



1980 GEOCHEMICAL
AND GEOLOGICAL EXPLORATION
OF PART OF THE BUR PROPERTY
YUKON TERRITORY
090848

Claims Jy 9-24 and Kat 9-24
Whitehorse Mining District

Geographic Coordinates

61° 23' N

139° 21' W

NTS Sheet 115 G/6

by

L.B. Halferdahl, Ph.D., P.Eng.

1981 06 03

Work on Property Conducted 1980 08 14 to 1980 08 16

090848

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This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ 5159.00

R. Dubicki for
Resident Geologist or
Resident Mining Engineer

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

R. Dubicki for
Commissioner of Yukon Territory
Aug 5/81

208000

TABLE OF CONTENTS

		<u>Page</u>
Section 1.0	Introduction	1
Section 2.0	Conclusions and Recommendations	1
2.1	Conclusions	1
2.2	Recommendations	2
Section 3.0	Property	2
Section 4.0	Geology of the Property	2
4.1	Station Creek Formation - Rust Member	2
4.2	Structure	4
Section 5.0	Geochemical Traverses	5
5.1	Sampling and Analyses	5
5.2	Distributions of Concentrations of Nickel, Copper, Lead, Zinc, Arsenic, and Gold	5
5.3	Anomalous Concentrations on Lines 20, 21, and 22 ..	6
Section 6.0	References	8

LIST OF ILLUSTRATIONS

Fig.	1.1	Location Map, Bur Property, Yukon Territory	F1
Fig.	1.2	Index Map	F2
Fig.	3.1	Claim Map of Bur Property	F3
Fig.	4.1	Geology (East Sheet)	In Pocket
Fig.	4.2	Geology (West Sheet)	In Pocket
Fig.	5.1	Locations of Lines of Geochemical Samples	F4
Fig.	5.2	Distributions of Arsenic, Copper, Gold, Lead, Nickel and Zinc Concentrations in Soil Samples ...	F5
Fig.	5.3	Concentrations of Ni, Cu, Zn, Pb, Au, and As in Soils along Traverse Line 20	F6
Fig.	5.4	Concentrations of Ni, Cu, Zn, Pb, Au, and As in Soils along Traverse Line 21	F7
Fig.	5.5	Concentrations of Ni, Cu, Zn, Pb, Au, and As in Soils along Traverse Line 22	F8

LIST OF APPENDICES

	<u>Page</u>
Appendix 1: 1980 Geochemical Soil Sample Descriptions - Lines 20 - 22	A1
Appendix 2: Certificates of Analysis for Geochemical Soil Samples from Lines 20 - 22	A7
Appendix 3: Notes from Geological Traverse up Creek on Kat Claims 9, 11, 13, and 14	A24
Appendix 4: Certificate of Assay for Grab Sample	A26
Appendix 5: Field and Office Personnel	A27
Appendix 6: Qualifications	A27

LIST OF TABLES

Table 4.1 Stratigraphic Column for the Burwash Creek Area ..	3
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SECTION 1.0

INTRODUCTION

In August 1978, 80 claims covering the confluence of Burwash and Tatamagouche Creeks in the Klwane Ranges of the western Yukon were staked for their potential for lode deposits of nickel, copper, platinum, and gold. In 1980, an additional 72 claims adjoining the original 80 on the west and south were staked. These 152 claims are termed the Bur property. Some of the original 80 claims were explored in 1978, 1979, and 1980 with the exploration consisting of geochemical traverses, geological mapping, measuring sections and sampling, a magnometer survey, and overburden drilling. This work has been previously reported (Bissonette and Halferdahl, 1980). This report presents the results of geochemical soil sampling in 1980, not previously reported, on and adjoining 32 of the claims staked in 1980: Kat 9-24 and Jy 9-24. It includes a few observations on one geological traverse on claims Kat 9, 11, 13, and 14, and some revisions to the stratigraphy and structure. Sections on geographic setting and previous work have been omitted as they are fully covered in previous reports. The section on geology is very brief as most of it has been covered in previous reports.

The work reported herein was conducted by a three-man crew including the writer. Accommodation was in a temporary camp in the valley of Tatamagouche Creek. A four-wheel-drive vehicle provided access to the roads along Burwash and Tatamagouche Creeks.

SECTION 2.0

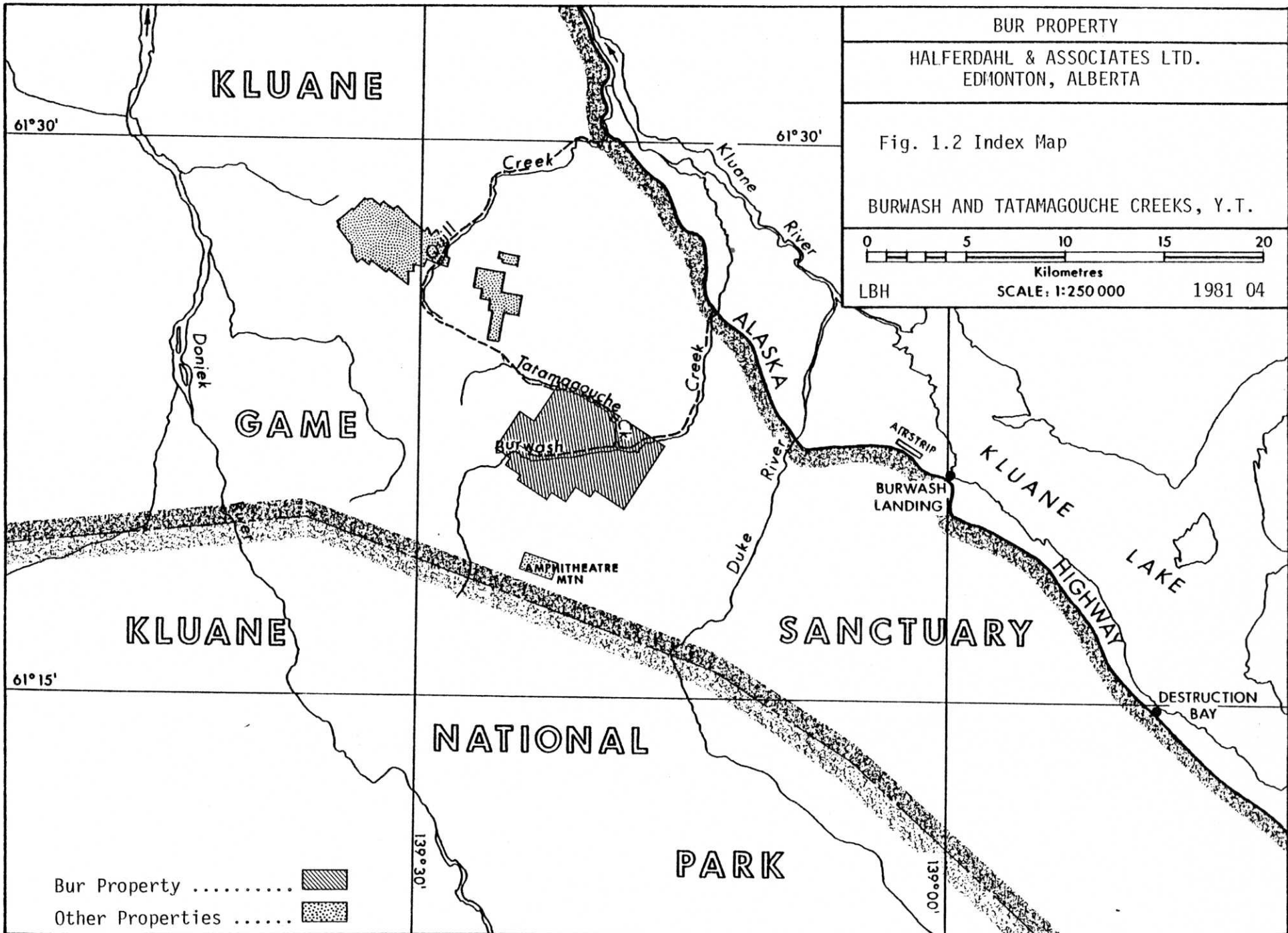
CONCLUSIONS AND RECOMMENDATIONS

2.1 Conclusions



1. Anomalous gold concentrations ranging from 13 to 69 ppb (threshold - 12 ppb) were found in eight samples on three traverse lines on some of the Jy and Kat claims including one line on the Burwash Uplands south of Burwash Creek. Several anomalous concentrations of zinc, lead, and arsenic were also found on these lines, not coincident with the anomalous gold concentrations.
2. A geological traverse up a creek tributary to the south side of Tatamagouche Creek suggests an anticlinal axis striking northeasterly on or just south of claims Kat 13 and 14.



Fig. 1 Location Map, Bur Property, Yukon Territory



BUR PROPERTY		
HALFERDAHL & ASSOCIATES LTD. EDMONTON, ALBERTA		
Fig. 1.2 Index Map		
BURWASH AND TATAMAGOUCHE CREEKS, Y.T.		
LBH	SCALE: 1:250 000	1981 04

Bur Property 
 Other Properties 

2.2 Recommendations

1. Geologically map and prospect the 72 claims staked in 1980 and the parts of the original 80 claims not yet mapped.
2. Conduct heavy mineral surveys along the pups tributary to Burwash and Tatamagouche Creeks.

SECTION 3.0

PROPERTY

The Bur property consists of 152 quartz mineral claims along Burwash and Tatamagouche Creeks in the Whitehorse Mining District (Fig. 3.1) but only the 32 claims for which work is reported herein are listed below.

<u>Claim</u>	<u>Grant Number</u>	<u>Record Date</u>	<u>Expiry Date</u>
Jy 9-24	YA51125-51140	1980 08 13	1981 08 13
Kat 9-24	YA51141-51156	1980 08 13	1981 08 13

The recorded holder of these claims is Laurence B. Halferdahl, for whom the work described here was conducted. This work is expected to fulfill representation work requirements for at least one year for these 32 claims, so that on its approval the expiry dates above will be extended to or beyond August 13, 1982.

SECTION 4.0

GEOLOGY OF THE PROPERTY

A stratigraphic column for the Burwash Creek area is in Table 4.1. Of the units in it, only the Paleocene latite porphyry, the Permian - Triassic gabbro and strata of the Skolai Group have been observed on the Bur property. These units were described in some detail in the 1979 and 1980 reports, so these descriptions are not repeated. Only new information from one geological traverse and revised interpretations of the stratigraphy and structure are given here.

