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CRANBROOK, B.C.
MINING RECORDER

Cominco Ltd.

EXPLORATION DIVISION

WESTERN DISTRICT

REPORT OF GRID "C" GEOCHEMICAL SURVEY
ON VINE 1 CLAIM, VINE 1, 25, 27 CLAIM GROUP
Fort Steele Mining Division

Submitted by:

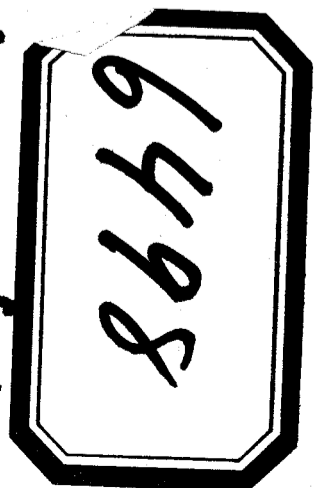
E.W. BATCHELOR

Cominco Ltd.
Kootenay Exploration
2450 Cranbrook Street
Cranbrook, B.C.

Under the supervision of:

D.W. HEDDLE
P. Eng.

PART 4 of 5



COMINCO LTD.

6498
Part 4 of 5

EXPLORATION DIVISION

WESTERN DISTRICT

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STATEMENT OF QUALIFICATIONS

COMINCO LTD.

EXPLORATION DIVISION

WESTERN DISTRICT

1.00 GENERAL STATEMENT

This report describes a detailed soil geochemical survey on Vine 1 Claim (20 units), recorded on September 3, 1976. For assessment work reporting, Vine 1, Vine 25 (12 units) and Vine 27 (6 units) have been grouped. The survey was undertaken to explore for Cu/Pb/Zn deposits in the Aldridge Formation.

The survey was conducted intermittently between April 13th and June 10th, 1977. A total of 297 samples were collected and analyzed by atomic absorption for ppm Cu, Pb and Zn.

Total expenditures for soil geochemical program on Grid "C" were \$2,380.14. An "Affidavit on Application to Record Work" which includes these expenditures was filed on September 1, 1977, with the Mining Recorder at Cranbrook, B.C.

2.00 INTRODUCTION

2.10 Status of Ownership

All Vine claims are 100% Cominco owned.

2.20 Location and Access

Vine 1 is located approximately 10 km SSW of Cranbrook, B.C., and access is via Highway 3/95 and good gravel road. Plate 1 is a location map showing Grid "C" relative to claim boundaries.

N.T.S. 82G/5
M.D. Fort Steele
Long: 116°13'
Lat: 49°25'

2.30 Topography and Vegetation

Vine 1 claim covers an area of moderate relief ranging in elevation from 940 to 1390 m. Relief within the survey area is approximately 75 m.

Vegetation varies from grassy open slopes to second growth lodgepole pine and Douglas fir.

3.00 GEOCHEMISTRY

3.10 Sampling Procedure

A detailed soil geochemistry survey was conducted over an area of 50 m by 260 m. A baseline, with azimuth 120°, was cut and flagged sample lines were established at 10 m intervals along the baseline. The sample interval along the lines was 5 m. Samples were collected from the "B" horizon of the soil profile using a grub hoe and were stored in wet strength kraft bags.

3.20 Sample Preparation and Analysis

Samples were dried at atmospheric temperature and were then sieved through a -80 mesh nylon screen. The samples were then shipped to Cominco's Exploration Research Lab in Vancouver for analysis.

Two grams of the -80 mesh fraction were digested in concentrated HCl and HNO₃ by heating on a hot plate. The sample was then taken up in 10% HCl and bulked to 100 ml with distilled water. The samples were then analyzed by atomic absorption.

4.00 INTERPRETATION AND RESULTS

Plates 2, 3 and 4 are contoured maps for Cu, Pb and Zn in ppm, from soils collected from Grid "C" on Vine 1 claim.

