GEOCHEMICAL AND GEOPHYSICAL REPORT ON THE JULIA CLAIMS STAGE 1 in the FRANCES LAKE AREA YUKON TERRITORY

on behalf of

ARBOR RESOURCES LTD.

by

G.H. Giroux, P.Eng.

MONTGOMERY CONSULTANTS LTD.

June 1981

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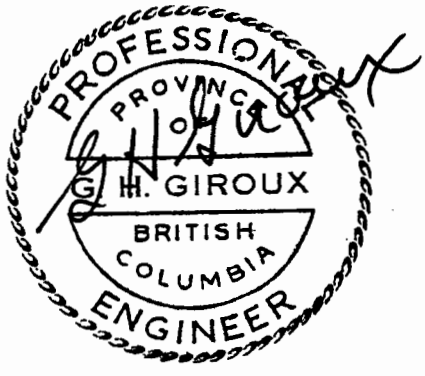

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1.0 SUMMARY AND CONCLUSIONS

1.1 Arbor Resources Limited of Vancouver, B.C. holds title to 54 mineral claims (Julia 1-20 and 37-70) near Frances Lake in the Yukon Territory.

1.2 The claims are covered by Mississippian or Devonian greenstones.

1.3 The showing on the Julia claims consists of a leeched siliceous iron rich layer within an acidic volcanic pile.

1.4 The strike length of the gossan is approximately 1800 meters.

1.5 285 soil samples were taken and analyzed for copper, lead, zinc, silver and gold.

1.6 The central part of the grid was tested with a V.L.F. EM-16 unit.

1.7 The EM-16 indicated a continuous zone of conductive material about 1200 meters long which appears to be faulted off to the east. The northern extension of this zone was picked up on the most northerly line surveyed. The zone is open to the south.

1.8 Geochemical anomalies for all elements tested indicated this zone to some extent.

1.9 Stage II, previously outlined in a report by this writer in September 1980, consisting of mapping, additional geochemistry, induced polarization and diamond drilling is most certainly warrented.

2.0 INTRODUCTION

This report is written for Arbor Resources Limited of Vancouver, British Columbia on STAGE I of an exploration program on their Julia Claims in the Frances Lake area of the Yukon Territory.

The report details work done on the property in August 1980 by Montgomery Consultants Limited.

A preliminary program of linecutting, soil sampling and EM-16 surveying was carried out.

3.0 LOCATION AND ACCESS

The Julia Group of mineral claims is located in the Campbell Mountain Range about 150 kilometers southeast of Ross River in the Yukon Territories. The claims cover a ridge above tree line just west of Money Creek and about 20 kilometers west of Frances Lake.

Latitude: 61° 25' Longitude: 130° 00'

N.T.S. Map Sheets: 105 H/5 and 105 G/8

Access to the property is by helicopter either from Ross River or from the Robert Campbell Highway at Frances Lake, if more than one trip is necessary.

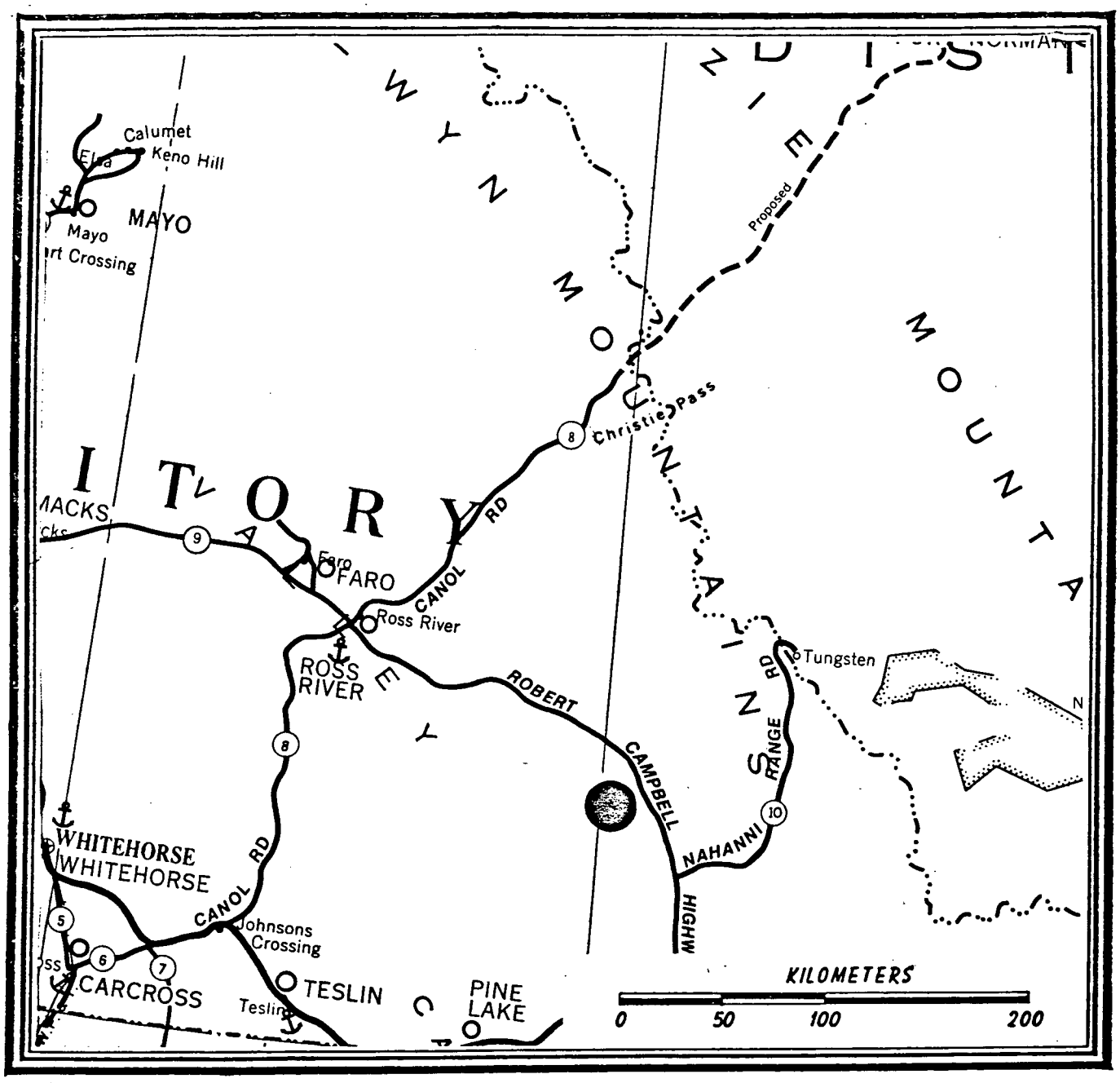


FIGURE 1

LOCATION MAP

JULIA CLAIMS

ARBOR RESOURCES INC.

MONTGOMERY CONSULTANTS LIMITED JUNE 1981.

4.0 CLAIM INFORMATION

Arbor Resources Incorporated of Vancouver, B.C., holds title through an option agreement with Welcome North Mines Limited to 54 mineral claims in the Frances Lake area of the Yukon Territory. The writer saw several claim posts on the property and they appear to be staked properly in accordance with the Yukon Quartz Mining Act.

The claim information follows in table form.

CLAIM NAME	NO. OF CLAIMS	EXPIRY DATE
Julia 1 - 10	10	August, 1981
Julia 11 - 20	10	August, 1981
Julia 37 - 70	34	August, 1981
Total:	54	

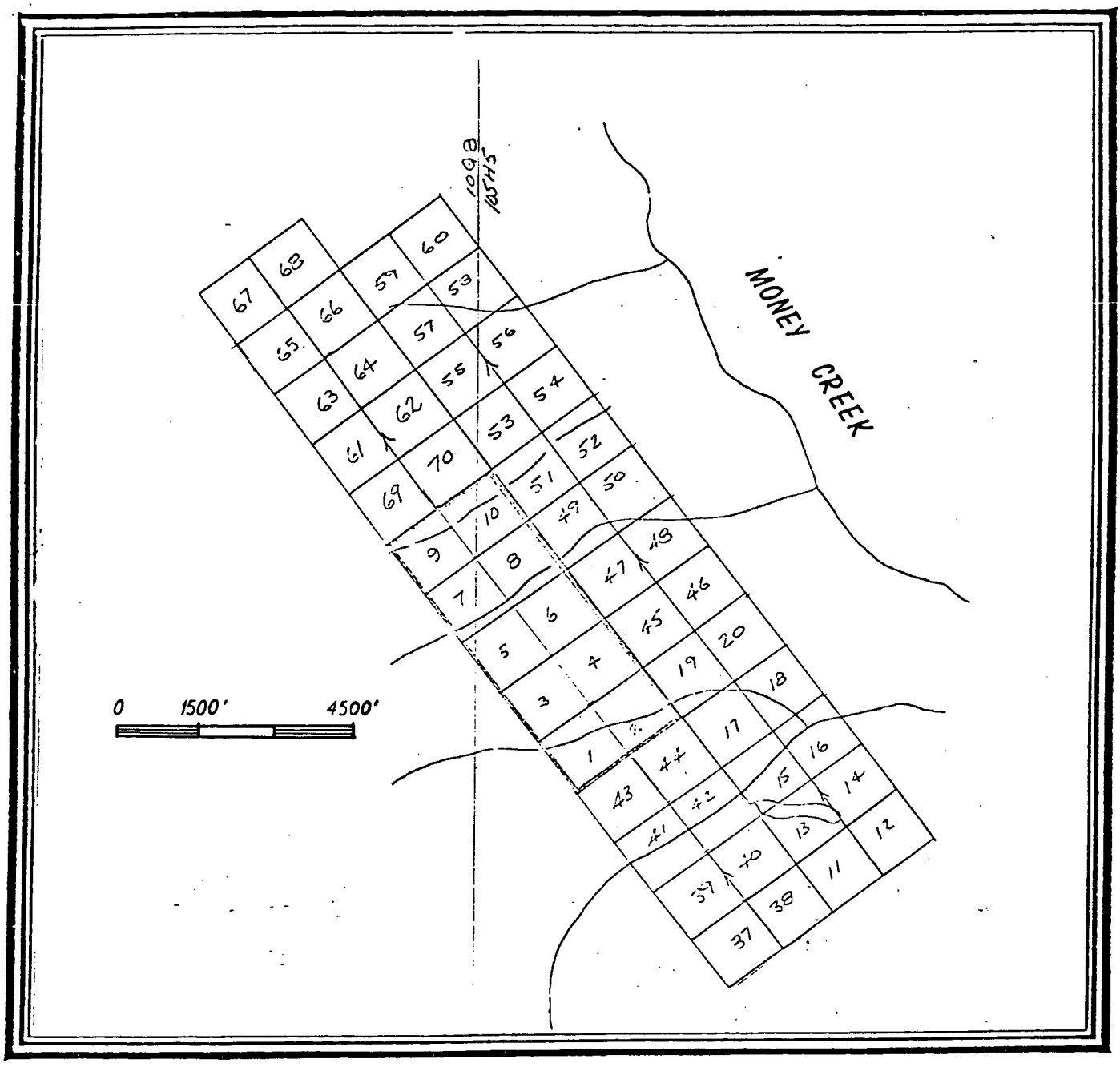


FIGURE 2

CLAIM MAP

JULIA CLAIMS

ARBOR RESOURCES INC.

MONTGOMERY CONSULTANTS LIMITED

JUNE 1981.

5.0 REGIONAL GEOLOGY

The geology of the claim area has been mapped by Roots, Roddick and Blusson on map 6-1966, and by Wheeler, Green and Roddick on the adjoining sheet 8-1960. Both maps describe the rock type of the Julia claims as a Mississippian or Devonian greenstone, or meta-diorite with minor serpentine and amphibolite.

On the claim group, the rocks are foliated, fine grained greenstones, considered by Roots, Green et al to be volcanic in origin.