4.1 Station Creek Formation - Rust Member

The base of the Skolai Group at its type sections in Alaska is not exposed (Smith and MacKevett, 1970). On the Bur property a unit not unlike parts of the Volcaniclastic Member of the Station Creek Formation appears to be exposed

TABLE 4.1 STRATIGRAPHIC COLUMN FOR THE BURWASH CREEK AREA
(modified after Muller, 1967; Smith and MacKevett, 1970;
Read and Monger, 1975 and 1976; Campbell, 1976)

Period Epoch or Group Group or Formation Member	Lithology
Tertiary	
Paleocene	LATITE, porphyritic
—————	Intrusive Contact —————
St. Clare	BASALT and ANDESITE, red-brown; massive or vesicular agglomerate, breccia, tuff
Paleocene or Eocene	
Amphitheatre	SANDSTONE, sand, conglomerate, gravel, shale, coal
—————	Angular Unconformity —————
Cretaceous and Later or Earlier	GRANITE, alaskite, granodiorite, diorite, related hybrid rocks
—————	Intrusive Contact —————
Upper Triassic	
?	LIMESTONE and SHALE, thin-bedded, dark to black
Chitistone	LIMESTONE, massive
Nikolai	BASALT, purple and dark-green, amygdaloidal; minor interbedded limestone
—————	Disconformity —————
Permian-Triassic	INTRUSIONS, basic and ultrabasic
—————	Intrusive Contact —————
Lower Permian	
Skolai Group	
Hasen Creek	CHERT, thin-bedded; argillite, limestone, greywacke, conglomerate
Station Creek	
Volcaniclastic	TUFFS and AGGLOMERATES; CARBONATE, fine-grained, rusty-weathering ankerite or siderite, and ARGILLITE and shale
Volcanic Flow	VOLCANICS, intermediate to basic
Rust	TUFFS and AGGLOMERATES underlain by CARBONATE, fine- grained rusty-weathering ankerite, siderite, dolomite?, and limestone, in part siliceous and argillaceous

stratigraphically below the Volcanic Flow Member. This unit has not been formally named; here it is informally termed the Rust Member. If the Volcanic Flow Member is found by subsequent mapping or drilling to be absent in the western or southern parts of the property, the Rust Member would not be separated from the Volcaniclastic Member by the Volcanic Flow Member. If necessary in such places, it might be possible to separate it from the Volcaniclastic Member by the presence of abundant ankeritic material.

The Rust Member forms the rusty-weathering cliffs along the north side of Burwash Creek on claims Wen 1 and And 8. It is overlain by the Volcanic Flow Member in one outcrop at the top of the cliffs on claim Wen 1, and by a thin volcanic flow, which is probably part of the Volcanic Flow Member which crosses Burwash Creek on claim And 8. Further details on the Rust Member are in previous reports, where it was termed the ankeritic unit, and tentatively correlated with the Volcaniclastic Member.

The Rust Member was also mapped previously as the ankeritic unit of the Volcaniclastic Member of the Station Creek Formation on claim E1 7 and beyond downstream along Burwash Creek.

4.2 Structure

The anticlinal axis along Burwash Creek on claims And 8, Wen 1, and Sue 7 has been mentioned previously. Thus the thin volcanic flow which crosses Burwash Creek on claim And 8 is probably on the opposite limb of the anticline from the volcanic flow overlying the Rust Member on claim Wen 1. If this interpretation is correct, the part of the previously designated ankeritic unit above this thin flow is actually part of the Volcaniclastic Member of the Station Creek Formation.

The easterly or northeasterly structural trend observed along Burwash Creek was also noted in strata of the Hasen Creek Formation in the creek tributary to Tatamagouche Creek on claims Kat 9, 11, 13, and 14 (appendix 3). At the upper end of the traverse up this creek the dips flatten, possibly indicating the axial region of a northeasterly trending anticlinal axis there. Such a structure requires at least one syncline between it and the anticline along Burwash Creek about 2 km to the southeast. The northerly strikes and westerly dips in strata of the Skolai Group on claims Wen 5 and E1 7 can be interpreted as being in the axial regions of folds with westerly plunges. Their number is greater and hence more convincing than the one dragfold measured by Campbell

(1976) showing an easterly plunge of 22° on the south limb of the anticline along Burwash Creek.

SECTION 5.0

GEOCHEMICAL TRAVERSES

5.1 Sampling and Analyses

In 1980, geochemical soil samples were collected at intervals of 40 m along three traverse lines on the western part of the property as follows:

<u>Line</u>	<u>Length</u>	<u>Number of Samples</u>		<u>Claims</u>
		<u>Collected</u>	<u>Analyzed</u>	
20	2160 m	55	53	Kat 9-16, Jy 9, 10
21	3000	74	73	Kat 17-20, Jy 17-26
22	2080	53	53	Jy 1, 2, 37-42, 55, 56
		<u>182</u>	<u>179</u>	

The locations of these traverse lines are shown on Fig. 5.1. At each sample location, the sample was collected from as great a depth as possible, the limiting factors being the presence of permafrost which could not be easily penetrated, and locally very wet places particularly on the Burwash Uplands on the south side of Burwash Creek. An effort was made where possible to obtain samples below the layer of volcanic ash (appendix 1). Fewer samples were analyzed than collected because three samples were lost.

The -80 mesh fractions were analyzed by standard atomic absorption techniques for nickel, copper, lead, zinc, and arsenic, and by standard neutron activation techniques for gold. Gold was also determined in these -80 mesh fractions by atomic absorption techniques for the samples from lines 21 and 22.

5.2 Distributions of Concentrations of Nickel, Copper, Lead, Zinc, Arsenic and Gold

The distributions of arsenic, copper, gold, lead, nickel, and zinc concentrations in soil samples are shown in Fig. 5.2. The method of presentation is that described by Lepeltier (1969). In the compilation of Fig. 5.2, the geochemical soil samples from all geochemical traverse lines in 1979 and 1980 on the Bur property have been included, in order to have larger numbers of samples for statistical analyses. Geochemical soil samples from the 1978

traverse lines have not been included because so many of them are from humus above the layer of volcanic ash. Further, arsenic in the 1978 samples was determined by a colorimetric method not directly comparable to the atomic absorption methods of 1979 and 1980 (Bissonnette and Halferdahl, 1979). The parameters for the curves in Fig. 5.2 follow. They generally agree with the

Metal	Number of Samples	Background Concentration (geometric mean)	Coefficient of Deviation	Threshold Concentration	Per Cent of Anomalous Samples
As	290	8.5 ppm	0.20	24 ppm	1.8
Cu	564	43 ppm	0.18	110 ppm	1.3
Au	277	3.6 ppb	0.27	12 ppb	3.0
Pb	564	2.7 ppm	0.27	13 ppm	0.5
Ni	564	45 ppm	0.22	185 ppm	0.7
Zn	564	82 ppm	0.14	140 ppm	4.2

parameters from previous data, except that the threshold for arsenic is higher. All the curves show the change of slope at higher concentrations typical of samples from a suite with both normal and anomalous populations. The curve for nickel shows two changes in slope with the one not listed above being near a concentration of 60 ppm with 27 per cent of the samples. As noted previously (Bissonnette and Halferdahl, 1979), this change in slope may be related to a third population associated with the gabbro intrusions. All the curves show changes of slope at low concentrations as well, but these are not pertinent and are not considered further.

5.3 Anomalous Concentrations on Lines 20, 21, and 22

Anomalous concentrations were obtained in the following samples (Fig. 5.3 to 5.5):

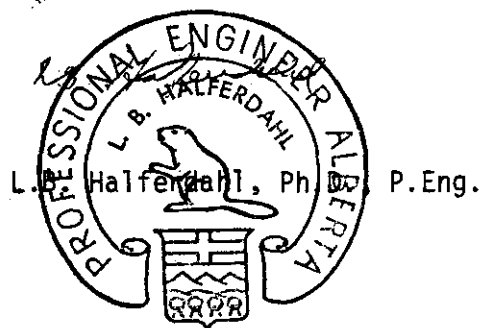
line 20	Zn	1640 m	192 ppm
	Pb	1640	20
		2160	13
	Au	800	25 ppb
line 21	Zn	240	160 ppm
		280	158
		760	170
		800	178
		960	152
		2400	178

line 21	Au	80	26 ppb
		1280	18
		1520	13
	As	800	29 ppm
		920	29
960		24	
1040		35	
line 22	Cu	1040	114
	Au	800	16 ppb
		1760	13
2080		13	

Although few of these anomalous concentrations are adjacent to each other, they do indicate some anomalous gold concentrations on lines 20 and 21 between Burwash and Tatamagouche Creeks, and on line 22 on the Burwash Uplands south of Burwash Creek. The anomalous zinc, lead, and arsenic concentrations are not in the same samples as the gold, but are, nevertheless, probably related to the gold.

Fig. 5.4 and 5.5 show concentrations of gold obtained by atomic absorption as well as those by neutron activation, with concentrations of less than 10 ppb by atomic absorption omitted. The atomic absorption results do not agree in detail with the neutron activation results, probably because of the particulate nature of the gold in the parts of the samples analyzed, but confirm the presence of anomalous concentrations of gold on lines 21 and 22.