Figures 1, 2 and 3 are graphs of percent cumulative frequency vs metal concentration plotted on log probability paper. The background and threshold values determined for each element are:

	Cu	Pb	Zn
Background (ppm)	50	150	165
Threshold (ppm)	270	800	800

East of line 14E, the Cu, Pb and Zn concentrations in soil samples decreases rapidly. This is thought to reflect increasing thickness of glacial till in that direction. Consequently, transported overburden may be obscuring any concentrations of Cu, Pb and Zn in bedrock.

5.00 STATEMENT OF EXPENDITURES

The following summary of expenditures is taken from Form B, "Affidavit on Application to Record Assessment", for the St. Joe claim group, which was filed on September 1, 1977.

1. Establishing Grid C:

G. McDonald, Tech. - April 13, 14, 15, 18	
4 days @ \$35/day	\$ 140.00
D. MacDonald, Asst. - April 13, 14, 15, 18	
4 days @ \$25.83/day	103.32

2. Sampling Grid C:

G. McDonald, Tech. - May 5, 6, 16, 18	
4 days @ \$35/day	140.00
D. MacDonald, Asst. - May 5, 6, 16, 18	
4 days @ \$25.83/day	103.32
D. Byford, Asst. - June 3, 4, 6	
3 days @ \$25.83/day	77.50
B. Fisher, Asst. - June 3, 4, 6	
3 days @ \$25.83/day	77.50

3. Sieving Geochem Samples:

D. Byford, Asst. - June 7, 8, 9	
3 days @ \$25.83/day	77.50
B. Fisher, Asst. - June 7, 8, 9	
3 days @ \$25.83/day	77.50

4. Map Preparation:

G. McDonald, Tech. - June 7, 8, 9	
3 days @ \$35/day	105.00

5. Supervision:

E.W. Batchelor, Geologist, June 9, 10, 13	
3 days @ \$100/day	300.00

EXPENDITURES - continued --

6. Analysis:	297 samples @ \$2.50/sample.	\$ 742.50
7. Domicile:	18 man days @ \$10/day	180.00
8. Transportation:	4 wheel drive rental, gas, repairs 8 days @ \$32/day.	<u>256.00</u>
	TOTAL EXPENDITURES	<u>\$2,380.14</u>

SUBMITTED BY: *E.W. Batchelor*
E.W. BATCHELOR

ENDORSED BY: *D.W. Heddle*
D.W. HEDDLE, P. Eng.,
Assistant Manager, Exploration
Western District

APPROVED BY: *D.W. Heddle for G. Harden*
G. HARDEN
Manager, Exploration
Western District

September 15, 1977

EXHIBIT "A"

Statement of Expenditures

Geochemical Survey - Vine Group - Grid C

Establishing Grid C:

G. McDonald, Tech. - April 13, 14, 15, 18	
4 days @ \$35/day	\$ 140.00
D. MacDonald, Asst.- April 13, 14, 15, 18	
4 days @ \$25.83/day	103.32

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297 samples @ \$2.50/sample.	742.50
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Domicile:

18 man days @ \$10/day.	180.00
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Transportation:

4 wheel drive rental, gas, repairs	
8 days @ \$32/day.	256.00

TOTAL EXPENDITURES \$ 2,380.14

SIGNED: 
E.W. BATCHELOR

This is Exhibit "A" to the Statutory Declaration of E.W. Batchelor declared before me this 28 day of SEPTEMBER, 1977.



IN THE MATTER OF THE

B.C. MINERAL ACT

AND

IN THE MATTER OF A GEOCHEMICAL PROGRAMME

CARRIED OUT ON THE VINE MINERAL CLAIMS (GRID C)

in the Fort Steele Mining Division of the
Province of British Columbia

More Particularly N.T.S. 82G/5

A F F I D A V I T

I, E.W. BATCHELOR, of the City of Cranbrook in the Province of British Columbia, make Oath and say:

1. That I am employed as a Geologist with Cominco Ltd. and as such, have a personal knowledge of the facts to which I hereinafter depose;
2. That annexed hereto and marked as Exhibit "A" to this my Affidavit is a true copy of expenditures incurred on a geochemical survey program, on the Vine Group of mineral claims.
3. That the said expenditures were incurred between the 13th day of April, 1977 and the 10th day of June, 1977, for the purposes of mineral exploration on the above claims.