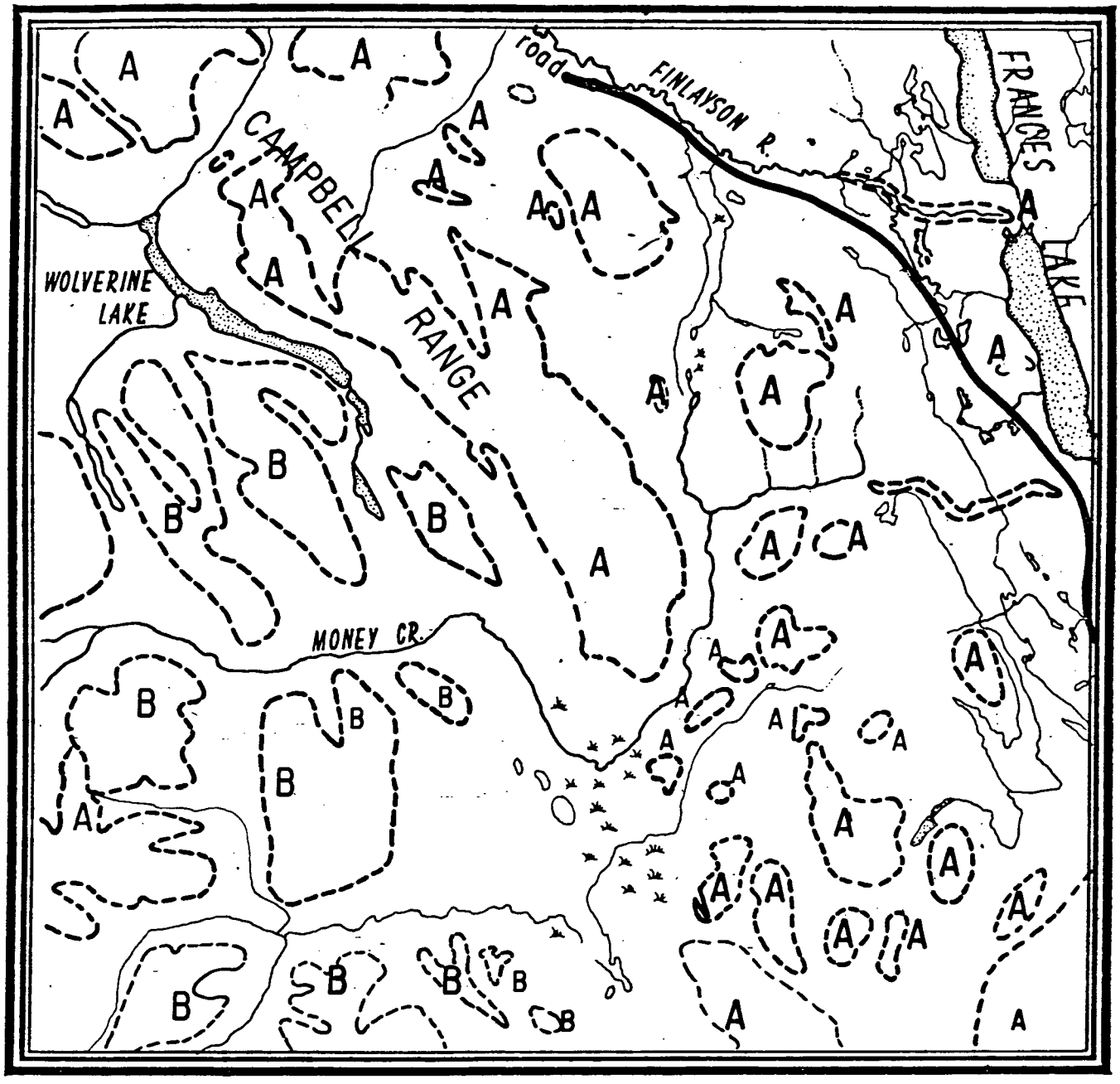


FIGURE 3

JUNE 1981.

LEGEND

A - Greenstone

B - Quartz biotite & quartz chlorite schist.

REGIONAL GEOLOGY

(After Wheeler, Green, Roddick, Roots & Blusson; 8-1960 & 6-1966)

Julia Claims

0 6 12 K.

N

ARBOR RESOURCES INC.

MONTGOMERY CONSULTANTS LIMITED

6.0 DETAILED GEOLOGY AND MINERALIZATION

The showing on the Julia claims consists of a leeched siliceous iron rich layer within an acidic, volcanic pile, exposed in three creek beds over approximately 1,800 meters. The zone is highly weathered and shows up as a red gossan. The mineralized layer strikes to the northwest and appears to be dipping about 45 to 60 degrees east. The apparent width of the bed varies up to a maximum of 80 meters. (See Figure 4).

The hostrock is possibly a rhyolite phase of the greenstones that cover the claim area. The rock is highly siliceous with pyrite occurring as disseminations and cavity filling. The majority of the pyrite has been leeched out leaving iron stained crystal indentations.

In the creek bed just southeast of the initial posts for Julia number 7 and 8 claims, massive sulphide boulders were found up to one meter square. These fragments appear to be close to their source and consist of banded pyrite with minor chalcopyrite and quartz. A selected piece of this boulder assayed .003 oz/ton Au, .80 oz/ton Ag and .239% Cu. Selected samples from this area taken by Welcome North staff are shown below.

7.0 GEOCHEMISTRY

The area immediately adjacent to the showing was covered with a compass and flagging grid. A base line was established along the Julia 1-10 claim line at a bearing of N 141°E. Perpendicular crosslines were flagged every 100 meters where possible.

Soil samples were taken from the B-Horizon every 20 meters along the crosslines for a distance 200 meters west of the baseline and 100 meters east. The samples were placed in kraft bags, dried, and shipped to Min-En Laboratories Ltd. in North Vancouver. Two hundred and eighty-five samples were tested for copper, lead, zinc and silver by nitric, perchloric digestion and then atomic absorption. Gold was tested for using an Aqua Regia digestion and atomic absorption.

The results have been plotted on Figures 5 through 9 and the laboratory analytical report is included in Appendix I.

7.1 Statistics

A statistical analysis of the results, including arithmetic histograms, lognormal histograms and cumulative distribution curves was completed and is shown in Appendix II.

The arithmetic and lognormal histograms for copper show a lognormal population ranging in values from 5 to 6000 ppm with a mean value of 177 ppm and a standard deviation of 482 ppm. A lognormal cumulative distribution curve for copper showed there were actually three distinct populations in the data set. An upper or anomalous population had a mean of 2800 ppm, a middle population with a mean 1180 ppm and a lower background population with a mean of 80 ppm. This curve was partitioned and thresholds determined at 1900, 1540, 900, and 540 ppm. These thresholds were contoured on Figure 5.

The arithmetic and lognormal histograms showed lead values formed a normal distribution ranging in values from 1 to 43 ppm with a mean of 12 ppm and a standard deviation of 5.5. An arithmetic cumulative distribution curve was partitioned into two populations. A 22 ppm threshold was used to contour the data.

Histograms for zinc showed a lognormal distribution. Values ranged from 3ppm to 425ppm with a mean fo 62 ppm and a standard deviation of 51. A lognormal cumulative distribution curve was partitioned into 2 populations with a threshold of 270 ppm used to contour the data.

Silver values ranged from a low of .1 ppm to a high of 5.6 ppm with a mean of .9 ppm and a standard deviation of .52. These values formed a lognormal distribution which was partitioned into 2 populations. An upper or anomalous population with amean of 2.1 ppm and a background population with a mean value of .8. A threshold of 1.4 ppm was used to contour the data and separate these populations.

The gold values on the Julia calims ranged in value from 5 ppb to 1605 ppb. For the purpose of a statistical analysis the obviously anomalous 1650 ppb sample was not used. The remaining 284 samples had a mean value of 10 ppb with a standard deviation of 9.5. A lognormal cumulative distribution curve was construted and partitioned into two populations. The anomalous values had a mean of 36 ppb while the background values had a mean of 8 ppb. The 2 ppb level was used to separate these two populations.

8.0 VLF-EM SURVEY

A Geonics Limited EM-16 or very low frequency EM was used to test the Julia claims for the continuation of the pyrite zone exposed on the surface in the form of a series of covered outcrops.

The specifications and a discription of the instrument are included as Appendix III.

Lines were tested perpendicular to the iron gossan and the submarine station NLK at Seattle, Washington (18.6 KH_Z) was used as a transmitter.

The data from the survey was converted from "zero-crossings" to contourable peaks by a process of simple numberical filtering devised by D.C. Fraser.

The results are shown in Figure 10. The zone is traced very well by the filtered data. The sulphide zone appears to be continuous from at least 1400N to 2600N where it is probably displaced to the east by a fault. This fault is represented by the creek marked number 1 on Figure 4. A second more westerly zone is indicated on lines 2000, 2100, and 2200N between stations 800 and 900E. This zone outcrops on the south side of creek number 2 as a leeched silecous gossan. A third zone is hinted at by one reading at the most easterly station on line 1800N.

9.0 DISCUSSION OF RESULTS

The EM-16 survey indicated a continuous conductive zone from at least 1400N to 2600N where it is probably faulted off and displaced eastward to where it was detected on line 3000N. This zone, which shall be referred to as the main zone, is anomalous in copper on lines 2100 and 2200N and on line 2850N. Lead geochemistry doesn't delineate the main zone very well but picks up the faulted off portion on line 3000N and indicates a possible continuation of this zone northward. Zinc geochemistry mirrors the main zone between lines 2100N and 2400N, although only 5 samples are considered anomalous. Silver values indicate this zone between lines 2200N and 2850N. The possible fault zone shows up as a large dispersion silver anomaly on line 2850N. The faulted off portion shows up on lines 3000 to 3400N. Anomalous gold values are not continuous enough to trace the main zone well, however, there are scattered small anomalies along its entire length.

A single anomalous gold value of 1650 ppb on line 1000N indicates the need for more thorough prospecting to the south and west.

A secondary zone indicated on line 1800N at its most easterly station was not picked up by geochemistry since the grid did not extend far enough east.

10.0 RECOMMENDATIONS

The results of STAGE I on the Julia claims were very encouraging. The mineralized gossan was picked up below surface with electromagnetic methods and the presence of gold, silver and sulfides was confirmed with geochemistry. As a result STAGE II, as recommended in the Report by this writter on September 2, 1980 should be carried out.

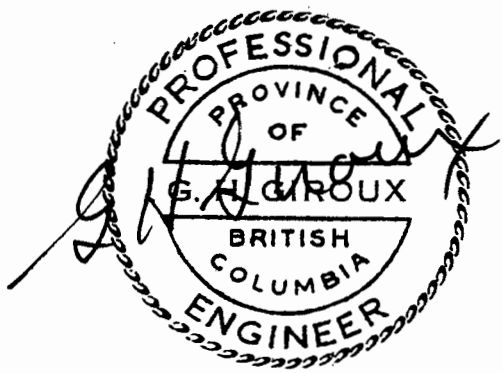
This report called for extensive geologic mapping, and additional geochemistry over the entire claim group.

An induced polarization survey to trace the sulfide zone should be used with allowance for several depth probes to indicate the dip of the structure, and hence the best location of drill holes.

The main zone should then be tested by diamond drilling. A preliminary program of 2000 feet was recommended with additional drilling in a third stage if warrented.

11.0 COST STATEMENT STAGE I

G.H. Giroux	10 days		2,687.50
D. Fonseca	7 days	(Aug.16-30/80)	630.00
M. Hayes	7 days	(Aug.16-30/80)	420.00
Room & Board			167.58
Helicopter			2,171.40
Truck Rental			463.72
Computer Costs			174.75
Assays & Geochemistry			2,818.08
Drafting			157.50
Report Preparation (typing, reproduction, etc)			300.00
		TOTAL	$9,990.53



12.0 CERTIFICATE

I, G.H. GIROUX, of 982 Braodview Drive, North Vancouver, British Columbia, do hereby certify that:

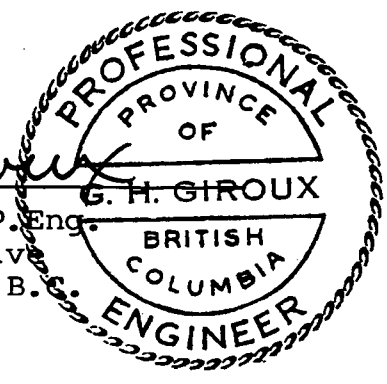
1. I am a consulting geological engineer with an office at #203 - 2786 W. 16th Ave., Vancouver, British Columbia.