Edmonton, Alberta
1981 06 03



SECTION 6.0

REFERENCES

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-
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APPENDIX 1: 1980 GEOCHEMICAL SOIL SAMPLE DESCRIPTIONS - LINES 20-22

Sample Number	Sample Depth (cm)	Remarks*
20-0	45	dark- to medium-brown humus with roots
20-40	40	light-brown and green-grey clay with roots and dark-green rock fragments
20-80	45	dark-brown humus and roots mixed with volcanic ash, dark-brown rock fragments
20-120	45	green-grey clay with light-brown streaks, dark-green pebbles
20-160	40	dark-brown humus with roots, above volcanic ash
20-200	35	light-brown clay with streaks of dark-brown humus, above volcanic ash
20-240	35	dark-brown humus with roots
20-280	35	light-brown clay with rock fragments, above volcanic ash
20-320	30	light-brown clay with rock fragments, no volcanic ash
20-360	25	dark-brown humus with roots
20-400	35	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
20-440	30	dark-brown clay/humus with roots and dark-brown rock fragments
20-480	30	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
20-520	40	dark-brown humus/clay with roots and dark-green rock fragments
20-560	30	dark-brown humus and dark-green and brown rock fragments, no volcanic ash
20-600	35	dark-brown humus and dark-green and brown rock fragments, no volcanic ash
20-640	25	medium-brown humus/clay with roots, no volcanic ash
20-680	35	medium-brown clay with roots and dark-brown and dark-green rock fragments, no volcanic ash
20-720	35	medium- to dark-brown clay/humus with roots and dark-green rock fragments
20-760	35	dark-brown humus with roots, above volcanic ash
20-800	30	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
20-840	30	dark-brown humus/clay with dark-brown rock fragments, no volcanic ash
20-880	35	dark-brown humus with roots and dark-green and dark-brown rock fragments, no volcanic ash
20-920	35	medium-brown clay/humus with roots and dark-brown and green rock fragments, no volcanic ash
20-960	35	dark-brown humus with roots, above volcanic ash
20-1000	30	dark-brown humus with medium-brown rock fragments
20-1040	35	medium-brown humus with medium-brown rock fragments, no volcanic ash
20-1080	35	medium-brown humus with dark-brown and medium-brown rock fragments, no volcanic ash

*All samples from below volcanic-ash layer at permafrost except where noted otherwise.

APPENDIX 1 : CONTINUED

Sample Number	Sample Depth (cm)	Remarks
20-1120	40	medium- to dark-brown humus with roots and dark-brown rock fragments
20-1160	45	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
20-1200	45	dark-brown humus with roots and dark-brown rock fragments
20-1240	30	medium-brown clay/humus with medium-brown rock fragments no volcanic ash
20-1280	35	dark-brown humus with roots and medium-brown rock fragments
20-1320	35	medium-brown clay and dark-brown rock fragments, no volcanic ash
20-1360	40	dark-brown humus and dark-brown rock fragments, no volcanic ash
20-1400	40	medium-brown clay/humus with dark-brown rock fragments, no volcanic ash
20-1440	35	medium- to dark-brown clay/humus with dark-brown rock fragments, no volcanic ash
20-1480	40	medium-brown clay-humus with dark-brown and dark-green rock fragments, no volcanic ash
20-1520	40	same as previous
20-1560	30	medium-brown clay with medium-brown rock fragments, no volcanic ash
20-1600	35	medium-brown clay/humus with dark-brown rock fragments, no volcanic ash
20-1640	35	medium-brown clay with medium-brown rock fragments, no volcanic ash
20-1680	30	medium-brown clay with medium-brown rock fragments
20-1720	35	medium-brown clay/humus with roots and rock fragments, no volcanic ash
20-1760	35	medium-brown clay with medium-brown rock fragments
20-1800	35	medium-brown clay with rock fragments
20-1840	30	medium-brown clay/humus with roots and dark-green rock fragments
20-1880	30	medium- to dark-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
20-1920	25	medium-brown humus with roots and dark-brown rock fragments, no volcanic ash
20-1960	30	medium- to dark-brown humus with roots and dark-brown volcanic ash
20-2000	25	light-brown clay with roots and dark-green and rusty streaks, and rock fragments
20-2040	25	medium-dark-brown humus with roots and dark-and light-brown rock fragments
20-2080	20	light-medium-brown clay/humus with roots and dark-brown and dark-green rock fragments, no volcanic ash
20-2120	20	dark-brown humus with roots, no volcanic ash
20-2160	25	medium- to dark-brown humus/clay with dark-brown rock fragments, no volcanic ash
21-0	35	dark-brown humus and roots, no volcanic ash
21-40	25	dark-brown humus and medium-brown rock fragments

APPENDIX 1 : CONTINUED

Sample Number	Sample Depth (cm)	Remarks
21-80	35	dark-brown humus with dark-green and brown rock fragments, no volcanic ash
21-120	20	dark-brown humus with roots, no volcanic ash
21-160	20	dark-brown humus/clay with dark-brown rock fragments, no volcanic ash
21-200	25	medium-brown clay/humus with dark-brown rock fragments, no volcanic ash
Traverse line to 560 m is parallel to and about 10 m from creek.		
21-240	25	light- to medium-brown clay/humus with dark-brown rock fragments
21-280	20	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-320	20	medium-brown clay/humus with roots, no volcanic ash
21-360	15	dark-brown humus with roots, above volcanic ash
21-400	30	same as previous
21-440	25	same as previous
21-480	40	dark-brown clay/humus with roots
21-520	30	dark-brown humus with roots and dark-brown rock fragments
21-560	20	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-600	25	dark-brown humus with dark-green and brown rock fragments, no volcanic ash
21-640	10	dark-brown humus with roots, only rock fragments below, no volcanic ash
21-680	20	same as previous
21-720	20	dark-brown humus with roots, no volcanic ash
21-760	25	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-800	25	same as previous
21-840	20	light- to medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-880	25	medium-brown clay/humus with roots and dark-brown rock fragments
21-920	20	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-960	25	medium- to dark-brown clay/humus with roots and dark-green and brown rock fragments, no volcanic ash
21-1000	25	medium-brown humus with roots, no volcanic ash
21-1040	30	medium- to dark-brown humus with roots and dark-green and dark-brown rock fragments, no volcanic ash
21-1080	20	dark-brown humus with roots, no volcanic ash
21-1120	20	dark- to medium-brown humus with roots and dark-brown and rusty rock fragments, no volcanic ash
21-1160	20	medium- to dark-brown clay/humus with roots and dark-brown and rusty rock fragments, no volcanic ash
21-1200	25	medium-brown clay/humus with roots and dark-brown and dark-green rock fragments

APPENDIX 1 : CONTINUED

Sample Number	Sample Depth (cm)	Remarks
21-1240	20	medium- to dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-1280	25	dark-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-1320	20	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-1360	25	medium-brown humus with roots and dark-brown and rusty rock fragments, no volcanic ash
21-1400	30	light- to medium-brown clay/humus with roots and dark-brown and dark-green rock fragments, no volcanic ash
21-1440	30	medium-brown clay/humus with roots and dark-green and brown rock fragments
21-1480	20	medium-brown clay/humus with roots and dark-green and dark-brown rock fragments, no volcanic ash
21-1520	30	dark-brown humus with roots and dark-brown rock fragments
21-1560	20	medium- to dark-brown humus with roots and dark-brown and rusty rock fragments, no volcanic ash
21-1600	30	medium-brown humus with roots and dark-brown rock fragments
21-1640	35	medium- to dark-brown humus with roots
21-1680	30	medium-brown clay with roots and dark-brown rock fragments
21-1720	20	medium- to dark-brown humus with roots, no volcanic ash
21-1760	20	dark-brown humus with roots, no volcanic ash
21-1800	25	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-1840	20	dark-brown humus with roots, no volcanic ash
21-1880	35	medium-brown humus with roots
21-1920	20	dark-brown humus with roots, above volcanic ash
21-1960	30	medium-brown clay/humus with roots
21-2000	25	dark-brown humus with roots
21-2040	20	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-2080	25	medium-brown clay/humus with roots and dark-brown rock fragments, no volcanic ash
21-2120	20	medium-to dark-brown humus with roots and dark-brown rock fragments
21-2160	20	medium- to dark-brown clay/humus with roots and dark-green and dark-brown rock fragments
21-2200	20	medium-brown clay with abundant medium-brown rock fragments, no volcanic ash
21-2240	25	medium-brown clay/humus with dark-brown rock fragments, no volcanic ash
Traverse descends into deep valley.		
21-2280	20	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-2320	-	talus slope - no sample collected
21-2350	-	bottom of valley
21-2360	20	medium-brown humus with roots and dark-brown pebbles, no volcanic ash

APPENDIX I : CONTINUED

Sample Number	Sample Depth (cm)	Remarks
21-2400	30	dark-brown humus with roots, no volcanic ash
21-2440	20	light-brown clay/humus with roots and dark-green and dark-brown rock fragments, no volcanic ash
21-2480	20	dark-brown humus with roots, no volcanic ash
21-2520	20	same as previous
21-2560	25	medium-brown humus with roots, no volcanic ash
21-2600	30	medium- to dark-brown humus with roots
21-2640	30	medium- to dark-brown humus with roots and dark-brown rock fragments
21-2680	30	dark-brown humus with roots and dark-brown rock fragments, no volcanic ash
21-2720	25	dark-brown humus with roots and dark-green rock fragments, no volcanic ash
21-2760	25	dark-brown humus with roots, above volcanic ash
21-2800	25	medium-brown humus/clay with roots and dark-green and dark-brown rock fragments, no volcanic ash
21-2840	20	dark-brown humus with roots, no volcanic ash
21-2880	25	medium- to dark-brown humus with roots and dark-brown and green rock fragments
21-2920	20	dark-brown humus with roots, no volcanic ash
21-2960	25	medium-brown humus/clay with roots and dark-green and dark-brown rock fragments, no volcanic ash
21-3000	-	talus slope - no sample collected
22-0	30	green-grey clay with dark-green and dark-brown rock fragments
22-40	35	dark-brown humus with roots
22-80	35	medium- to dark-brown clay/humus with roots and medium-green rock fragments
22-120	20	dark-brown humus with roots
22-160	35	medium-brown humus/clay with roots and dark-green and dark-brown rock fragments
22-200	20	medium-brown clay with roots and dark-green and dark-brown rock fragments
22-240	30	medium-brown clay/humus with roots and streaks of green-grey clay, no volcanic ash
22-280	30	dark-brown humus with roots, no volcanic ash
22-320	30	dark- to medium-brown humus with roots and dark-green rock fragments, no volcanic ash
22-360	25	dark-brown humus mixed with green-grey clay
22-400	25	light- to medium-brown clay/humus with roots, no volcanic ash
22-440	35	dark-brown humus with roots
22-480	35	light-brown clay with grey-green clay
22-520	30	medium- to dark-brown humus/clay with roots and dark-brown rock fragments
22-560	20	medium- to dark-brown humus with roots, above volcanic ash
22-600	35	dark-brown humus with roots, no volcanic ash
22-640	30	medium-brown clay/humus mixed with green/grey clay
22-680	35	dark-brown humus with roots, above volcanic ash
22-720	35	light-brown clay with roots