Sworn Before Me at Cranbrook)
in the Province of British Columbia, this)
28 day of SEPTEMBER, 1977.)

[Signature])
A Commissioner for taking Affidavits in the)
Province of British Columbia.)

[Signature]
E.W. BATCHELOR

COMINCO LTD.

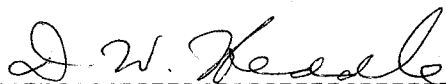
EXPLORATION DIVISION

WESTERN DISTRICT

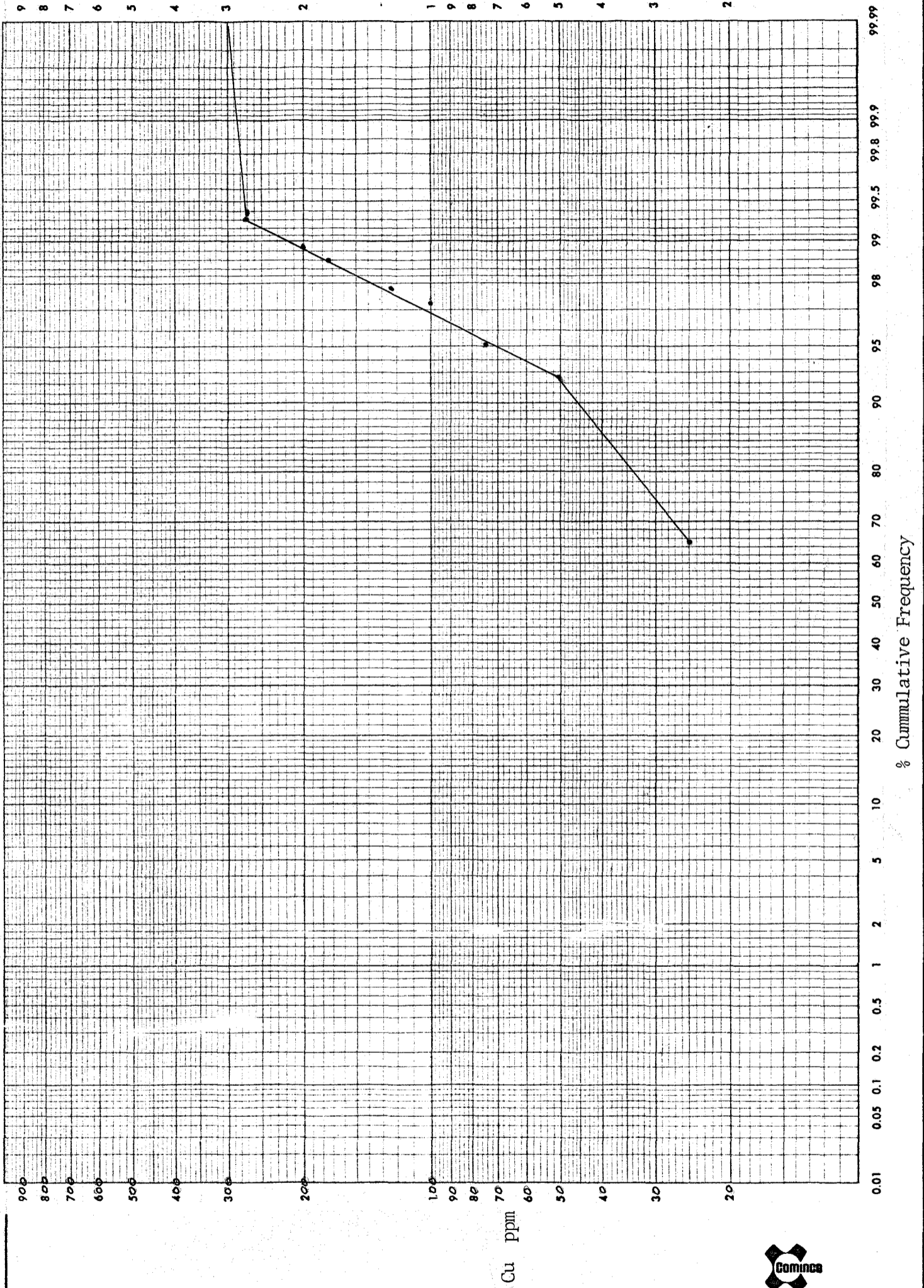
STATEMENT OF QUALIFICATIONS

E.W. BATCHELOR graduated from U.B.C. during 1966 with a B.A.Sc degree in Geological Engineering.

Since that time he has been employed in various phases of base metal exploration.



D.W. HEDDLE, P. Eng.
Assistant Manager, Exploration
Western District



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

FIGURE 1
Cu - Cumulative Frequency Distribution

VINE PROPERTY - Grid "C"

82G/5

Scale:

Date:

Sept. 14, 1977

Plate:

2

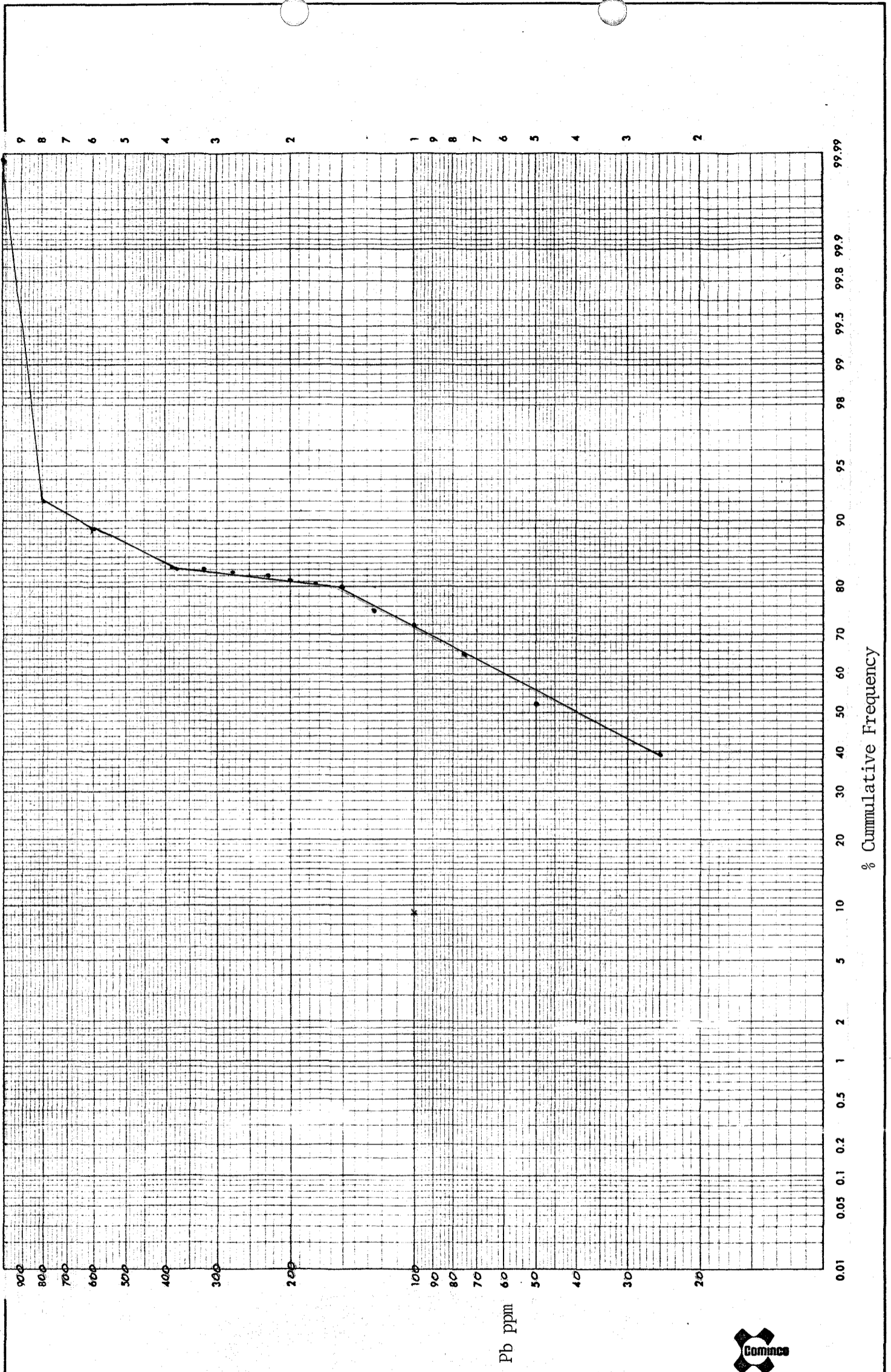


FIGURE 2

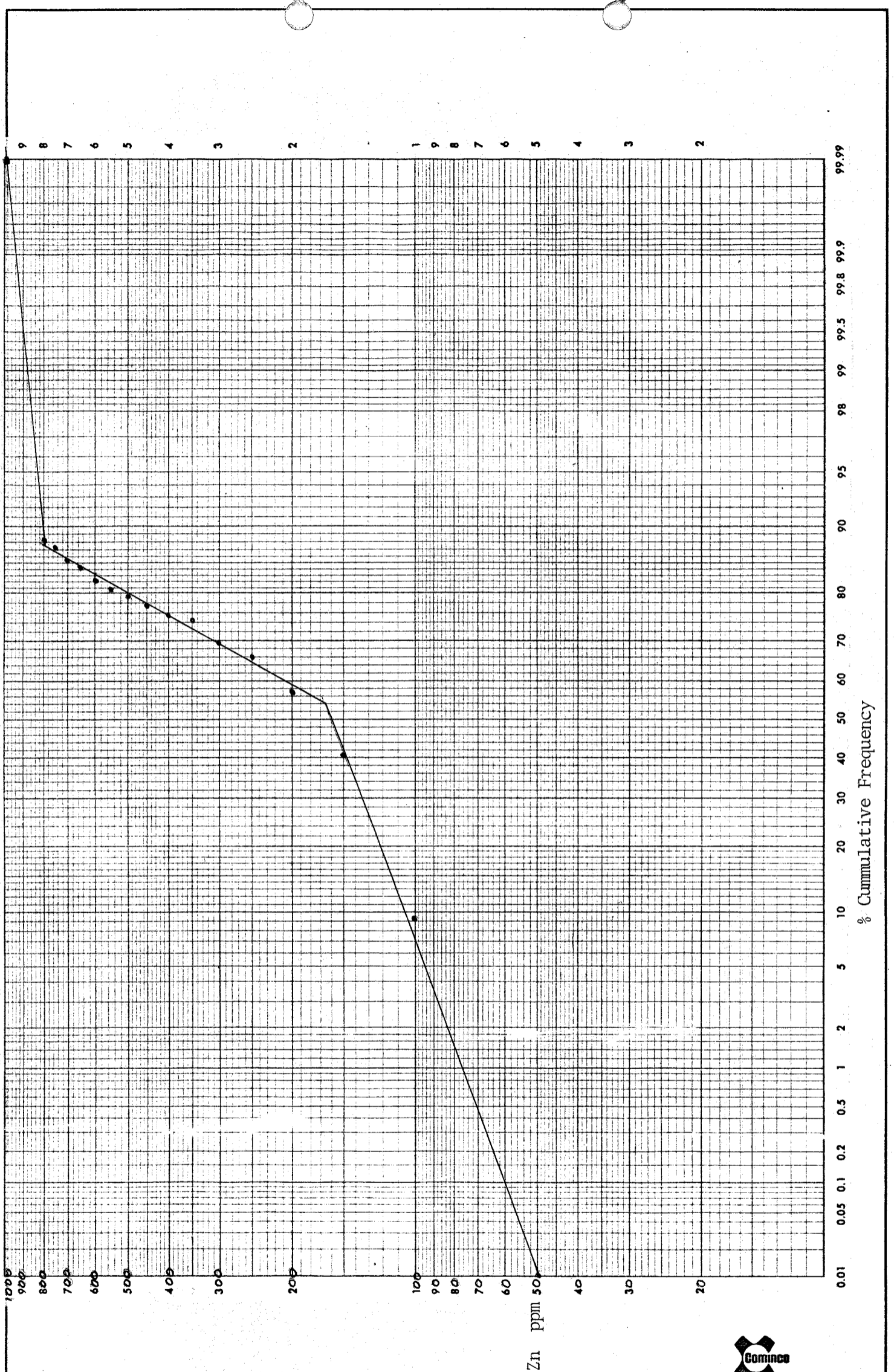
Pb - Cumulative Frequency Distribution