2. I am a graduate of the Universtiy of British Columbia (1970) with a degree in Geological Engineering (B.A. Sc.).

3. I have practiced my profession continuously since graduation.

4. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

5. I have no interest, either direct or indirect in the properties or securities of Arbor Resources Limited; nor do I expect to receive any such interest.



Gary H. Grioux, P.Eng.
982 Braodview Drive
North Vancouver, B.C.
June 1981

APPENDIX I

ANALYTICAL REPORT

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project 80RR1 Date of report Sept.15/80.

File No. 0-757 Date samples received Aug.26/80.

Samples submitted by: G. Giroux

Company: Montgomery Consultants

Report on: 79 soils Geochem samples

Assay samples

Copies sent to:

1. Montgomery Consultants, Vancouver, B.C.
2.
3.

Samples: Sieved to mesh -80 Ground to mesh

Prepared samples stored ☒ discarded ☐

rejects stored ☐ discarded ☒

Methods of analysis: Cu,Pb,Zn,Ag-nitric,perchloric digestion.A.A. Analysis. Au-Aqua Regia.A.A.Analysis.

Remarks: This is the completion of this file number.

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

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rejects stored ☐ discarded ☒

Methods of analysis: Cu,Pb,Zn,Ag-nitric,perchloric digestion.A.A. Analysis. Au-Aqua Regia.A.A.Analysis.

Remarks: This is the completion of this file number.

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project 80RR1 Date of report Sept.12/80.

File No. 0-757 Date samples received Aug.26/80.

Samples submitted by: G. Giroux

Company: Montgmery Consultants

Report on: 210 soils Geochem samples

Assay samples

Copies sent to:

1. Montgmery Consultants, Vancouver, B.C.
2.
3.

Samples: Sieved to mesh -80 Ground to mesh

Prepared samples stored ☒ discarded ☐

rejects stored ☐ discarded ☒

Methods of analysis: Cu,Pb,Zn,Ag-nitric,perchloric digestion.A.A. Analysis. Au-Aqua Regia.A.A.Analysis.

Remarks: More samples to follow.

Co... Mo go y ns :a

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ... ALYSIS DATA SHEET

MIN - EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. ... 75.

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb
900N 800E		31	11	72			05					<5
820E		16	3	19			01					5
840E		7	1	3			01					5
860E		28	3	19			02					10
880E		12	3	13			02					20
900E		18	7	32			03					<5
920E		22	10	52			03					5
940E		16	6	40			04					10
960E		18	7	51			05					5
980E		24	10	181			07					5
1000E		8	2	9			01					10
1020E		22	9	50			04					15
1040E		32	10	53			07					40
1060E		16	4	27			05					5
1080E		24	3	17			04					10
900N 1100E		7	1	3			03					<5
1000N 800E		23	9	49			05					1650
820E		28	10	37			05					10
840E		30	9	47			09					5
860E		28	8	55			07					<5
880E		30	12	44			07					5
900E		34	9	46			08					5
920E		28	6	27			02					10
940E		27	6	36			03					5
960E		38	7	48			02					10
980E		10	2	20			01					5
1000E		64	12	98			07					5
1020E		28	9	41			05					5
1040E		19	7	13			02					5
1000N 1060E		16	9	30			04					5

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PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ALYSIS DATA SHEET

MIN - EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. 0-157

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb
1000N	80E	18	4	8			04					15
1000N	100E	22	9	25			04					15
1200N	00E	78	10	51			05					10
"	20E	36	9	25			05					10
"	40E	260	18	158			10					5
"	60E	205	20	225			12					15
"	80E	110	15	64			04					10
"	00E	100	19	43			08					15
"	20E	94	10	48			06					15
"	40E	40	10	83			05					15
"	60E	13	6	11			04					10
"	80E	28	10	32			02					5
"	000E	34	11	67			06					15
"	020E	20	12	58			04					20
"	040E	35	13	64			08					15
"	060E	26	13	68			06					5
"	080E	20	13	89			07					5
1200N	100E	6	5	11			02					5
1300N	00E	60	11	48			05					5
"	20E	53	9	44			08					5
"	40E	175	11	56			09					5
"	60E	5	3	55			01					10
"	80E	28	8	25			03					10
"	000E	60	12	85			12					5
"	020E	32	10	37			11					10
"	040E	34	9	29			05					5
"	060E	13	3	11			02					15
"	080E	22	12	49			06					10
1300N	100E	52	11	43			07					5
1400N	00E	64	9	45			06					10

COMPANY: Mc go :y ns ta ;

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

FILE No.: J-;57

DATE: Sept. 12, 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		
1400N 820E		66	12	46			0.4					<5		
840E		50	13	44			0.7					5		
860E		28	10	52			0.4					5		
880E		23	10	66			0.3					10		
900E		34	13	35			0.7					<5		
920E		30	9	36			0.4					<5		
940E		32	11	44			0.7					5		
960E		24	11	39			0.5					10		
980E		44	11	101			0.6					5		
1000E		72	10	54			0.6					5		
1020E		52	10	44			0.6					10		
1040E		50	8	53			0.6					10		
1060E		98	10	76			0.8					5		
1080E		96	9	48			0.7					5		
1400N 1100E		92	15	62			0.8					5		
1500N 800E		38	15	40			0.6					<5		
820E		30	16	69			0.9					5		
840E		72	16	35			0.8					<5		
860E		42	15	41			0.5					10		
880E		76	14	64			1.2					5		
900E		22	11	20			0.6					10		
920E		33	12	39			0.9					5		
940E		24	8	28			0.5					5		
960E		28	13	42			0.9					10		
980E		14	2	14			0.5					5		
1000E		53	10	38			0.6					25		
1020E		30	9	30			0.4					20		(40 mesh)
1040E		44	14	48			0.4					15		
1060E		40	15	29			0.7					10		
1500N 1080E		61	17	83			0.8					10		

C M Montgomery Consultants

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

No. -7

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
1500N	100E	2.9	9	42			0.8					10			
1600N	800E	2.7	10	35			0.8					10			
	820E	1.7	1	14			0.4					5			
	840E	7.9	12	56			1.5					10			
	860E	5.2	12	44			0.9					5			
	880E	4.3	10	45			1.0					10			
	900E	6.0	12	39			1.2					5			
	920E	4.7	11	45			0.9					10			
	940E	4.0	11	47			1.3					10			
	960E	4.5	11	34			1.0					10			
	980E	5.2	12	45			1.2					10			
	1000E	3.0	10	38			1.3					5			
	1020E	5.1	10	39			0.7					5			
	1040E	4.7	6	27			0.9					10			
	1060E	3.7	5	20			0.8					5			
	1080E	2.7	2	19			0.7					15			
1600N	1100E	2.9	2	23			0.6					10			
1700N	800E	9.6	13	55			1.5					5			
	820E	8.3	12	59			1.2					5			
	840E	4.8	12	44			1.3					5			
	860E	4.3	4	20			0.6					10			
	880E	3.2	12	47			1.1					5			
	900E	5.0	11	44			1.1					15			
	920E	2.9	5	30			0.8					35		(20 mesh)	
	940E	7.2	13	54			1.2					5			
	960E	4.5	10	50			0.9					15			
	980E	4.8	10	54			1.0					5			
	1000E	6.0	11	46			0.9					10			
	1020E	4.8	5	29			0.5					5			
1700N	1040E	9.7	10	47			1.1					10			

COMPANY Montgomery Consultants

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

No. [illegible]-7[illegible]

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		
1700N	1060E	8.3	1.6	6.5			1.1					25		
	1080E	4.9	1.0	6.6			0.9					5		
1700N	1100E	7.3	1.1	5.4			1.2					5		(40 mesh)
1800N	800E	4.0	9	3.3			0.9					10		
	820E	1.5	3	1.2			0.5					5		
	840E	3.3	1.0	3.0			1.0					5		(40 mesh)
	860E	3.8	2.0	6.2			1.4					5		
	880E	4.3	1.3	5.7			1.2					10		
	900E	4.4	1.1	3.6			1.0					10		
	920E	9.7	2.0	6.4			1.6					5		
	940E	9.9	1.2	4.4			1.0					<5		
	960E	1.1	2	1.1			0.3					<5		
	980E	1.0	2	6			0.3					<5		
	1000E	4.9	1.4	4.5			0.8					5		
	1020E	7.9	1.3	8.5			0.9					5		
	1040E	2.5	6	2.1			0.4					<5		
	1060E	4.9	9	3.5			0.9					10		
	1080E	12.1	1.1	4.9			1.2					5		(40 mesh)
1800N	1100E	19.8	1.3	5.8			1.4					<5		(40 mesh)
1900N	800E	5.3	1.3	4.7			1.3					5		
	820E	7.2	1.4	6.1			1.4					10		
	840E	5.1	1.1	4.5			1.0					<5		
	860E	5.8	1.1	4.1			0.9					20		
	880E	12.4	1.2	5.0			1.1					5		
	900E	2.9	9	4.0			0.9					5		(40 mesh)
	920E	11.6	1.8	5.9			1.0					5		
	940E	10.6	1.1	5.4			1.0					15		
	960E	4.8	8	3.2			0.5					5		
	980E	3.3	8	1.9			0.4					5		
1900N	1000E	12.6	1.1	4.7			1.2					5		(40 mesh)

COMPANY Montgomery Consultants

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		
1900N	1	020E	1.2	6	1.9	5.5			1.0				5	
	1	040E	1.9	0	4.3	8.1			1.0				5	
	1	060E	1.6	6	1.2	5.1			0.7				15	
	1	080	3.6	0	1.4	8.6			1.2				20	
1900N	1	100E	1.4	0	1.4	4.7			0.8				10	
2000N	8	00E	7.0		8	2.8			0.5				10	
	8	20E	6.8		1.2	9.8			0.7				15	
	8	40E	8.6		1.0	3.9			0.7				15	
	8	60E	8.4		1.5	4.6			0.7				20	
	8	80E	1.0	0	1.4	5.2			1.0				5	
	9	00E	1.1	6	1.1	5.6			0.8				15	
	9	20E	7.2		1.1	4.9			0.8				15	
	9	40E	1.0	0	1.4	5.0			0.9				15	
	9	60E	9.6		1.2	5.2			0.8				15	
	9	80E	1.6	2	1.7	6.2			1.4				20	
	1	000E	1.5	0	1.6	7.3			1.3				15	
	1	020E	1.3	4	1.1	5.0			0.9				20	
	1	040E	3.0	0	1.2	6.9			1.1				35	
	1	060E	2.1	0	6	5.2			0.7				15	
	1	080E	7.8		6	2.7			0.6				25	
2000N	1	100E	3.8	0	1.1	1.9			1.3				25	(20mesh)
2100N	8	00E	6.6		1.1	3.5			0.8				20	
	8	20	4.8		4	2.1			0.6				20	
	8	40E	6.6		9	3.5			0.6				15	
	8	60E	2.6		8	2.7			0.5				20	
	8	80E	1.0	4	1.6	6.7			1.2				10	
	9	00E	9.6		1.2	4.7			1.2				25	
	9	20E	2.1	5	1.3	6.8			0.9				30	
	9	40E	1.4	0	1.3	4.1			1.1				10	
2100N	9	60E	2.5	0	1.2	5.0			0.9				5	

COMPANY: Montgomery Consultants

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

DATE: Sept.15 1980.