APPENDIX 1: CONTINUED

Sample Number	Sample Depth (cm)	Remarks
22-760	20	dark-brown humus with roots, above volcanic ash
22-800	35	medium-brown clay/humus with roots
22-840	25	dark-brown humus with roots
22-880	20	dark-brown humus with roots, above volcanic ash
22-920	30	medium-brown clay/humus with roots
22-960	25	dark-brown humus with roots
22-1000	20	dark-brown humus with roots
22-1040	35	same as previous
22-1080	20	dark-brown humus with roots and dark-green and dark-brown rock fragments, above volcanic ash
22-1120	30	medium-brown clay/humus with roots, no volcanic ash
22-1160	20	dark-brown humus with roots, above volcanic ash
22-1200	25	light-brown clay/humus with roots and rusty clay streaks, no volcanic ash
22-1240	35	dark-brown humus with roots
22-1280	30	medium- to dark-brown humus with roots and rusty streaks, above volcanic ash
22-1320	40	dark-brown humus with roots, above volcanic ash
22-1360	25	medium-brown clay/humus with green-grey streaks of clay, no volcanic ash
22-1400	20	dark-brown humus with roots, above volcanic ash
22-1440	25	dark-brown humus with roots
22-1480	20	dark-brown humus with roots, above volcanic ash
22-1520	30	light-brown clay/humus with roots, green-grey clay streaks, and dark-green and dark-brown rock fragments
22-1560	30	dark-brown humus/clay with roots
22-1600	40	green-grey clay with roots
22-1640	25	dark-brown humus with roots, above volcanic ash
22-1680	30	dark-brown humus with roots and light-brown clay with green-grey streaks, no volcanic ash
22-1720	30	light-brown clay with roots and streaks of grey-green clay, dark-green rock fragments, no volcanic ash
22-1760	25	dark-brown humus with roots, above volcanic ash
22-1800	25	green-grey till with roots and pebbles
22-1840	30	dark-brown sandy material with a few pebbles mixed with ash
22-1880	30	brown-grey till with roots and pebbles
22-1920	25	grey-green clay with brown spots, roots, and few pebbles
22-1960	35	green-grey clay with brown masses, some ash
22-2000	35	green-grey clay
22-2040	30	light- and dark-brown humus, no volcanic ash
22-2080	20	dark-brown to black humus, wet area, above volcanic ash

APPENDIX 2: CERTIFICATES OF ANALYSIS FOR GEOCHEMICAL
SOIL SAMPLES FROM LINES 20-22



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Halferdahl & Assoc. Ltd.,
Dept. 18
10509 - 81st Ave.,
Edmonton, Alta.

ATTN: T6E 1X7

CERTIFICATE NO. 55583
INVOICE NO. 38143
RECEIVED August 18, 1980
ANALYSED August 25, 1980

SAMPLE NO. :	PPM Cu	PPM Pb	PPM Zn	PPM As	PPM Ni
20-00	48	1	66	9	101
40	56	1	84	4	144
80	58	2	72	9	104
120	50	2	72	3	136
160	76	2	94	11	104
240	76	1	48	4	52
280	48	1	78	5	108
320	52	1	72	6	76
360	42	2	84	6	52
400	70	1	68	6	74
440	64	2	88	9	84
480	88	4	84	6	62
520	54	2	84	6	68
560	68	2	80	6	82
600	46	4	76	11	64
640	40	2	84	12	74
680	52	4	92	11	56
720	58	4	86	11	52
760	52	4	92	10	30
800	68	1	88	9	74
840	68	2	70	7	96
880	72	2	78	8	86
920	68	2	76	9	86
960	66	2	54	6	38
1000	68	6	88	9	42
1040	74	8	54	3	170
1080	38	1	100	1	30
1120	42	2	90	9	34
1160	58	8	86	10	46
1200	44	4	82	6	24
1240	64	4	80	10	40
1280	42	2	94	6	32
1320	58	6	76	14	46
1360	76	8	118	14	70
1400	82	6	118	23	52
1440	108	10	120	19	64
1520	86	4	102	15	66
1520B 1560	54	8	96	10	44
1600	38	8	104	15	36
20-1640	86	20	192	20	78

Also on #69741 for Combo Au - NAA



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: *Hart Biddle*

CERTIFICATE OF ANALYSIS

CERTIFICATE # AS002210

CLIENT : CHEMEX LABS LTD.
 REIHALFERDAHL & ASSOC. LTD.

SAMPLES RECEIVED : 04-SEP-80
 ANALYSIS COMPLETED : 21-SEP-80
 NUMBER OF SAMPLES : 40
 CLIENT P.O. NUMBER : 69741
 INVOICE NO. : 39044

ATTN. :

From Cert. 55583

SAMPLE ID	AU PPB
20-00	2.
20-40	3.
20-80	1.
20-120	2.
20-160	3.
20-240	0.
20-280	1.
20-320	2.
20-360	1.
20-400	3.
20-440	8.
20-480	2.
20-520	2.
20-560	0.
20-600	3.
20-640	4.
20-680	3.
20-720	2.
20-760	5.
20-800	25.
20-840	2.
20-880	3.
20-920	2.
20-960	1.
20-1000	8.
20-1040	1.
20-1080	1.
20-1120	4.
20-1160	3.
20-1200	4.
20-1240	6.
20-1280	2.
20-1320	1.
20-1360	3.
20-1400	3.
20-1440	5.
20-1520	69.
20- 1520 1560	2.
20-1600	2.
20-1640	4.

CERTIFIED BY *Hart Biele*

CERTIFICATE OF ANALYSIS

CERTIFICATE # A8002211

CLIENT : CHEMEX LABS LTD.
RE: HALFERDAHL & ASSOC. LTD.

SAMPLES RECEIVED : 04-SEP-80
ANALYSIS COMPLETED : 21-SEP-80
NUMBER OF SAMPLES : 18
CLIENT P.O. NUMBER : 69742
INVOICE NO. : 39044
From Cert. 55584

ATTN. :

SAMPLE ID	AU PPB
20-1680	3.
20-1720	1.
20-1760	4.
20-1800	< 1.
20-1840	2.
20-1880	1.
20-1920	4.
20-1960	3.
20-2000	< 1.
20-2040	5.
20-2080	3.
20-2120	3.
20-2160	1.

CERTIFIED BY *Hart Biddle*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

: Halferdahl & Assoc. Ltd.,
Dept. 13,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-001-A
INVOICE # : 38408
DATE : 30-AUG-80

Sample description	Cu ppm	Pb ppm	Zn ppm	Ni ppm
21-0000	74	2	84	56
21-0040	52	1	58	96
1-0080	66	1	64	74
1-0120	50	1	62	32
21-0160	82	4	146	72
1-0200	96	6	132	64
1-0240	66	4	160	70
21-0280	48	2	158	38
21-0320	46	2	88	48
1-0360	64	2	104	44
1-0400	46	1	108	28
21-0440	40	1	84	24
1-0480	78	2	108	30
1-0520	54	2	106	34
21-0560	66	8	108	32
21-0600	104	6	112	32
1-0640	86	1	90	40
1-0680	34	1	108	26
21-0720	48	2	116	30
1-0760	66	4	170	62
1-0800	74	4	178	94
21-0840	42	4	114	34
1-0880	44	4	112	38
1-0920	42	4	142	36
21-0960	56	4	152	48
21-1000	94	1	114	44
1-1040	52	6	130	56
1-1080	44	2	90	26
21-1120	56	2	96	38
1-1160	58	6	138	42
1-1200	42	6	134	38
21-1240	44	2	94	26
21-1280	60	10	118	42
1-1320	44	6	96	32
1-1360	42	6	112	34
21-1400	48	6	108	40
1-1440	42	4	98	36
1-1480	40	6	118	38
21-1520	54	2	90	30
21-1560	48	4	106	36

Certified by *Hart Biddle*



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CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597.

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-001-B
INVOICE # : 38408
DATE : 30-AUG-80

Sample description	AS ppm	Au - AA ppb		
21-0000	6	<10	--	--
21-0040	5	<10	--	--
1-0080	6	<10	--	--
1-0120	9	<10	--	--
21-0160	16	<10	--	--
1-0200	16	<10	--	--
1-0240	14	20	--	--
21-0280	12	10	--	--
21-0320	9	10	--	--
1-0360	10	<10	--	--
1-0400	10	<10	--	--
21-0440	9	<10	--	--
1-0480	10	<10	--	--
1-0520	10	<10	--	--
21-0560	14	10	--	--
21-0600	15	<10	--	--
1-0640	9	<10	--	--
1-0680	10	10	--	--
21-0720	14	10	--	--
1-0760	16	10	--	--
1-0800	29	<10	--	--
21-0840	16	<10	--	--
21-0880	16	<10	--	--
1-0920	29	10	--	--
21-0960	24	20	--	--
21-1000	18	<10	--	--
1-1040	35	<10	--	--
1-1080	9	<10	--	--
21-1120	12	10	--	--
1-1160	22	<10	--	--
1-1200	23	10	--	--
21-1240	9	<10	--	--
21-1280	12	<10	--	--
1-1320	16	<10	--	--
1-1360	17	<10	--	--
21-1400	17	10	--	--
1-1440	14	<10	--	--
1-1480	14	<10	--	--
21-1520	12	10	--	--
21-1560	15	<10	--	--

Certified by ... *Harry Biddle*



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• ANALYTICAL CHEMISTS

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CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-002-A
INVOICE # : 38408
DATE : 30-AUG-80