VINE PROPERTY - GRID "C"

82G/5

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

Scale: _____ Date: Sept. 14, 1977 Plate: 3



Drawn by: <i>EWB</i>		Traced by:	
Revised by	Date	Revised by	Date

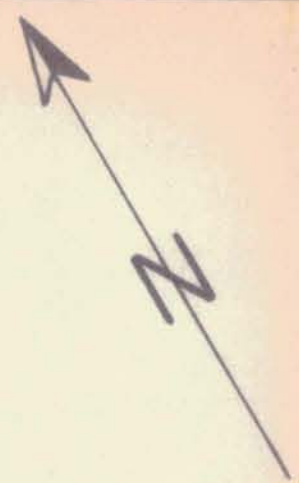
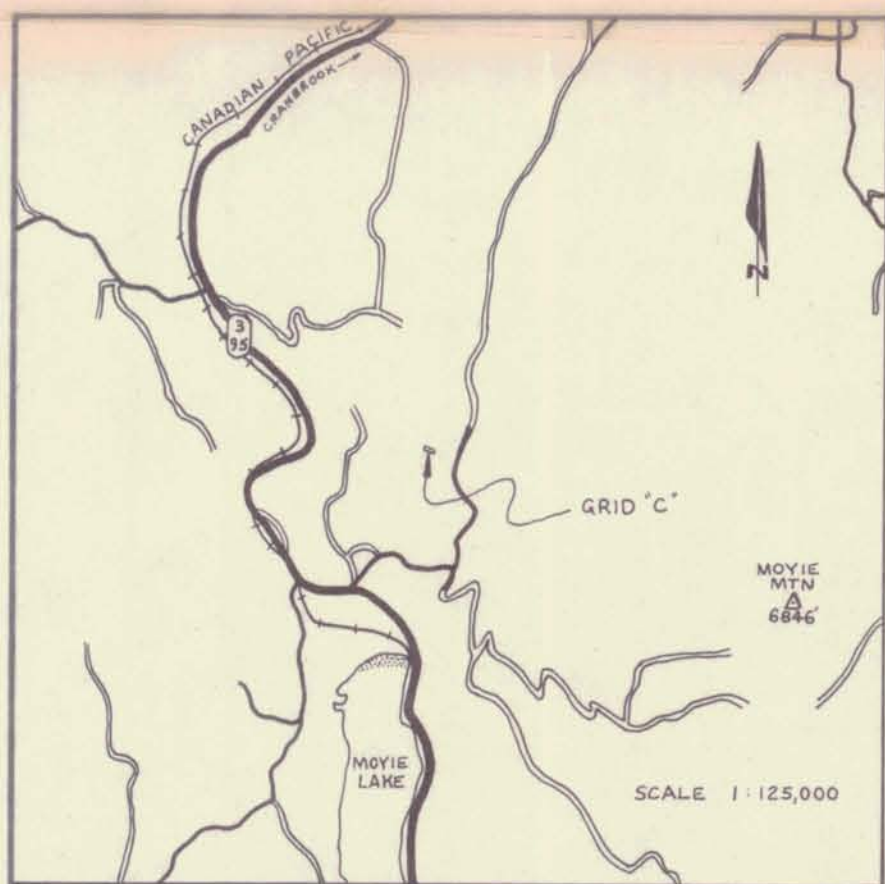
FIGURE 3