Sample Number		Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	
2100N	80E	88	10	10			02					5	
	1000E	720	9	141			09					<5	
	1020E	500	13	228			08					<5	
	1040E	2400	15	425			08					5	
	1060E	600	10	216			07					5	
	1080E	700	11	174			08					95	
2100N	1100E	600	12	99			09					5	
2200N	800E	78	12	46			07					5	
	820E	115	16	206			08					<5	
	840E	98	10	49			05					<5	
	860E	320	15	108			13					5	
	880E	170	11	64			10					5	
	900E	3200	14	141			18					5	
	920E	210	8	61			11					5	
	940E	750	13	70			14					<5	
	960E	1100	19	127			18					10	
	980E	1100	15	71			15					5	
	1000E	1050	21	149			28					20	
	1020E	1200	17	315			18					5	
	1040E	6000	14	292			12					10	
	1060E	2600	12	202			12					15	
	1080E	800	8	109			08					5	40mesh)
2200N	1100E	1400	7	177			08					5	
2400N	840E	170	21	286			20					<5	
	860E	106	11	53			10					10	
	880E	95	12	60			11					15	
	900E	86	11	65			09					40	
	920E	230	32	112			56					85	
	940E	185	13	106			11					20	
2400N	960E	35	3	28			04					30	

CERTIFIED BY:

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PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. U-757

DATE: Sept.15, 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		
2400N	900E	175	15	55			1.3					20		
	1000E	62	8	33			0.9					25		
	1040E	52	18	46			0.9					20		
	1060E	40	9	46			1.0					10		
	1080E	82	15	60			0.9					10		
2400N	1100E	44	15	49			1.1					5	(40mesh)	
2600N	800E	56	13	33			1.1					5		
	820E	62	18	78			1.3					15		
	840E	44	12	41			0.9					10		
	860E	56	16	65			1.2					5		
	880E	56	18	80			1.5					5		
	900E	35	7	62			0.8					5	(20mesh)	
	920E	50	13	40			1.0					15		
	940E	59	14	35			1.1					10		
	960E	46	15	45			1.0					5		
	980E	22	12	26			0.6					10		
	1000E	60	16	48			1.2					15		
	1020E	50	15	41			0.9					10		
	1040E	16	8	11			0.4					25	(40mesh)	
	1060E	63	14	46			1.3					5		
	1080E	68	18	39			1.1					15		
2600N	1100E	31	10	18			0.6					5		
2850N	800E	61	12	34			0.9					10		
	820E	117	20	50			1.2					<5		
	840E	51	14	33			1.0					5		
	860E	149	10	34			1.0					5		
	880E	840	26	126			2.2					5		
	900E	325	20	103			1.8					5		
	920E	590	26	63			2.5					20		
2850N	940E	725	25	92			2.2					10		

COMPANY: Montgomery Consultants

PROJECT No.: 80RR1

ATTENTION: G. Giroux

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

No. 71

DATE: Sept. 12 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
2850N 960E		44.0	1.8	116			1.4					10			
980E		61.0	2.2	182			1.9					10			
1000E		53.0	2.1	139			1.8					15			
1020E		58.0	2.0	171			1.2					15			
1040E		40.0	2.0	123			0.9					10			
1060E		146	1.7	80			1.1					20			
1080E		260	2.0	65			1.4					10			
2850N 1100E		150	2.0	82			1.0					5			
3000N 900E		112	1.5	51			0.9					5			
920E		156	1.9	87			1.1					10			
960E		72	1.4	93			1.0					10			
980E		90	2.1	114			1.0					15			
1000E		220	2.1	61			1.2					5			
1020E		32	1.1	40			0.6					15			
1040E		116	1.6	37			0.5					20			
1060E		503	2.6	132			1.9					25			
1080E		456	2.5	60			2.2					15			
3000N 1100E		158	2.4	163			1.8					5			
3200N 860E		187	2.3	100			1.8					10			
880E		237	2.8	139			1.8					10			
900E		112	1.4	70			1.8					15			
920E		153	2.0	48			1.3					10			
940E		57	0.8	77			1.5					10			
960E		51	2.0	40			1.2					15			
980E		78	1.2	37			1.2					10			
1000E		68	1.3	24			0.8					15			
1020E		96	2.3	75			1.4					10			
1040E		20	0.9	11			0.5					15			
1060E		74	1.6	33			1.2					5			
3200N 1080E		86	2.2	101			1.2					15			

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PROJECT No.: 80RR1

ATTENTION: G. Giroux

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MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

No. U-751

DATE: Sept. 15 1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		
3300N 840E		196	1.6	59			1.4					5		
860E		134	1.1	43			1.2					5		
880E		168	1.4	48			1.1					15		
900E		95	1.4	64			1.0					5		
920E		93	1.1	70			1.3					10		
940E		168	1.5	62			1.4					15		
960E		181	1.6	74			1.4					10		
980E		67	1.3	123			1.2					10		
1000E		81	2.0	75			1.2					20		
1020E		64	1.8	53			1.1					15		
1040E		115	1.7	63			1.4					25		
1060E		73	1.8	65			1.1					10		(40 mesh)
1080E		101	2.6	57			1.2					5		
3300N 1100E		75	1.4	67			0.9					5		(20 mesh)
3280N 920E		160	1.4	54			1.3					10		(20 mesh)
Silt #2		570	1.1	110			1.3					10		
Silt #3		114	1.5	72			1.1					15		
3020N 1100E (Silt #4)		205	1.4	63			1.3					20		
3200N 1100E		74	1.1	64			0.8					25		

APPENDIX II

STATISTICAL ANALYSIS

..STOL.. ..F .....ABL.. 1 C..

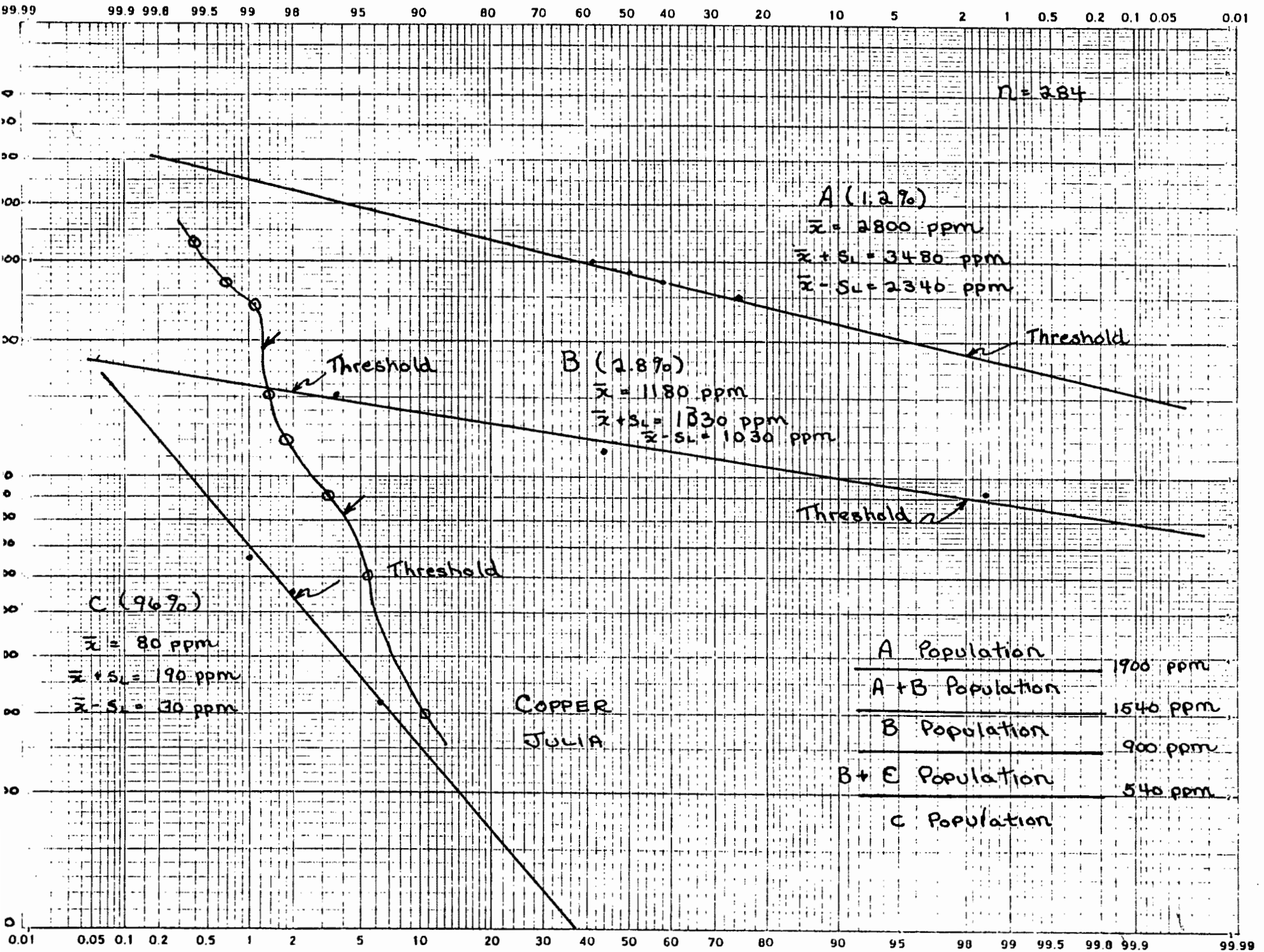
SYMBOL	COUNT	MEAN	ST. .V.
X	284	177.006	432.844

INTERVAL NAME	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80	FREQUENCY INT.	FREQUENCY CUM.	PERCENTAGE INT.	PERCENTAGE CUM.
* 300.00	+XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*	254	254	89.4	89.4
* 600.00	+XXXXXXXXXXXXXX	14	268	4.9	94.4
* 900.00	+XXXXXXX	7	275	2.5	96.8
* 1200.0	+XXXX	4	279	1.4	98.2
* 1500.0	+X	1	280	0.4	98.6
* 1800.0	+	0	280	0.0	98.6
* 2100.0	+	0	280	0.0	98.6
* 2400.0	+X	1	281	0.4	98.9
* 2700.0	+X	1	292	0.4	99.3
* 3000.0	+	0	282	0.0	99.3
* 3300.0	+X	1	283	0.4	99.6
* 3600.0	+	0	283	0.0	99.6
* 3900.0	+	0	283	0.0	99.6
* 4200.0	+	0	283	0.0	99.6
* 4500.0	+	0	283	0.0	99.6
* 4800.0	+	0	283	0.0	99.6
* 5100.0	+	0	283	0.0	99.6
* 5400.0	+	0	283	0.0	99.6
* 5700.0	+	0	283	0.0	99.6
* 6000.0	+X	1	284	0.4	100.0
* 6300.0	+	0	284	0.0	100.0
	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80				

HISTOGRAM OF VARIABLE 1 CU

SYMBOL	COUNT	MEAN	ST.DEV.
X	284	1.859	0.491

INTERVAL MAME	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80	FREQUENCY INT.	FREQUENCY CUM.	PERCENTAGE INT.	PERCENTAGE CUM.
* .72000	+X	1	1	0.4	0.4
* .90000	+XXX	3	4	1.1	1.4
* 1.0800	+XXXXX	5	9	1.8	3.2
* 1.2600	+XXXXXXXXXXXXX	13	22	4.6	7.7
* 1.4400	+XXXXXXXXXXXXXXXXXXXX	21	43	7.4	15.1
* 1.6200	+XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	46	89	16.2	31.3
* 1.8000	+XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	55	144	19.4	50.7
* 1.9800	+XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	43	187	15.1	65.8
* 2.1600	+XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	34	221	12.0	77.8
* 2.3400	+XXXXXXXXXXXXXXXXXXXXXXXX	26	247	9.2	87.0
* 2.5200	+XXXXXXXXX	9	256	3.2	90.1
* 2.7000	+XXXXXX	6	262	2.1	92.3
* 2.8800	+XXXXXXXXXXX	11	273	3.9	96.1
* 3.0600	+XXXXX	5	278	1.8	97.9
* 3.2400	+XX	2	280	0.7	98.6
* 3.4200	+XX	2	282	0.7	99.3
* 3.6000	+X	1	283	0.4	99.6
* 3.7800	+X	1	284	0.4	100.0
* 3.9600	+	0	284	0.0	100.0
* 4.1400	+	0	284	0.0	100.0
* 4.3200	+	0	284	0.0	100.0