Sample Description	Cu ppm	Pb ppm	Zn ppm	Ni ppm
21-1600	44	4	94	32
21-1640	52	4	86	26
1-1680	42	6	100	26
21-1720	48	4	88	26
21-1760	64	1	82	26
1-1800	56	8	126	40
1-1840	62	2	72	28
21-1880	38	6	78	20
21-1920	36	4	66	24
1-2000	54	2	58	20
21-2040	38	4	58	16
21-2080	54	2	82	32
1-2120	56	4	70	28
1-2160	54	4	74	46
21-2200	62	2	74	38
21-2240	74	2	72	42
1-2280	92	2	72	36
21-2360	66	4	84	54
21-2400	78	6	178	56
1-2440	82	1	74	70
1-2480	84	2	76	54
21-2520	52	4	94	32
21-2560	86	1	66	50
1-2600	62	2	78	46
21-2640	104	4	94	58
21-2680	82	1	68	52
1-2720	76	4	60	32
1-2760	54	4	56	26
21-2800	66	6	90	58
1-2840	52	4	94	38
1-2880	58	4	82	56
21-2920	56	1	80	56
21-2960	54	1	66	54
2-0000	52	4	88	54
2-0040	56	1	76	68
22-0080	36	1	76	66
2-0120	54	4	100	84
2-0160	52	2	72	80
22-0200	36	1	62	30
22-0240	38	4	106	48

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TELEPHONE: (604)984-0221
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• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-002-B
INVOICE # : 38408
DATE : 30-AUG-80

Sample description	As ppm	Au - AA ppb		
21-1600	11	<10	--	--
21-1640	10	10	--	--
1-1680	10	10	--	--
1-1720	10	20	--	--
21-1760	9	<10	--	--
1-1800	11	20	--	--
1-1840	7	10	--	--
21-1880	14	<10	--	--
21-1920	7	<10	--	--
1-2000	7	<10	--	--
1-2040	10	20	--	--
21-2080	10	<10	--	--
1-2120	11	10	--	--
1-2160	7	<10	--	--
21-2200	6	<10	--	--
21-2240	9	<10	--	--
1-2280	9	10	--	--
21-2360	9	<10	--	--
21-2400	7	20	--	--
1-2440	6	20	--	--
1-2480	5	<10	--	--
21-2520	6	<10	--	--
21-2560	6	10	--	--
1-2600	7	<10	--	--
21-2640	14	<10	--	--
21-2680	9	10	--	--
1-2720	5	<10	--	--
1-2760	6	<10	--	--
21-2800	7	<10	--	--
1-2840	9	10	--	--
1-2880	7	<10	--	--
21-2920	5	10	--	--
21-2960	5	<10	--	--
2-0000	2	<10	--	--
2-0040	6	<10	--	--
22-0080	7	10	--	--
2-0120	6	<10	--	--
2-0160	4	<10	--	--
22-0200	4	20	--	--
22-0240	3	<10	--	--

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TELEPHONE: (604)984-0221
TELEX: 043-52597

- ANALYTICAL CHEMISTS

- GEOCHEMISTS

- REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010025-003-A
INVOICE # : 38408
DATE : 30-AUG-80

Sample Description	Cu ppm	Pb ppm	Zn ppm	Ni ppm
22-0280	46	2	86	34
22-0320	42	1	66	32
22-0360	34	1	58	30
22-0400	30	1	78	26
22-0440	28	1	60	20
22-0480	26	2	68	44
22-0520	36	2	64	46
22-0560	36	1	78	90
22-0600	34	1	82	48
22-0640	24	2	78	34
22-0680	42	1	98	44
22-0720	38	2	74	36
22-0760	36	4	80	20
22-0800	28	4	72	22
22-0840	34	2	68	20
22-0880	46	4	82	28
22-0920	32	2	68	30
22-0960	36	4	78	30
22-1000	54	2	58	26
22-1040	114	2	42	24
22-1080	32	1	64	26
22-1120	26	1	66	44
22-1160	42	2	58	28
22-1200	44	2	68	36
22-1240	48	1	96	32
22-1280	20	1	76	24
22-1320	24	2	84	22
22-1360	36	4	100	24
22-1400	36	1	104	48
22-1440	44	2	90	28
22-1480	36	4	90	26
22-1520	42	1	68	64
22-1560	48	4	72	22
22-1600	36	2	76	42
22-1640	50	1	42	34
22-1680	38	1	46	20
22-1720	34	4	78	28
22-1760	46	2	56	34
22-1800	46	1	82	64
22-1840	34	1	76	26

Certified by ... *Hart Biddle*



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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-003-B
INVOICE # : 38408
DATE : 30-AUG-80

Sample Description	As ppm	Au - AA ppb		
22-0280	4	<10	--	--
22-0320	3	<10	--	--
2-0360	4	10	--	--
2-0400	5	<10	--	--
22-0440	3	20	--	--
2-0480	5	10	--	--
2-0520	4	<10	--	--
22-0560	4	10	--	--
22-0600	4	<10	--	--
2-0640	4	10	--	--
2-0680	5	<10	--	--
22-0720	5	10	--	--
2-0760	5	<10	--	--
2-0800	5	<10	--	--
22-0840	4	<10	--	--
2-0880	6	10	--	--
2-0920	6	<10	--	--
2-0960	9	<10	--	--
22-1000	6	10	--	--
2-1040	4	20	--	--
2-1080	5	<10	--	--
22-1120	9	<10	--	--
2-1160	6	<10	--	--
2-1200	11	<10	--	--
2-1240	9	<10	--	--
22-1280	9	<10	--	--
2-1320	1	10	--	--
2-1360	2	<10	--	--
22-1400	5	20	--	--
2-1440	3	<10	--	--
2-1480	9	<10	--	--
22-1520	4	<10	--	--
22-1560	3	<10	--	--
2-1600	3	<10	--	--
2-1640	2	<10	--	--
22-1680	10	<10	--	--
2-1720	15	<10	--	--
2-1760	9	<10	--	--
22-1800	6	<10	--	--
2-1840	3	<10	--	--

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A18

212 BROOKSBANK AVE.
NORTH VANCOUVER B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Order: Halferdahl & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-004-A
INVOICE # : 38408
DATE : 30-AUG-80

Sample description	Cu ppm	Pb ppm	Zn ppm	Ni ppm
22-1880	46	1	82	70
22-1920	54	1	66	76
22-1960	62	2	118	38
22-2000	48	2	116	34
22-2040	50	1	124	54
22-2080	38	2	68	30



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CHEMEX LABS LTD.

A19

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Client: Halferdahl & Assoc. Ltd.,
Dept. 19,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010026-004-3
INVOICE # : 38408
DATE : 30-AUG-80

Sample description	As ppm	Au- AA ppm		
2-1380	7	<10	--	--
2-1920	5	<10	--	--
2-1960	4	<10	--	--
2-2000	4	<10	--	--
2-2040	6	<10	--	--
2-2080	4	<10	--	--

Certified by *Hart Biddle*





CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA V7J 2C1
 TELEPHONE: (604)984-0221
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Halferdahl & Assoc. Ltd.,
 Dept. 13,
 10509 - 81st Ave.,
 Edmonton, Alta.
 T6E 1X7

CERT. # : A8010874-001-A
 INVOICE # : 40002
 DATE : 30-OCT-80
 ORIGINAL A8010026.

ORIGINALLY ON A8010026

Sample description	Prep code	AJ-NIA opp					
21-0000	214	1	--	--	--	--	--
21-0040	214	2	--	--	--	--	--
21-0080	214	25	--	--	--	--	--
21-0120	214	N.S.S.	--	--	--	--	--
21-0160	214	3	--	--	--	--	--
21-0200	214	2	--	--	--	--	--
21-0240	214	5	--	--	--	--	--
21-0280	214	N.S.S.	--	--	--	--	--
21-0320	214	1	--	--	--	--	--
21-0360	214	<1	--	--	--	--	--
21-0400	214	<1	--	--	--	--	--
21-0440	214	N.S.S.	--	--	--	--	--
21-0480	214	1	--	--	--	--	--
21-0520	214	1	--	--	--	--	--
21-0560	214	N.S.S.	--	--	--	--	--
21-0600	214	<1	--	--	--	--	--
21-0640	214	N.S.S.	--	--	--	--	--
21-0680	214	N.S.S.	--	--	--	--	--
21-0720	214	2	--	--	--	--	--
21-0760	214	6	--	--	--	--	--
21-0800	214	<1	--	--	--	--	--
21-0840	214	3	--	--	--	--	--
21-0880	214	2	--	--	--	--	--
21-0920	214	<1	--	--	--	--	--
21-0960	214	<1	--	--	--	--	--
21-1000	214	4	--	--	--	--	--
21-1040	214	4	--	--	--	--	--
21-1080	214	<1	--	--	--	--	--
21-1120	214	6	--	--	--	--	--
21-1160	214	2	--	--	--	--	--
21-1200	214	2	--	--	--	--	--
21-1240	214	N.S.S.	--	--	--	--	--
21-1280	214	18	--	--	--	--	--
21-1320	214	3	--	--	--	--	--
21-1360	214	3	--	--	--	--	--
21-1400	214	6	--	--	--	--	--
21-1440	214	4	--	--	--	--	--
21-1480	214	<1	--	--	--	--	--
21-1520	214	13	--	--	--	--	--
21-1560	214	3	--	--	--	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Halferdahl & Assoc. Ltd.,
Dept. 19,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010676-002-A
INVOICE # : 39942
DATE : 28-OCT-80

ORIGIN A8010026.

ORIGINALLY ON A8010026

Sample description	Prep code	AU-NAA ppb					
21-1600	214	8	--	--	--	--	--
21-1640	214	2	--	--	--	--	--
21-1680	214	2	--	--	--	--	--
21-1720	214	3	--	--	--	--	--
21-1760	214	4	--	--	--	--	--
21-1800	214	8	--	--	--	--	--
21-1840	214	3	--	--	--	--	--
21-1880	214	6	--	--	--	--	--
21-1920	214	<1	--	--	--	--	--
21-2000	214	3	--	--	--	--	--
21-2040	214	4	--	--	--	--	--
21-2080	214	2	--	--	--	--	--
21-2120	214	4	--	--	--	--	--
21-2160	214	3	--	--	--	--	--
21-2200	214	8	--	--	--	--	--
21-2240	214	3	--	--	--	--	--
21-2280	214	4	--	--	--	--	--
21-2360	214	6	--	--	--	--	--
21-2400	214	4	--	--	--	--	--
21-2440	214	3	--	--	--	--	--
21-2480	214	3	--	--	--	--	--
21-2520	214	4	--	--	--	--	--
21-2560	214	3	--	--	--	--	--
21-2600	214	5	--	--	--	--	--
21-2640	214	3	--	--	--	--	--
21-2680	214	4	--	--	--	--	--
21-2720	214	N.S.S.	--	--	--	--	--
21-2760	214	N.S.S.	--	--	--	--	--
21-2800	214	4	--	--	--	--	--
21-2840	214	4	--	--	--	--	--
21-2880	214	2	--	--	--	--	--
21-2920	214	3	--	--	--	--	--
21-2960	214	2	--	--	--	--	--
22-0000	214	2	--	--	--	--	--
22-0040	214	3	--	--	--	--	--
22-0080	214	7	--	--	--	--	--
22-0120	214	2	--	--	--	--	--
22-0160	214	2	--	--	--	--	--
22-0200	214	2	--	--	--	--	--
22-0240	214	<1	--	--	--	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Halferdahl & Assoc. Ltd.,
Dept. 16,
10509 - 81st Ave.,
Edmonton, Alta.
T6E 1X7

CERT. # : A8010675-002-A
INVOICE # : 40002
DATE : 30-00T-80

ORIG. DN A8010026.