Zn - Cumulative Frequency Distribution

VINE PROPERTY - GRID "C"

82G/5

Scale: _____ Date: Sept. 14, 1977 Plate: 4



	0E	1E	2E	3E	4E	5E	6E	7E	8E	9E	10E	11E	12E	13E	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	25E	26E	
2.50 N		32	17	26	23	33	29	48	157	57	8	12	11	12	10	16	14	20	10	17	26	36	65	54	36	36	12	
2.25 N		23		40	53	29	56	120	293	200	119	14	10	12	12	16	17	15	15	16	19	37	40	36	50	48	45	
2.00 N									300	300																		
1.75 N									200	300																		
1.50 N		32	26	36	14	115	30	14	178	263	89	28	18	13	14	25	18	17	19	18	12	19	32	50	29	36	42	
1.25 N																												
1.00 N		23	15	25	53	59	26	18	173	29	19	10	14	13	10	25	16	20	26	37	30	16	40	26	35	33	48	
0.75 N																												
0.50 N	50	22	13	15	24	19	23	14	14	12	17	10	12	23	9	11	14	12	11	25	10	17	38	26	60	18	60	
0.25 N																												
BASE LINE 120° East	22	59	13	18	10	31	13	18	16	15	10	10	9	29	10	16	13	11	12	17	22	17	30	41	28	35	29	
0.25 S																												
0.50 S	17	23	30	21	9	12	27	10	10	15	18	10	16	42	14	8	14	20	13	18	18	18	37	25	37	23	26	
0.75 S																												
1.00 S	20	80	14	21	8	21	26	89	14	14	12	14	13	13	11	9	13	10	15	12	11	15	26	33	34	46	22	
1.25 S																												
1.50 S	22	26	89	20	10	12	15	15	44	9	11	12	13	22	22	10	20	15	20	20	20	17	18	26	38	36	28	
1.75 S																												
2.00 S	12	23	18	10	9	16	18	18	15	12	11	16	14	14	10	10	11	13	10	14	29	21	13	42	34	39	36	
2.25 S																												
2.50 S	14	23	33	23	8	15	13	14	13	12	10	7	13	20	8	10	11	14	10	15	38	28	26	25	35	35	35	