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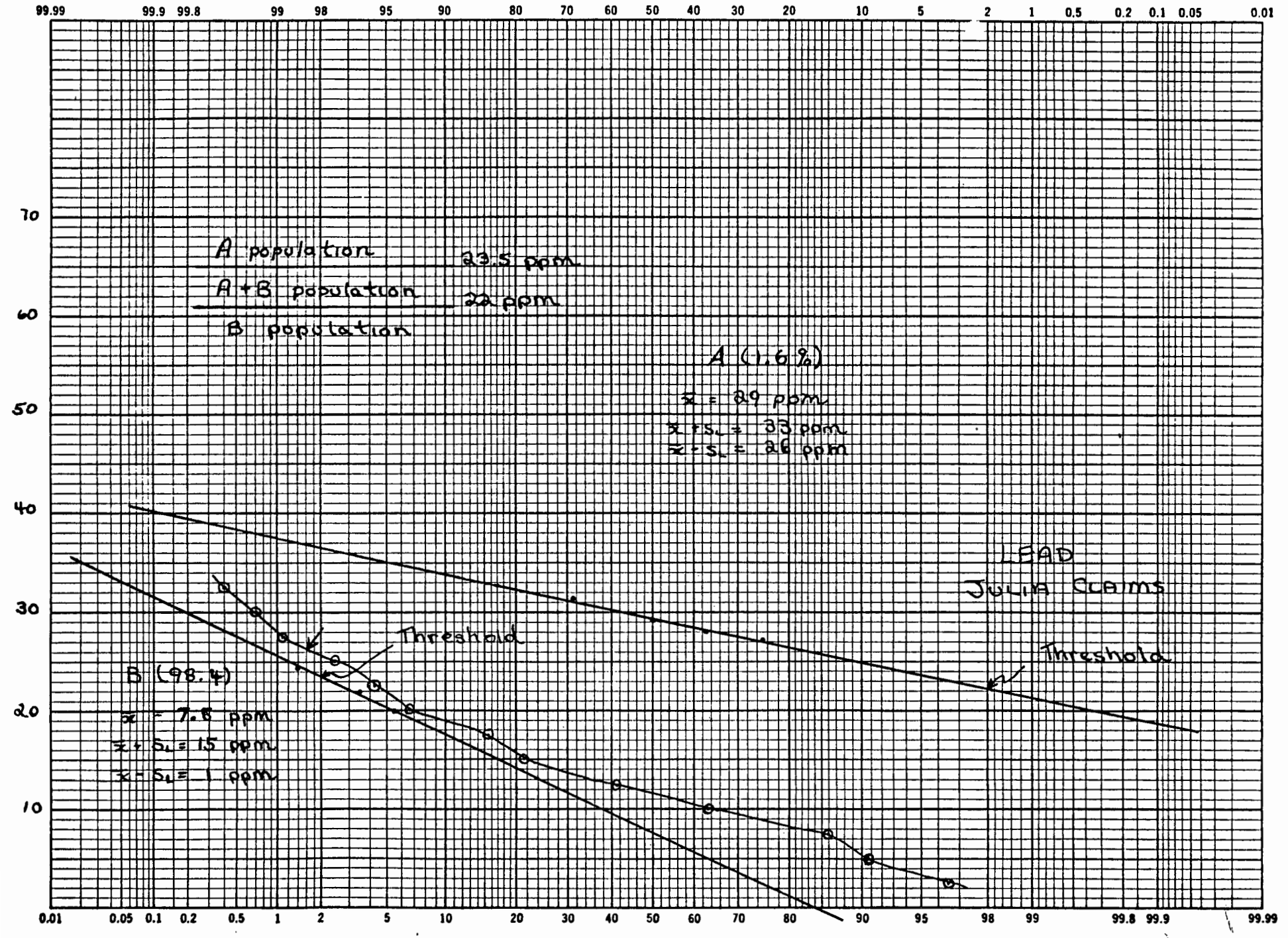
HISTOGRAM OF VARIABLE 2 PB

SYMBOL	COUNT	MEAN	ST.DEV.
X	284	12.299	5.545

```
INTERVAL
NAME          5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
      +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
* 2.5000 +XXXXXXXXXX
* 5.0000 +XXXXXXXXXXXXXXX
* 7.5000 +XXXXXXXXXXXXXX
* 10.000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
* 12.500 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
* 15.000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
* 17.500 +XXXXXXXXXXXXXXXX
* 20.000 +XXXXXXXXXXXXXXXXXXXXXXXXX
* 22.500 +XXXXXXX
* 25.000 +XXXXX
* 27.500 +XXXX
* 30.000 +X
* 32.500 +X
* 35.000 +
* 37.500 +
* 40.000 +
* 42.500 +
* 45.000 +X
* 47.500 +
* 50.000 +
* 52.500 +
      +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
           5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```

INTERVAL NAME	FREQUENCY INT.	FREQUENCY CUM.	PERCENTAGE INT.	PERCENTAGE CUM.
* 2.5000	10	10	3.5	3.5
* 5.0000	16	26	5.6	9.2
* 7.5000	14	40	4.9	14.1
* 10.000	64	104	22.5	36.6
* 12.500	63	167	22.2	58.8
* 15.000	56	223	19.7	78.5
* 17.500	17	240	6.0	84.5
* 20.000	25	265	8.8	93.3
* 22.500	7	272	2.5	95.8
* 25.000	5	277	1.8	97.5
* 27.500	4	281	1.4	98.9
* 30.000	1	282	0.4	99.3
* 32.500	1	283	0.4	99.6
* 35.000	0	283	0.0	99.6
* 37.500	0	283	0.0	99.6
* 40.000	0	283	0.0	99.6
* 42.500	0	283	0.0	99.6
* 45.000	1	284	0.4	100.0
* 47.500	0	284	0.0	100.0
* 50.000	0	284	0.0	100.0
* 52.500	0	284	0.0	100.0

```
HISTOGRAM   VARIABLE    2 PB
                                        SYMBOL  COUNT      MEAN      ST.DEV.
                                          X      284       1.035       0.246
INTERVAL                                                                                                   FREQUENCY PERCENTAGE
NAME            5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   INT. CUM.  INT.  CUM.
             +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
* .10000 +XXX                                                                                      3    3    1.1   1.1
* .20000 +                                                                                         0    3    0.0   1.1
* .30000 +                                                                                         0    3    0.0   1.1
* .40000 +XXXXXXX                                                                                  7   10    2.5   3.5
* .50000 +XXXXXXXX                                                                                 8   18    2.8   6.3
* .60000 +                                                                                         0   18    0.0   6.3
* .70000 +XXXXXXXX                                                                                 8   26    2.8   9.2
* .80000 +XXXXXXXX                                                                                 8   34    2.8  12.0
* .90000 +XXXXXX                                                                                   6   40    2.1  14.1
* 1.0000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                        64  104   22.5  36.6
* 1.1000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                         63  167   22.2  58.8
* 1.2000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                        56  223   19.7  78.5
* 1.3000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                          30  253   10.6  89.1
* 1.4000 +XXXXXXXXXXXXXXXXXXXXXXXX                                                                24  277    8.5  97.5
* 1.5000 +XXXXX                                                                                    5  282    1.8  99.3
* 1.6000 +X                                                                                        1  283    0.4  99.6
* 1.7000 +X                                                                                        1  284    0.4 100.0
* 1.8000 +                                                                                         0  284    0.0 100.0
* 1.9000 +                                                                                         0  284    0.0 100.0
* 2.0000 +                                                                                         0  284    0.0 100.0
* 2.1000 +                                                                                         0  284    0.0 100.0
             +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```