ORIGINALLY DN A8010026

Sample description	Prep code	AU-NAA	ppb					
22-0280	214	2	--	--	--	--	--	--
22-0320	214	3	--	--	--	--	--	--
22-0360	214	4	--	--	--	--	--	--
22-0400	214	1	--	--	--	--	--	--
22-0440	214	4	--	--	--	--	--	--
22-0480	214	3	--	--	--	--	--	--
22-0520	214	2	--	--	--	--	--	--
22-0560	214	4	--	--	--	--	--	--
22-0600	214	2	--	--	--	--	--	--
22-0640	214	4	--	--	--	--	--	--
22-0680	214	N.S.S.	--	--	--	--	--	--
22-0720	214	<1	--	--	--	--	--	--
22-0760	214	1	--	--	--	--	--	--
22-0800	214	16	--	--	--	--	--	--
22-0840	214	3	--	--	--	--	--	--
22-0880	214	3	--	--	--	--	--	--
22-0920	214	1	--	--	--	--	--	--
22-0960	214	2	--	--	--	--	--	--
22-1000	214	N.S.S.	--	--	--	--	--	--
22-1040	214	6	--	--	--	--	--	--
22-1080	214	3	--	--	--	--	--	--
22-1120	214	2	--	--	--	--	--	--
22-1160	214	<1	--	--	--	--	--	--
22-1200	214	7	--	--	--	--	--	--
22-1240	214	3	--	--	--	--	--	--
22-1280	214	<1	--	--	--	--	--	--
22-1320	214	11	--	--	--	--	--	--
22-1360	214	3	--	--	--	--	--	--
22-1400	214	<1	--	--	--	--	--	--
22-1440	214	2	--	--	--	--	--	--
22-1480	214	4	--	--	--	--	--	--
22-1520	214	4	--	--	--	--	--	--
22-1560	214	2	--	--	--	--	--	--
22-1600	214	<1	--	--	--	--	--	--
22-1640	214	N.S.S.	--	--	--	--	--	--
22-1680	214	2	--	--	--	--	--	--
22-1720	214	2	--	--	--	--	--	--
22-1760	214	13	--	--	--	--	--	--
22-1800	214	3	--	--	--	--	--	--
22-1840	214	1	--	--	--	--	--	--

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212 BROOKSBANK AVE.
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CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : Halferdani & Assoc. Ltd.,
Dept. 18,
10509 - 81st Ave.,
Edmonton, Alta.
T5E 1X7

CEPT. # : A8010675-004-4
INVOICE # : 40002
DATE : 30-OCT-80
ORIG.ON A8010026.

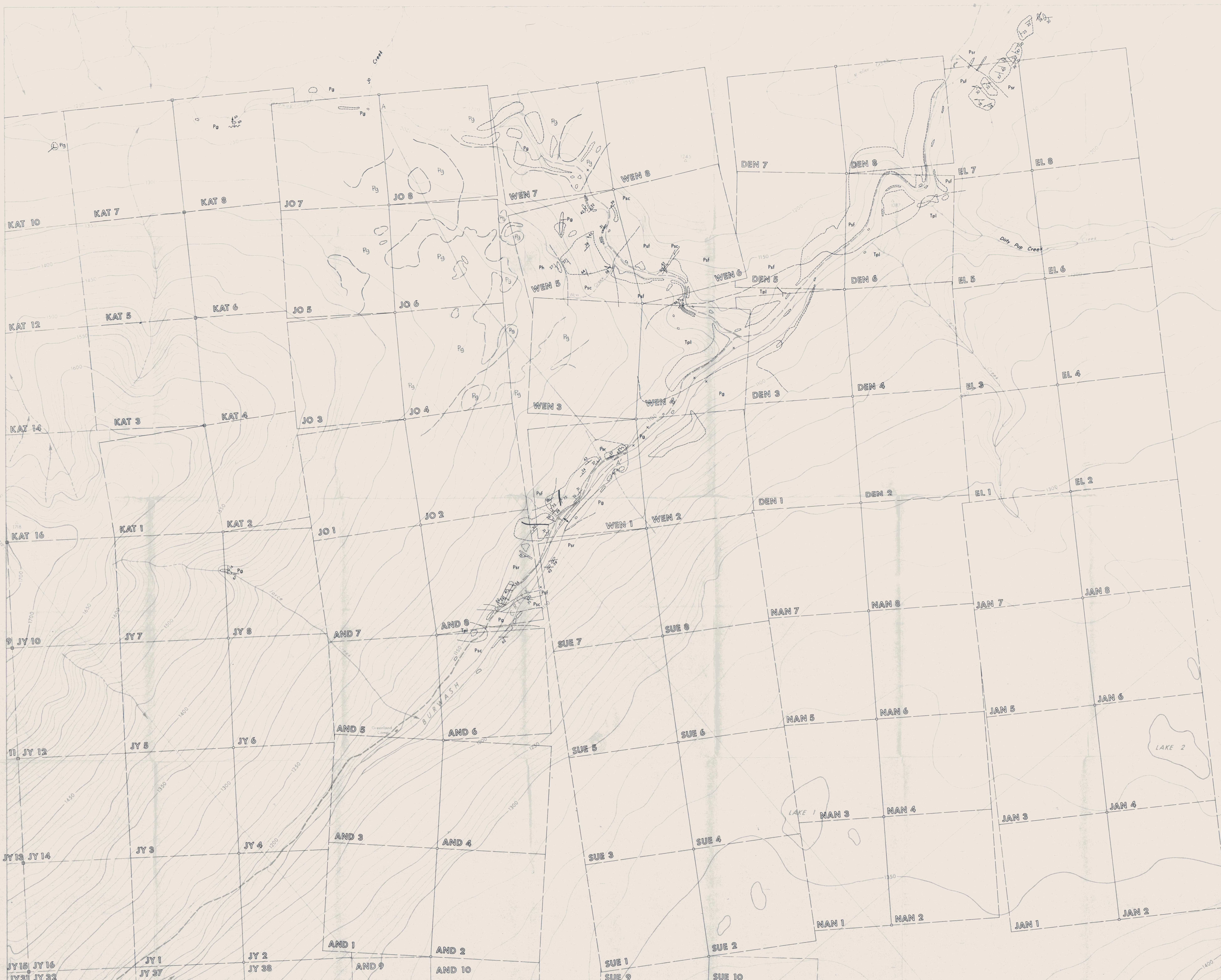
ORIGINALLY ON A8010026

Sample description	Prep code	AU-NAA ppb						
22-1880	214	2	--	--	--	--	--	--
22-1920	214	5	--	--	--	--	--	--
22-1950	214	3	--	--	--	--	--	--
22-2000	214	4	--	--	--	--	--	--
22-2040	214	N.S.S.	--	--	--	--	--	--
22-2080	214	13	--	--	--	--	--	--



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LEGEND

- TERTIARY**
 Paleocene
 Tpl Latite porphyry
- PERMIAN-TRIASSIC**
 Pg Gabbro
- LOWER PERMIAN**
 Skolai Group
 Ph Hasen Creek Formation: limestone, chert
 Psc Station Creek Formation: Volcaniclastic Member
 Psf Station Creek Formation: Volcanic Flow Member
 Basic dykes
 Psr Station Creek Formation: Rust Member

SYMBOLS

- Geological boundary, defined
 approximate
 Area of outcrop
 Isolated outcrop
 Strike and dip of bedding
 Strike and dip of schistosity
 Strike and dip of joint
 Strike and plunge of lineation
 Fault, defined
 Road, unimproved
 Contour line, interval 10 metres
 Spot elevation in metres
 Claim post
 Claim boundary, location line
 other
 Claim name WEN 3
 Abandoned axis
 Anticlinal axis

Claim posts and claim boundaries are only approximate.

BUR PROPERTY
 HALFERDAHL & ASSOCIATES LTD.
 EDMONTON, ALBERTA

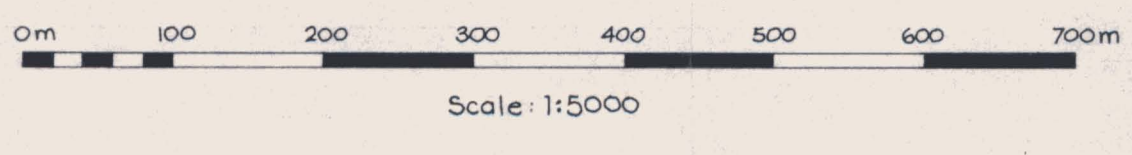
REVISIONS	
INITIALS	DATE
BH	1980-08
LBH	1981-04

