U ppm
547677	965	2	0.16	15	3510	<2	18	0.18	86	20	18	70	<10
547678	595	2	0.96	21	940	<2	17	0.19	71	20	18	40	<10
547679	915	1	0.19	16	1180	4	44	0.15	80	20	16	30	<10
547680	560	1	0.16	17	890	<2	17	0.15	64	10	16	70	<10
547681	970	4	0.15	14	740	<2	16	0.18	62	20	14	40	<10
547682	630	6	0.01	11	1150	<2	6	0.07	126	40	20	270	<10
547683	600	1	0.15	15	750	<2	15	0.17	50	10	8	10	<10
547684	855	2	0.15	13	820	<2	14	0.19	64	20	16	60	<10
547685	1320	<1	0.17	24	730	<2	17	0.21	67	20	16	50	<10
547686	985	1	0.65	25	800	<2	17	0.21	61	20	26	10	<10
547687	925	1	0.17	17	850	<2	13	0.19	70	20	16	70	<10
547688	930	<1	0.19	24	760	<2	16	0.20	52	10	18	20	<10
547689	1500	2	1.21	13	760	<2	24	0.19	46	10	18	40	<10
547690	695	1	0.14	14	810	<2	16	0.24	67	20	16	30	<10

CERTIFICATION: *B. Caulfield*

APPENDIX VII



GEOLOGIST'S CERTIFICATE

GEOLOGIST'S CERTIFICATE

I, MICHAEL A. STAMMERS, of 941 Kennedy Avenue, North Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. I am a graduate of McMaster University (1977) and hold a combined Honours B.A. in Geology and Geography.
2. I have practiced in my profession with various mining companies in Yukon, British Columbia and the Northwest Territories for 19 years.
3. I am duly registered as a Professional Geoscientist in the Province of British Columbia (#18883).
4. I am a Fellow of the Geological Association of Canada.
5. This report is based on property work I completed September 1, 1992 and three years accumulated experience in the Wernecke terrain.
6. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.
7. THAT I hereby grant permission to Westmin Resources Limited for the use of this report in any prospectus or other documentation required by any regulatory authority.

DATED at Vancouver, B.C., this 10 day of December, 1992.

Michael A. Stammers, Geologist, P.Ge., FGAC