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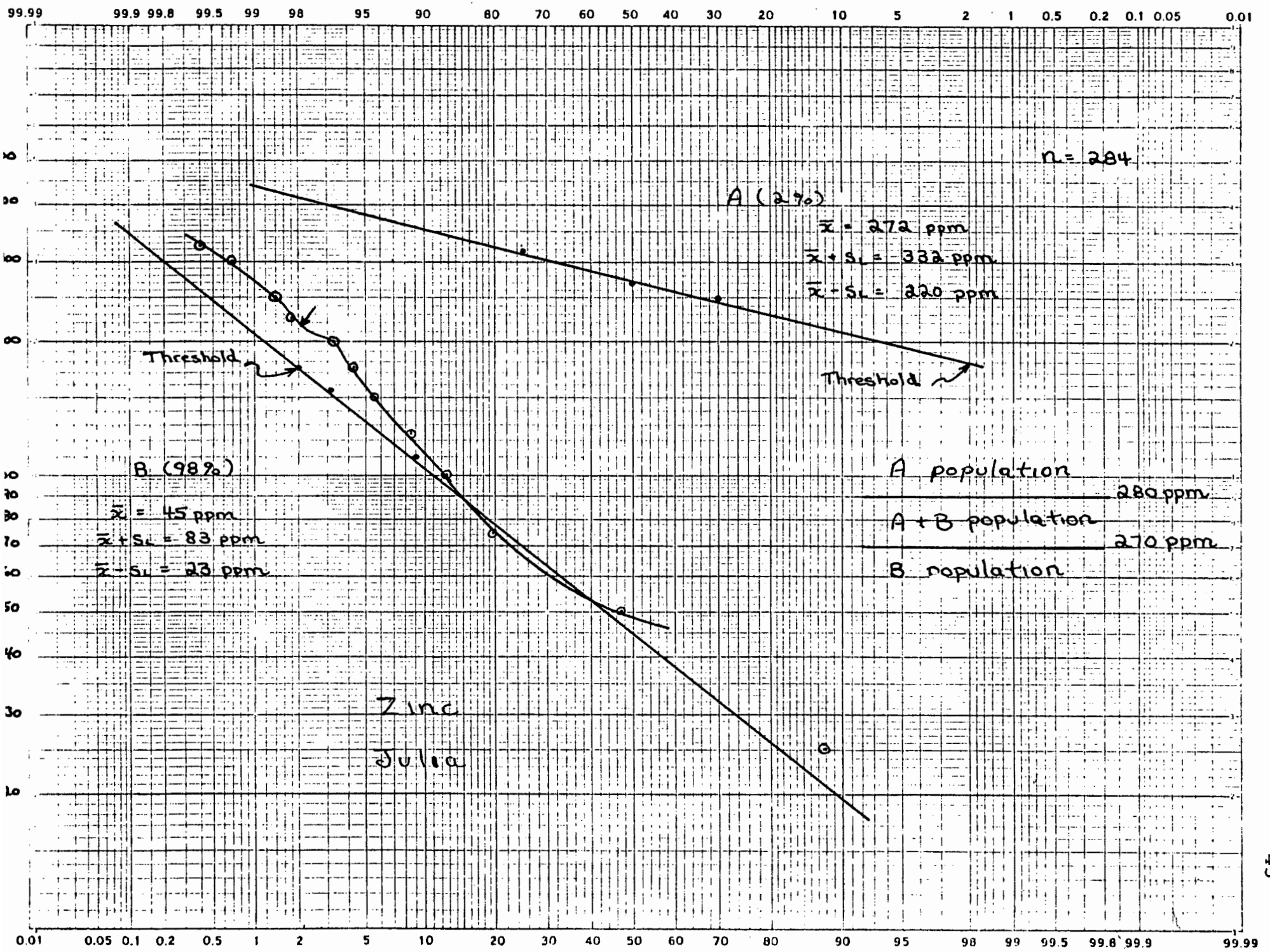
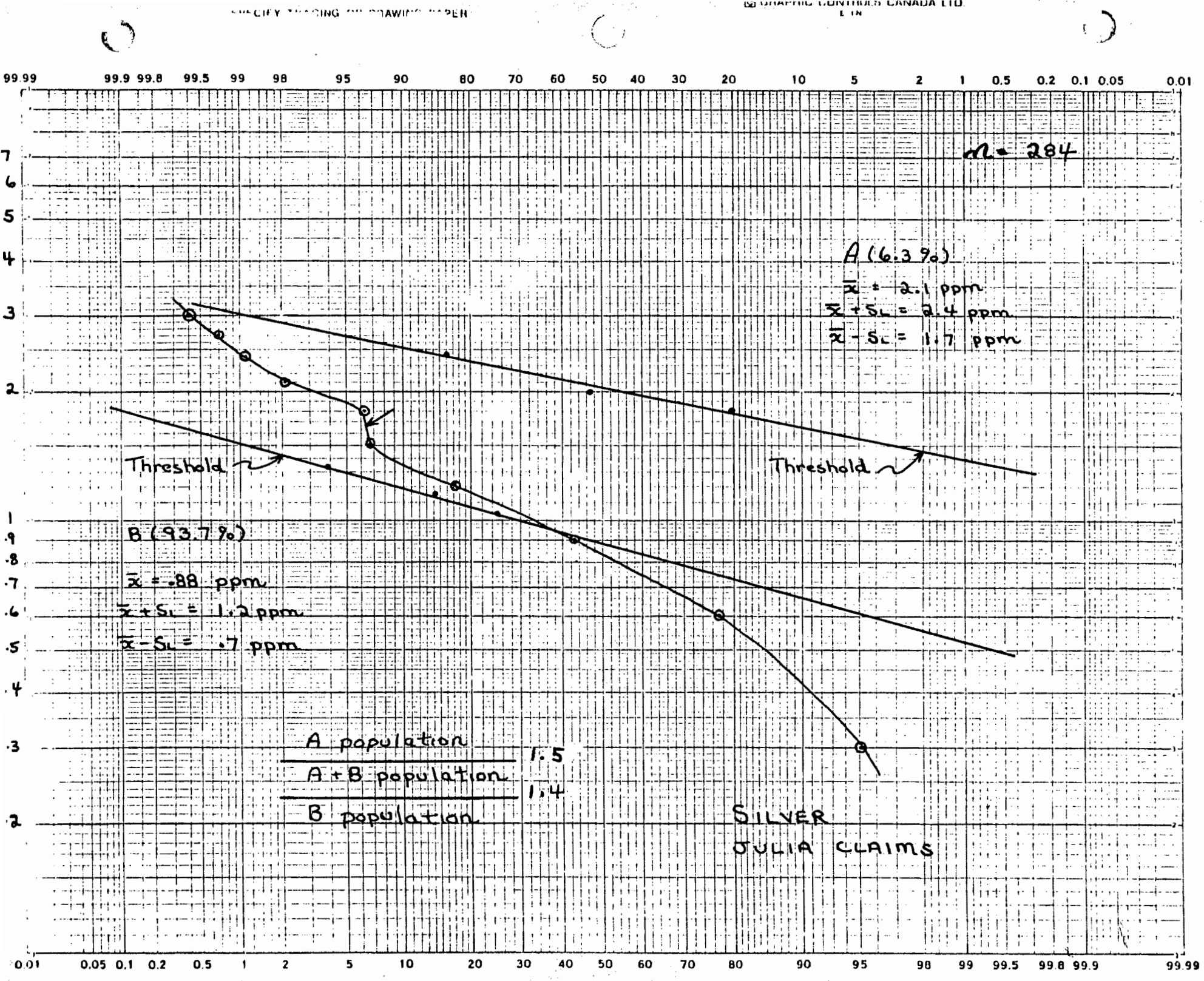
HISTOGRAM OF VARIABLE   3 ZN
                                   SYMBOL   COUNT      MEAN      ST.DEV.
                                     X       284      62.189      50.799
INTERVAL                                                                                              FREQUENCY PERCENTAGE
NAME            5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   INT. CUM.  INT.  CUM.
              +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
* 25.000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                  34   34   12.0  12.0
* 50.000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*   118  152   41.5  53.5
* 75.000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX          76  228   26.8  80.3
* 100.00 +XXXXXXXXXXXXXXXXXXXX                                                                20  248    7.0  87.3
* 125.00 +XXXXXXXXXXXX                                                                        12  260    4.2  91.5
* 150.00 +XXXXXXXX                                                                             8  268    2.8  94.4
* 175.00 +XXXX                                                                                 4  272    1.4  95.8
* 200.00 +XXX                                                                                  3  275    1.1  96.8
* 225.00 +XXXX                                                                                 4  279    1.4  98.2
* 250.00 +X                                                                                    1  280    0.4  98.6
* 275.00 +                                                                                     0  280    0.0  98.6
* 300.00 +XX                                                                                   2  282    0.7  99.3
* 325.00 +X                                                                                    1  283    0.4  99.6
* 350.00 +                                                                                     0  283    0.0  99.6
* 375.00 +                                                                                     0  283    0.0  99.6
* 400.00 +                                                                                     0  283    0.0  99.6
* 425.00 +X                                                                                    1  284    0.4 100.0
* 450.00 +                                                                                     0  284    0.0 100.0
* 475.00 +                                                                                     0  284    0.0 100.0
* 500.00 +                                                                                     0  284    0.0 100.0
* 525.00 +                                                                                     0  284    0.0 100.0
              +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```

```
HISTOGRAM    VARIABLE    3 ZN
                                    SYMBOL  COUNT     MEAN     ST.DEV.
                                      X      284      1.692     0.302
INTERVAL                                                                                   FREQUENCY  PERCENTAGE
NAME          5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   INT. CUM.  INT.  CUM.
          +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
*  .48000 +XX                                                                                 2    2    0.7    0.7
*  .60000 +                                                                                   0    2    0.0    0.7
*  .72000 +                                                                                   0    2    0.0    0.7
*  .84000 +X                                                                                  1    3    0.4    1.1
*  .96000 +XX                                                                                 2    5    0.7    1.8
* 1.0800  +XXXXXXXX                                                                           8   13    2.8    4.6
* 1.2000  +XXXX                                                                               4   17    1.4    6.0
* 1.3200  +XXXXXXXXXX                                                                        10   27    3.5    9.5
* 1.4400  +XXXXXXXXXXXXX                                                                     13   40    4.6   14.1
* 1.5600  +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                   31   71   10.9   25.0
* 1.6800  +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                  61  132   21.5   46.5
* 1.8000  +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX            67  199   23.6   70.1
* 1.9200  +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                            38  237   13.4   83.5
* 2.0400  +XXXXXXXXXXXXXXXXX                                                                 17  254    6.0   89.4
* 2.1600  +XXXXXXXXXXXXX                                                                     13  267    4.6   94.0
* 2.2800  +XXXXXXXX                                                                           8  275    2.8   96.8
* 2.4000  +XXXXX                                                                              5  280    1.8   98.6
* 2.5200  +XXX                                                                                3  283    1.1   99.6
* 2.6400  +X                                                                                  1  284    0.4  100.0
* 2.7600  +                                                                                   0  284    0.0  100.0
* 2.8800  +                                                                                   0  284    0.0  100.0
          +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
              5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```



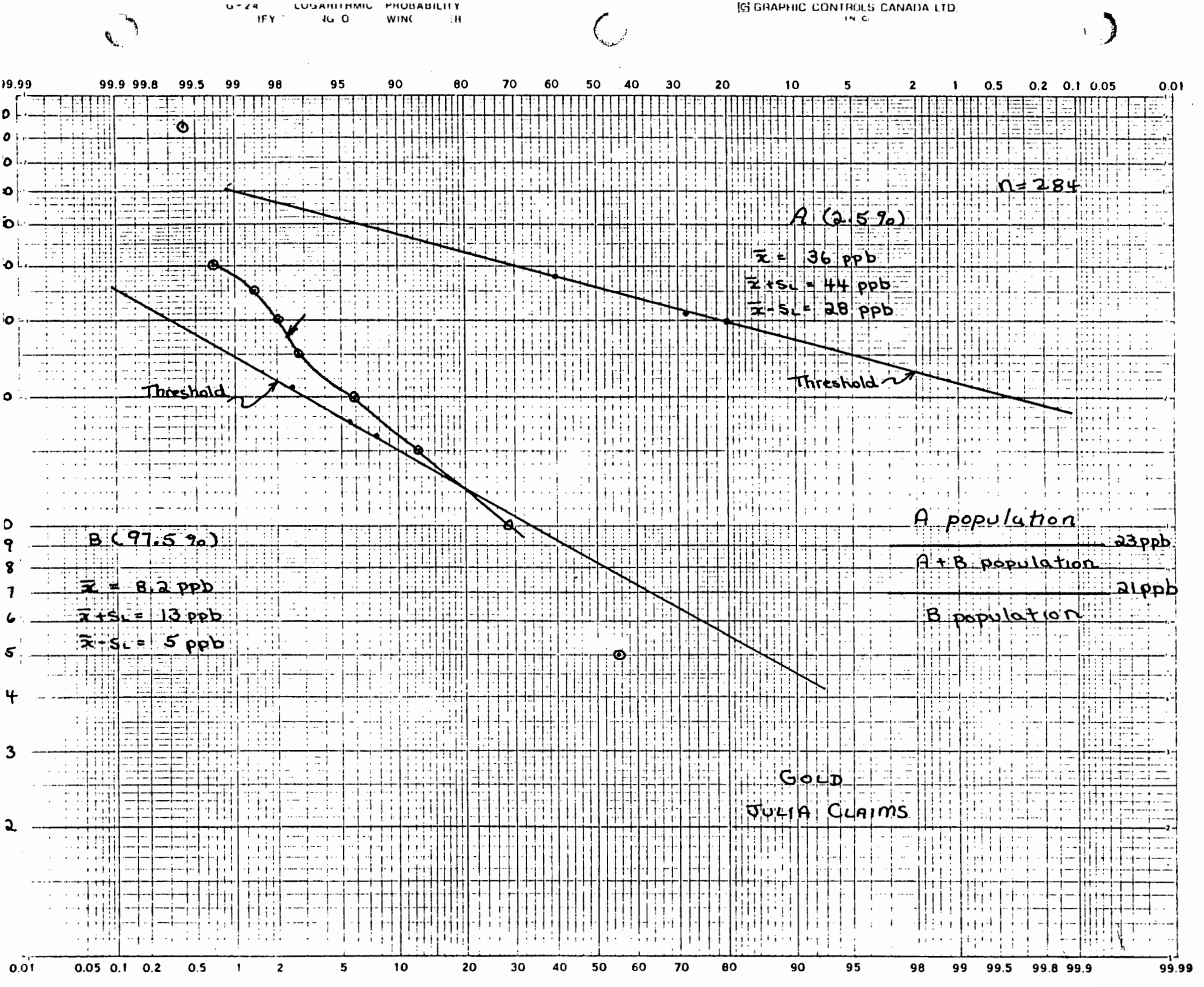
```
HISTOGRAM OF VARIABLE    4 AG
                                        SYMBOL   COUNT      MEAN       ST.DEV.
                                          X       284       0.923        0.521
INTERVAL                                                                                              FREQUENCY PERCENTAGE
NAME            5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80       INT.  CUM.  INT.   CUM.
               +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
*  .30000 +XXXXXXXXXXXXXX                                                                           14    14    4.9    4.9
*  .60000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                       50    64   17.6   22.5
*  .90000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*        98   162   34.5   57.0
* 1.2000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                 73   235   25.7   82.7
* 1.5000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                            30   265   10.6   93.3
* 1.8000 +X                                                                                          1   266    0.4   93.7
* 2.1000 +XXXXXXXXXXXX                                                                              12   278    4.2   97.9
* 2.4000 +XXX                                                                                        3   281    1.1   98.9
* 2.7000 +X                                                                                          1   282    0.4   99.3
* 3.0000 +X                                                                                          1   283    0.4   99.6
* 3.3000 +                                                                                           0   283    0.0   99.6
* 3.6000 +                                                                                           0   283    0.0   99.6
* 3.9000 +                                                                                           0   283    0.0   99.6
* 4.2000 +                                                                                           0   283    0.0   99.6
* 4.5000 +                                                                                           0   283    0.0   99.6
* 4.8000 +                                                                                           0   283    0.0   99.6
* 5.1000 +                                                                                           0   283    0.0   99.6
* 5.4000 +                                                                                           0   283    0.0   99.6
* 5.7000 +X                                                                                          1   284    0.4  100.0
* 6.0000 +                                                                                           0   284    0.0  100.0
* 6.3000 +                                                                                           0   284    0.0  100.0
               +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```

```
HISTOGRAM OF VARIABLE    4 AG
                                         SYMBOL   COUNT      MEAN      ST.DEV.
                                           X       284      -0.100      0.257
INTERVAL                                                                                              FREQUENCY PERCENTAGE
NAME          5    10    15    20    25    30    35    40    45    50    55    60    65    70    75    80  INT. CUM. INT.  CUM.
             +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
*-1.0000 +XXXXX                                                                                     5    5   1.8    1.8
*-.90000 +                                                                                          0    5   0.0    1.8
*-.80000 +                                                                                          0    5   0.0    1.8
*-.70000 +                                                                                          0    5   0.0    1.8
*-.60000 +XXXXXXXXX                                                                                 9   14   3.2    4.9
*-.50000 +XXXXXXXXX                                                                                 9   23   3.2    8.1
*-.40000 +                                                                                          0   23   0.0    8.1
*-.30000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                41   64  14.4   22.5
*-.20000 +XXXXXXXXXXXXXXXXXXXX                                                                     20   84   7.0   29.6
*-.10000 +XXXXXXXXXXXXXXXXXXXXX                                                                    21  105   7.4   37.0
* 0.0000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*       81  186  28.5   65.5
* .10000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                        49  235  17.3   82.7
* .20000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                           30  265  10.6   93.3
* .30000 +XXXXXXXXXXXX                                                                             12  277   4.2   97.5
* .40000 +XXXXX                                                                                     5  282   1.8   99.3
* .50000 +X                                                                                         1  283   0.4   99.6
* .60000 +                                                                                          0  283   0.0   99.6
* .70000 +                                                                                          0  283   0.0   99.6
* .80000 +X                                                                                         1  284   0.4  100.0
* .90000 +                                                                                          0  284   0.0  100.0
* 1.0000 +                                                                                          0  284   0.0  100.0
             +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
              5    10    15    20    25    30    35    40    45    50    55    60    65    70    75    80
```