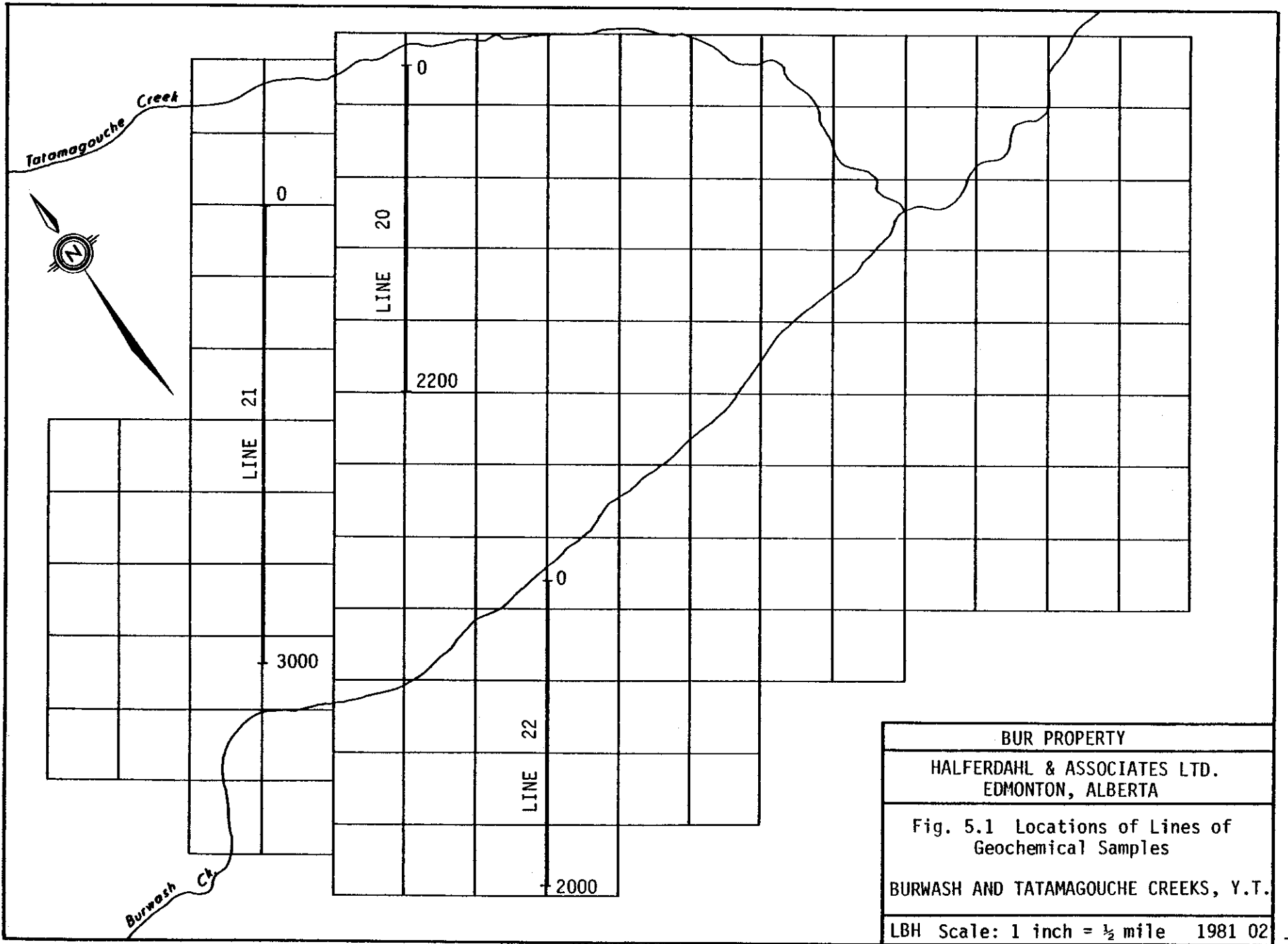
Fig. 4.1 Geology (East Sheet)

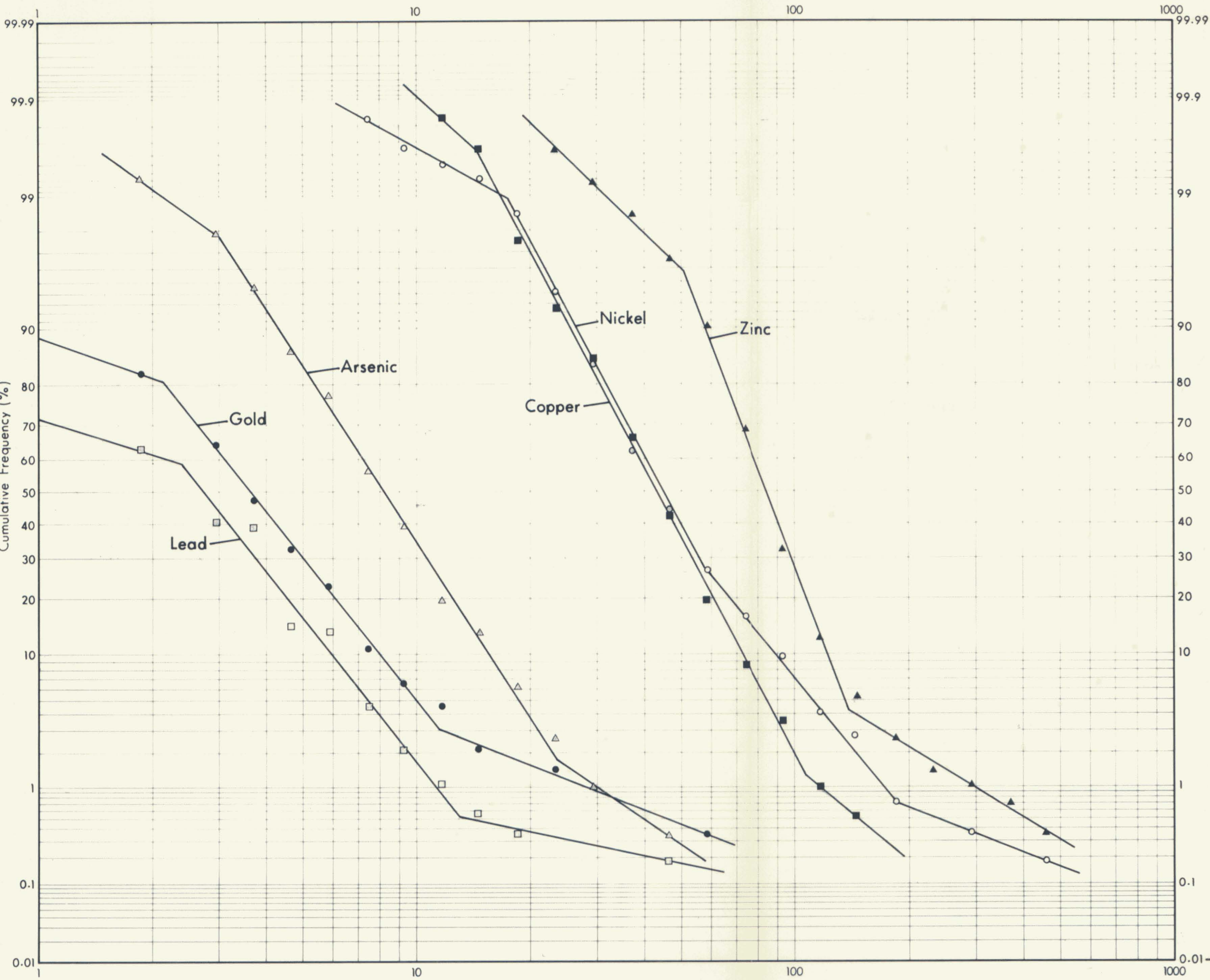
BURWASH & TATAMAGOUCHE CREEKS, Y.T.

SCALE: 1:5000

SEE FIGURE 4.1 FOR LEGEND & SYMBOLS.







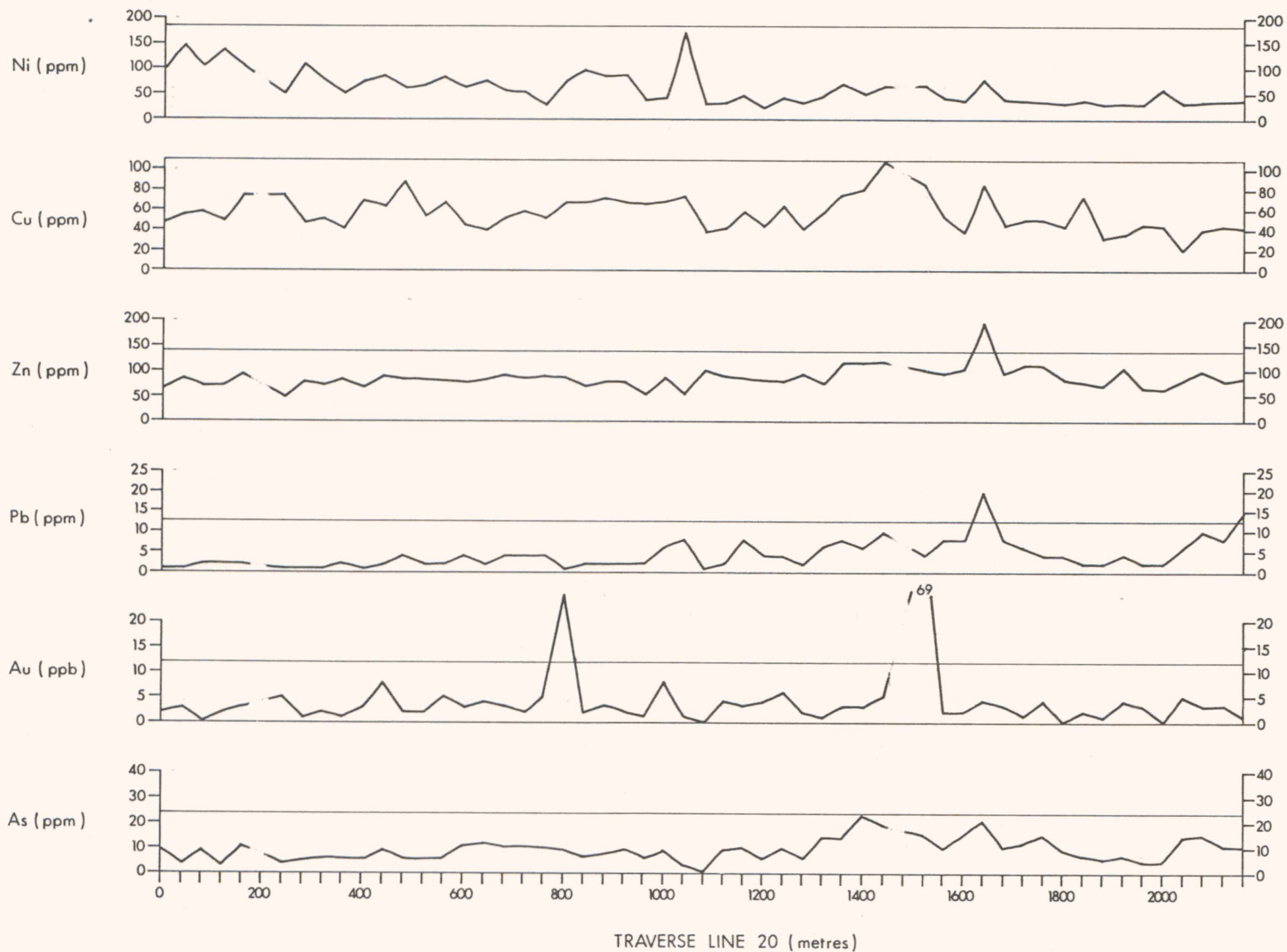
Metal	Symbol	N	Back-ground	Threshold
Arsenic	△	290	8.5	24 ppm
Copper	■	564	43	110 ppm
Gold	●	277	3.6	12 ppb
Lead	□	564	2.7	13 ppm
Nickel	○	564	45	185 ppm
Zinc	▲	564	82	140 ppm

BUR PROPERTY
 HALFERDAHL & ASSOCIATES LTD.
 EDMONTON, ALBERTA

Fig. 5-2 Distributions of Arsenic,
 Copper, Gold, Lead, Nickel,
 and Zinc Concentrations in
 Soil Samples.
 Burwash & Tatamagouche Creeks, Y.T.