n = 284
A (6.3 %)
$\bar{x}$ = 2.1 ppm
$\bar{x} + S_L$ = 2.4 ppm
$\bar{x} - S_L$ = 1.7 ppm
Threshold
Threshold
B (93.7 %)
$\bar{x}$ = .88 ppm
$\bar{x} + S_L$ = 1.2 ppm
$\bar{x} - S_L$ = .7 ppm
A population / A+B population 1.5
A+B population / B population 1.4
SILVER
OULIA CLAIMS

```
HISTOGRAM   VARIABLE    5 AU
                                SYMBOL  COUNT      MEAN      ST.DEV.
                                  X      284      10.507      9.536
INTERVAL                                                                              FREQUENCY PERCENTAGE
NAME           5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   INT. CUM. INT.  CUM.
            +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
* 5.0000    +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*  129  129  45.4  45.4
* 10.000    +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX        75  204  26.4  71.8
* 15.000    +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                       44  248  15.5  87.3
* 20.000    +XXXXXXXXXXXXXXXXXXX                                                                19  267   6.7  94.0
* 25.000    +XXXXXXXXX                                                                           9  276   3.2  97.2
* 30.000    +XX                                                                                  2  278   0.7  97.9
* 35.000    +XX                                                                                  2  280   0.7  98.6
* 40.000    +XX                                                                                  2  282   0.7  99.3
* 45.000    +                                                                                    0  282   0.0  99.3
* 50.000    +                                                                                    0  282   0.0  99.3
* 55.000    +                                                                                    0  282   0.0  99.3
* 60.000    +                                                                                    0  282   0.0  99.3
* 65.000    +                                                                                    0  282   0.0  99.3
* 70.000    +                                                                                    0  282   0.0  99.3
* 75.000    +                                                                                    0  282   0.0  99.3
* 80.000    +                                                                                    0  282   0.0  99.3
* 85.000    +X                                                                                   1  283   0.4  99.6
* 90.000    +                                                                                    0  283   0.0  99.6
* 95.000    +X                                                                                   1  284   0.4 100.0
* 100.00    +                                                                                    0  284   0.0 100.0
* 105.00    +                                                                                    0  284   0.0 100.0
            +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
               5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```

```
HISTOGRAM OF VARIABLE    5 AU
                                        SYMBOL  COUNT      MEAN      ST.DEV.
                                          X      284       0.911       0.305
INTERVAL                                                                                                   FREQUENCY PERCENTAGE
NAME          5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80  INT. CUM.  INT.  CUM.
         +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
* .30000 +                                                                                    0    0    0.0   0.0
* .40000 +XXXXXXXXXXXXXXXXXXXXXX                                                             22   22    7.7   7.7
* .50000 +                                                                                    0   22    0.0   7.7
* .60000 +                                                                                    0   22    0.0   7.7
* .70000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX*  107  129   37.7  45.4
* .80000 +                                                                                    0  129    0.0  45.4
* .90000 +                                                                                    0  129    0.0  45.4
* 1.0000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX         75  204   26.4  71.8
* 1.1000 +                                                                                    0  204    0.0  71.8
* 1.2000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                       44  248   15.5  87.3
* 1.3000 +                                                                                    0  248    0.0  87.3
* 1.4000 +XXXXXXXXXXXXXXXXXXXXXXXXXXXX                                                       28  276    9.9  97.2
* 1.5000 +XX                                                                                  2  278    0.7  97.9
* 1.6000 +XX                                                                                  2  280    0.7  98.6
* 1.7000 +XX                                                                                  2  282    0.7  99.3
* 1.8000 +                                                                                    0  282    0.0  99.3
* 1.9000 +                                                                                    0  282    0.0  99.3
* 2.0000 +XX                                                                                  2  284    0.7 100.0
* 2.1000 +                                                                                    0  284    0.0 100.0
* 2.2000 +                                                                                    0  284    0.0 100.0
* 2.3000 +                                                                                    0  284    0.0 100.0
         +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
              5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
```


LOGARITHMIC PROBABILITY
GRAPHIC CONTROLS CANADA LTD
99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
n=284
A (2.5 %)
$\bar{x}$ = 36 ppb
$\bar{x}+s_L$ = 44 ppb
$\bar{x}-s_L$ = 28 ppb
Threshold
Threshold
B (97.5 %)
$\bar{x}$ = 8.2 ppb
$\bar{x}+s_L$ = 13 ppb
$\bar{x}-s_L$ = 5 ppb
A population
23ppb
A+B population
21ppb
B population
GOLD
JULIA CLAIMS
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99

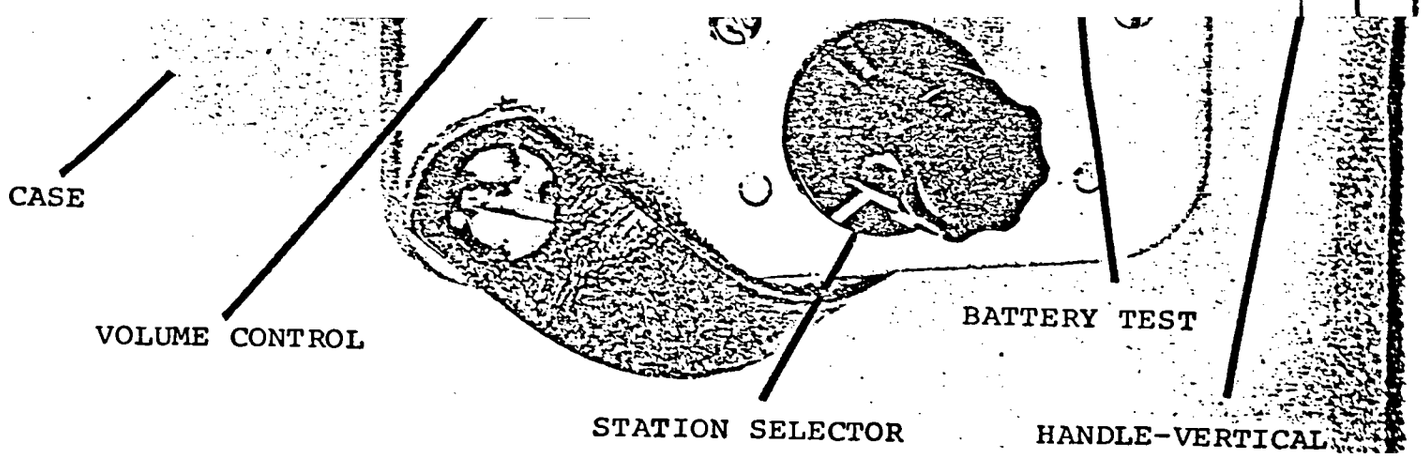
APPENDIX III

EM-16

SPECIFICATIONS

EM16 SPECIFICATIONS

MEASURED QUANTITY	In-phase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity).
SENSITIVITY	In-phase :±150% Quad-phase :± 40%
RESOLUTION	±1%
OUTPUT	Nulling by audio tone. In-phase indication from mechanical inclinometer and quad-phase from a graduated dial.
OPERATING FREQUENCY	15-25 kHz VLF Radio Band. Station selection done by means of plug-in units.
OPERATOR CONTROLS	On/Off switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
POWER SUPPLY	6 disposable 'AA' cells.
DIMENSIONS	42 x 14 x 9cm
WEIGHT	Instrument: 1.6 kg Shipping : 4.5 kg



PRINCIPLES OF OPERATION

The VLF-transmitting stations operating for communications with submarines have a vertical antenna. The Antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from these bodies. (See Figures 3 & 4). This equipment measures the vertical components of these secondary fields.

The EM16 is simply a sensitive receiver covering the frequency band of the VLF-transmitting stations with means of measuring the vertical field components.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis and the other is horizontal.

The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt-angle is calibrated in percentage. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from the other coil, after being shifted by 90°. This coil is normally parallel to the primary field, (See instrument Block Diagram - Figure 2).

Thus, if the secondary signals are small compared to the primary horizontal field, the mechanical tilt-angle is an accurate measure of the vertical real-component, and the compensation ¶/2-signal from the horizontal coil is a measure of the quadrature vertical signal.

Some of the properties of the VLF radio wave in the ground are outlined by Figures 4 thru 9.

ACCOMPANYING NOTES FOR FIGURES 2 - 9

FIGURE 2 is the block diagram of the EM16. The diagram is self-explanatory. Both the coils (reference and signal coil) are housed in the lower part of the handle. The directions of the axis of the coils are as follows: The reference coil axis is basically horizontal and is kept more or less parallel to the primary field during measurement. The signal coil is at right angles to the reference coil and its axis is, of course, vertical.

The signal amplifier has the two inputs, one connected to the signal coil and one to the reference channel. By tilting the coils, the operator minimizes the signal from the signal (vertical axis) coil. Any remaining signal is reduced to zero by the quadrature control in the reference channel. The signal amplifier has zero output

FIGURE 2 Continued...

when both input signals are equal in amplitude and phase. Thus, the setting of the quadrature control for minimum output from the receiver indicates the relative amount of the quadrature signal of the vertical coil. The measured value does not depend on the absolute value of the signal, only the relative values are measured.

FIGURE 3 shows the proper planning of survey in relation to the direction of strike and primary field, direction of survey lines etc.

FIGURE 4 explains the time delay (phase lag) ϕ of travelling electromagnetic wave above and in the conductive ground. The amplitude of the wave in the ground is also attenuated.

FIGURE 5 shows on the left the physical direction of the primary (H_x) and secondary (H_z) field vectors in relation to conductive ground and target. The location of secondary current distribution in the target is shown schematically. We see that most current concentration is in the upper edge of the good conductor. The return secondary current is more spread due to the diminishing primary field in the conductive rock. On the right, the time vectors show the retarded phase of H_x in the target and the phase advance of the secondary field H_z compared to H_x. We must remember that the H_z will have additional phase lag when it penetrates back towards the surface.

This figure shows a positive real component of the H_z while the quadrature remains negative.

FIGURE 6 This graph shows the primary field attenuation in nepers, relative amplitude and phase lag in radians of the primary field as function of depth and conductivity of the ground. This graph is for 20 kHz.

FIGURE 7 shows the maximum obtainable amplitude H_z from a sphere or horizontal cylinder as a function of the radius-to-depth ratio. The schematic on the left shows the depth determination for the spherical or cylindrical target.

FIGURE 7 Continued...

The equation for the phase shift and attenuation of the primary field in conductive material, where $\sigma/\varepsilon\omega >> 1$ is as follows:

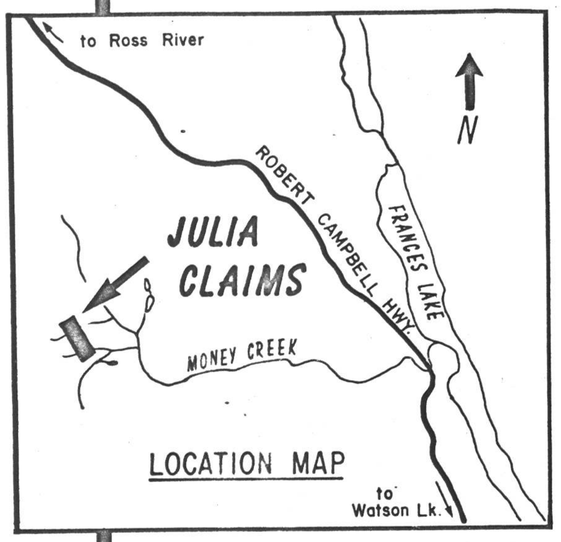
$$\alpha = \beta = \sqrt{\frac{\omega\mu\sigma}{2}}$$

where α = attenuation, nepers/m
β = phase lag, radian/m
$\omega = 2\pi f$
μ = magn. permeability = $4\pi \times 10^{-7}$
σ = mhos/m

FIGURE 8 This graph gives the amplitude and phase shift of the field (in conductive media) as function of skin depth, $\delta = 1/\alpha$.

This equation gives the skin-depth in meters for certain conductivity and frequency. Normalize this to one, and the graph in Figure 8 gives the amplitude and phase shift of the wave at any relative depth.

FIGURE 9 The vertical field from a long wire source is plotted here. A vertical semi-infinite sheet target would be simulated this way. In practice it hardly works accurately due to the spread of the secondary current in the target because of the finite conductivity and the attenuation and phase shift of the primary field as function of depth.



TRACE OF PYRITE-AURIFEROUS ZONE IN CONFORMABLE ACIDIC HORIZON

Leached siliceous gossan appears to be dip slope exposure

Prominent pyritic gossan (transported)

Massive banded sulphides preserved in creek bed.

Angular blocks to one metre square composed of pyrite & chalcopyrite.

Probable trace of zone obscured by talus

LOCATION OF 1980 GRID

CAMP

sample 330

sample 335

1 2 3 4 5 6 7 8 9 10

3300N 3200N 3000N 2850N 2600N 2400N 2200N 2100N 2000N 1900N 1800N 1700N 1600N 1500N 1400N 1300N 1200N 1000N 900N

5000 4500

0 500 1000 1500 feet

0 100 200 300 400 metres

N

31° 48' declination

LEGEND

- MINERAL ZONE (observed, projected)
- CREEK
- 4000 CONTOUR
- CLAIM BOUNDARY
- TREE LINE

NOTE : The mineral zone is enclosed in structureless altered green volcanic rocks including flows, tuffs & pyroclastic breccias.

AFTER J.A.O.C., WELCOME NORTH MINES LTD.

Figure 4

SAMPLE LOCATIONS

JULIA CLAIMS

ARBOR RESOURCES INC.

MONTGOMERY CONSULTANTS LIMITED

N.T.S 105 H/5 JUNE 1981.

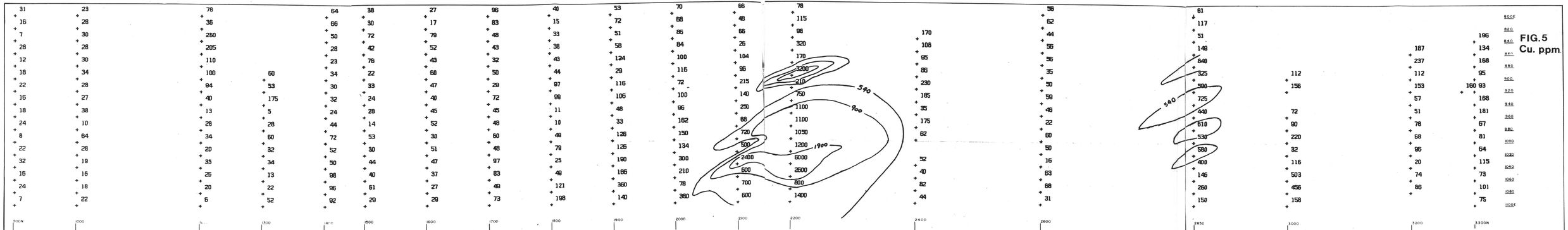

540
900
1900
N
NTS 105H
Inches
centimetres
SCALE 1:2,500
50 100 150 200 M
ARBOR RESOURCES INC.
JULIA CLAIMS – Geochemical Survey
Montgomery Consultants Ltd.
June 1981

FIG. 5
Cu. ppm.

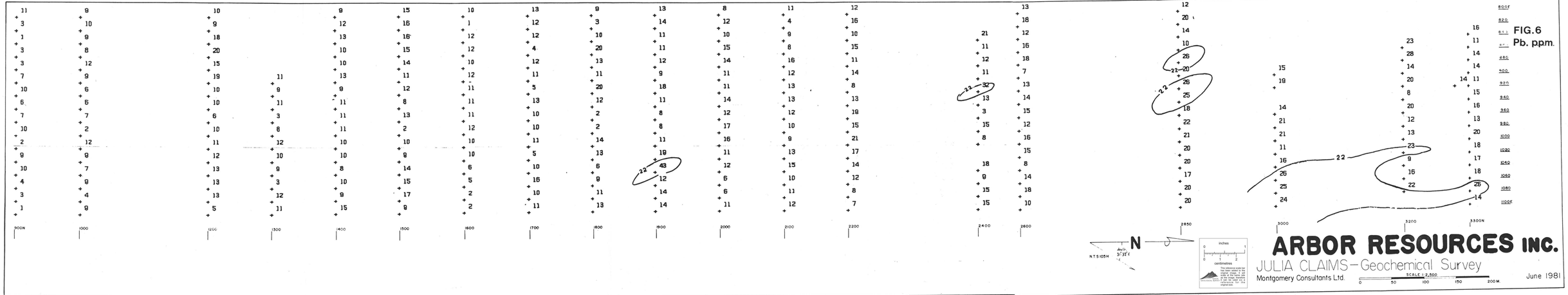


FIG.6
Pb. ppm.
800E
820
840
860
880
900
920
940
960
980
1000
1020
1040
1060
1080
1100E
900N
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2400
2600
2800
3000
3200
3300N
N
N.T.S 105 H
Avg. 31°32' E
inches
centimetres
ARBOR RESOURCES INC.
JULIA CLAIMS—Geochemical Survey
Montgomery Consultants Ltd.
SCALE 1:2,500
0 50 100 150 200 M.
June 1981

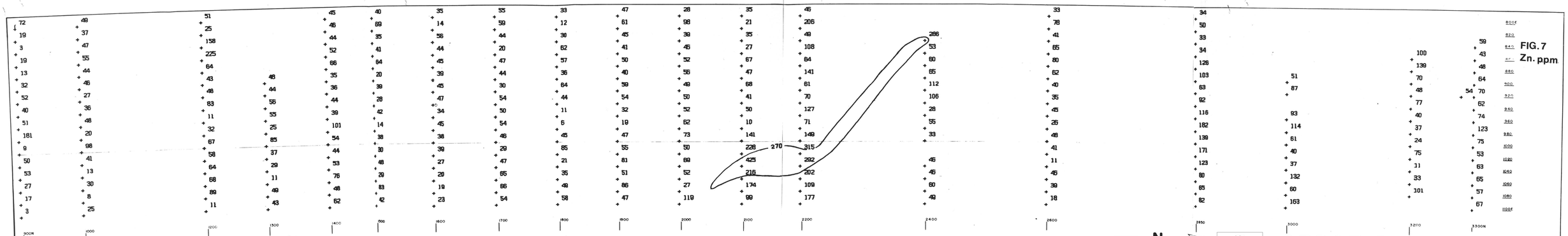


FIG. 7
Zn. ppm.

N
Auto. 3° 32' E
NTS 105H

inches
centimetres

ARBOR RESOURCES INC.

JULIA CLAIMS – Geochemical Survey
Montgomery Consultants Ltd.

SCALE 1:2,500
0 50 100 150 200 M

June 1981

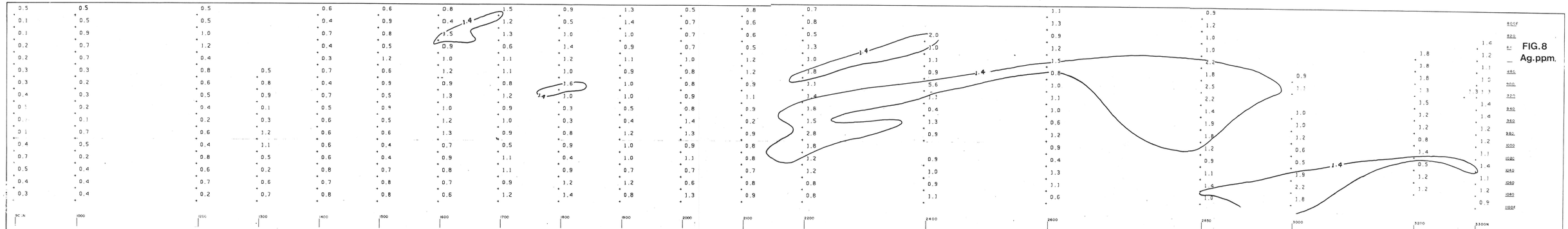


FIG.8
Ag.ppm.

ARBOR RESOURCES INC.

JULIA CLAIMS – Geochemical Survey

Montgomery Consultants Ltd.

June 1981

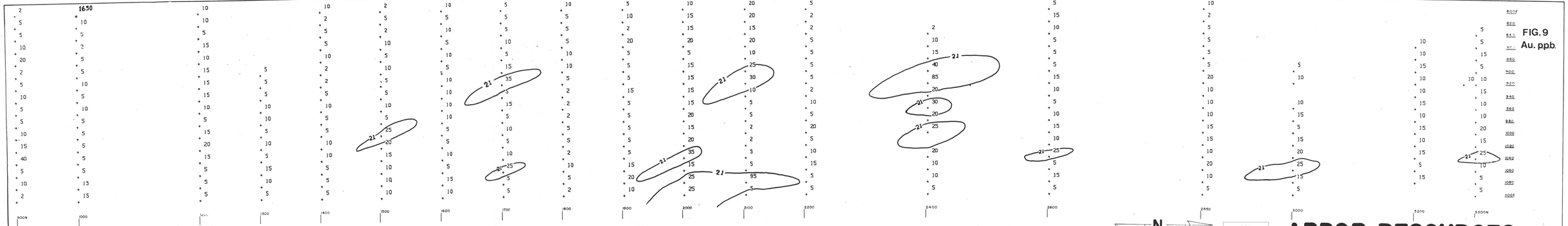


FIG. 9
Au. ppb.

ARBOR RESOURCES INC.

JULIA CLAIMS – Geochemical Survey

Montgomery Consultants Ltd.

June 1981

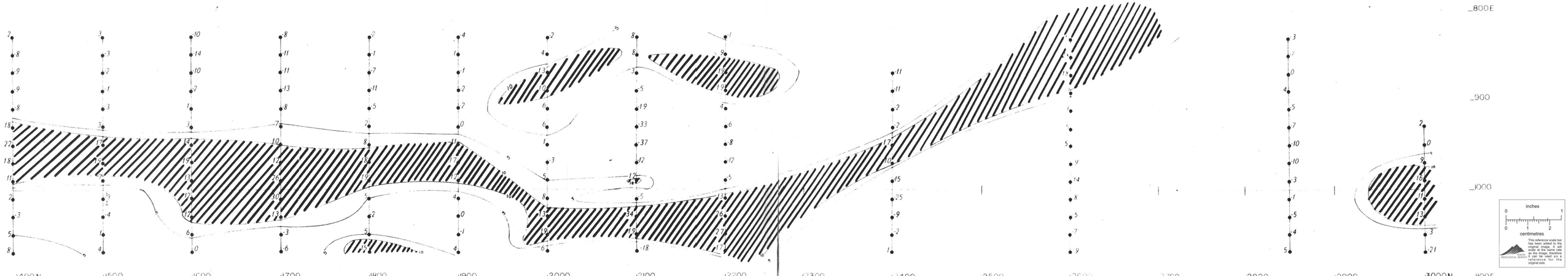


FIG 10

ARBOR RESOURCES INC

JULIA CLAIMS – Fraser filtered EM-16 Data

Montgomery Consultants Ltd.

SCALE 1:2,500

0 50 100 150 200M.

June 19