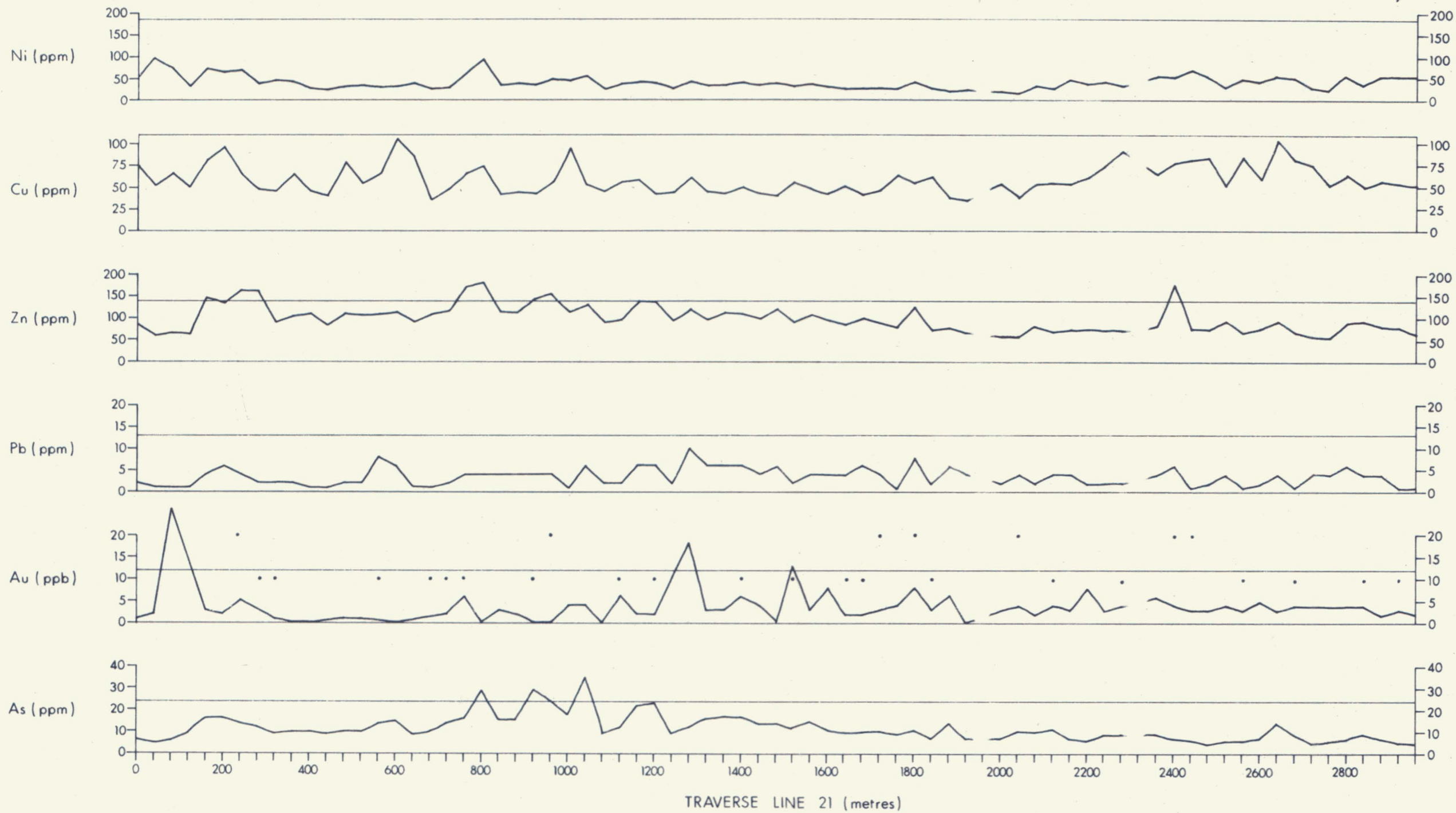
LBH 1981.03

Concentration (ppm except Gold - ppb)



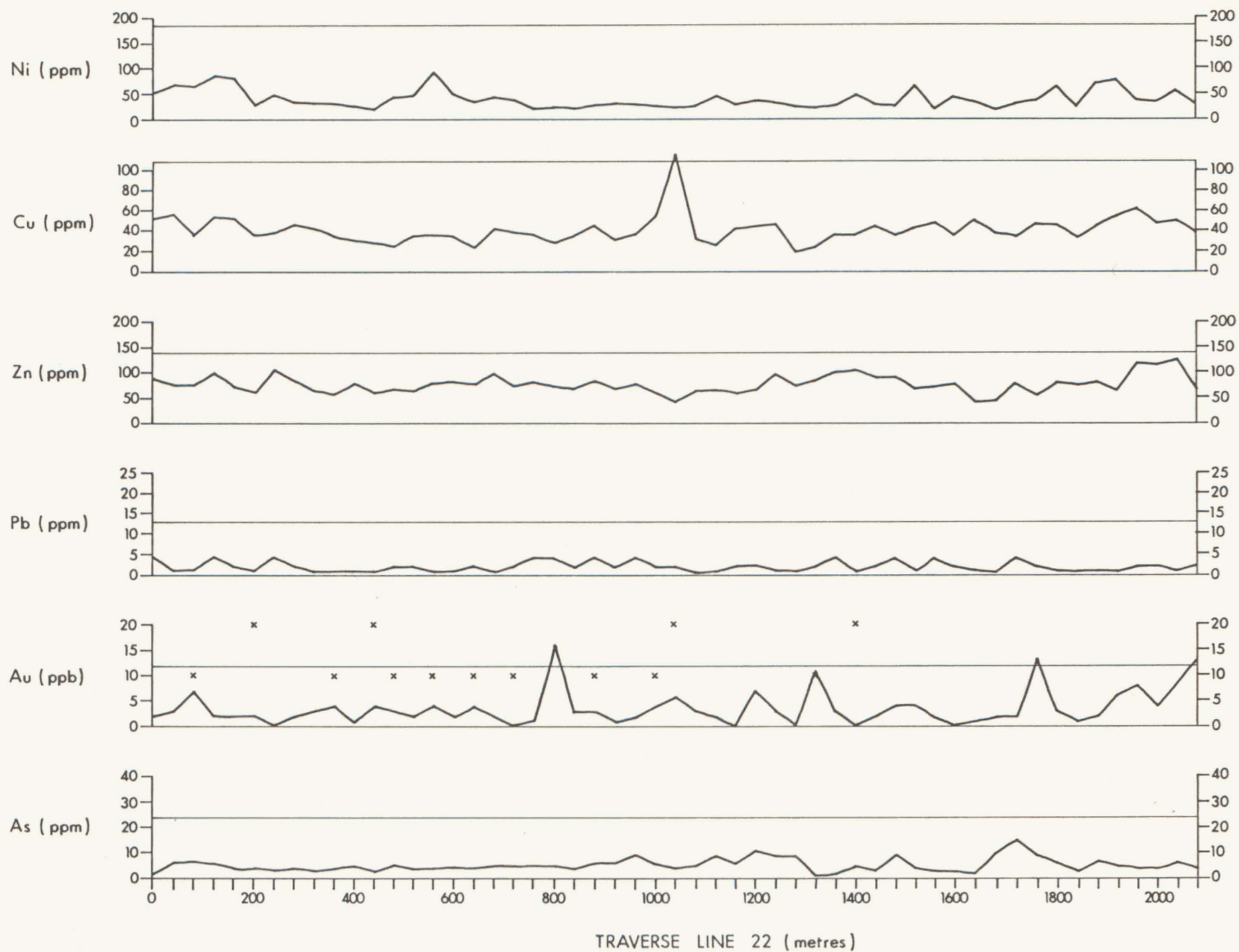
Threshold.....

BUR PROPERTY	
HALFERDAHL & ASSOCIATES LTD. EDMONTON, ALBERTA	
Fig. 5.3 Concentrations of Ni, Cu, Zn, Pb, Au, and As in Soils along Traverse Line 20	
BURWASH & TATAMAGOUCHE CREEKS, Y.T.	
WM	1981 02



Threshold
 Concentration of Au by atomic absorption (10 ppb or more)

BUR PROPERTY	
HALFERDAHL & ASSOCIATES LTD. EDMONTON, ALBERTA	
Fig. 5-4 Concentrations of Nickel, Copper, Zinc, Lead, Gold, and Arsenic in Soils along Traverse Line 21.	
BURWASH & TATAMAGOUCHE CREEKS, Y.T.	
WM	1981-02



BUR PROPERTY	
HALFERDAHL & ASSOCIATES LTD. EDMONTON, ALBERTA	
Fig. 5.5! Concentrations of Ni, Cu, Zn, Pb, Au, and As in Soils along Traverse Line 22	
BURWASH & TATAMAGOUCHE CREEKS, Y.T.	
WM	1981 02