BASE LINE
120° East

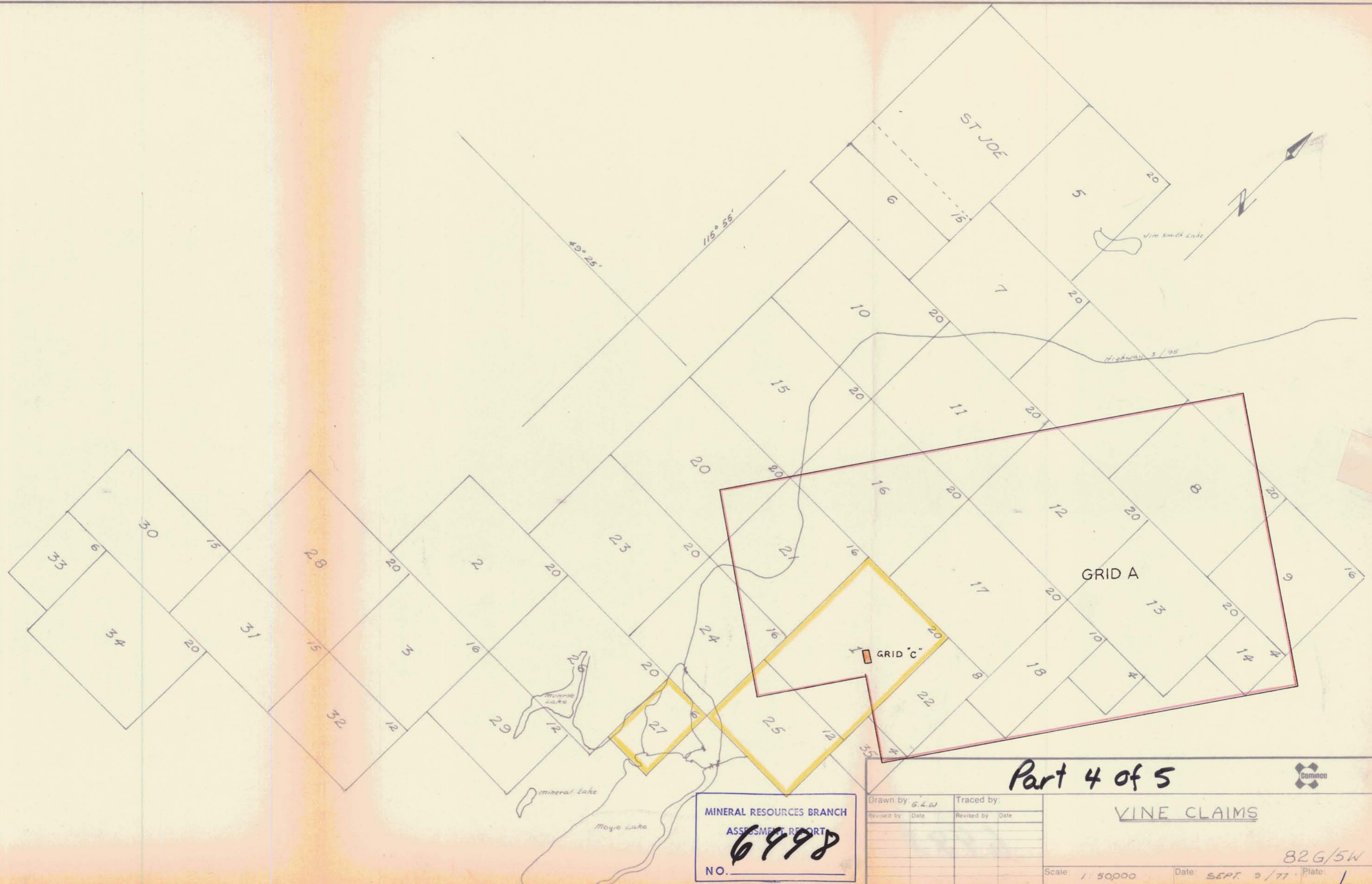
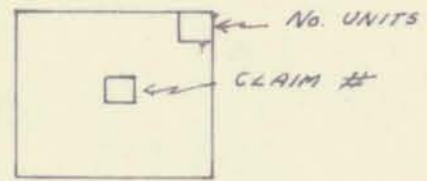
SCALE 1:500 OR 1 cm TO 5 m.



894

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6998
NO. _____
Part 4 of 5

GRID "C" VINE #1 COPPER		VINE GEOCHEM SURVEY	
Drawn by: WBS	Traced by:	Scale 1:500	
Revised by: GMM	Date: 8/7/77	Date: 27.4.77	Plate 2



8990

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6998
NO. _____

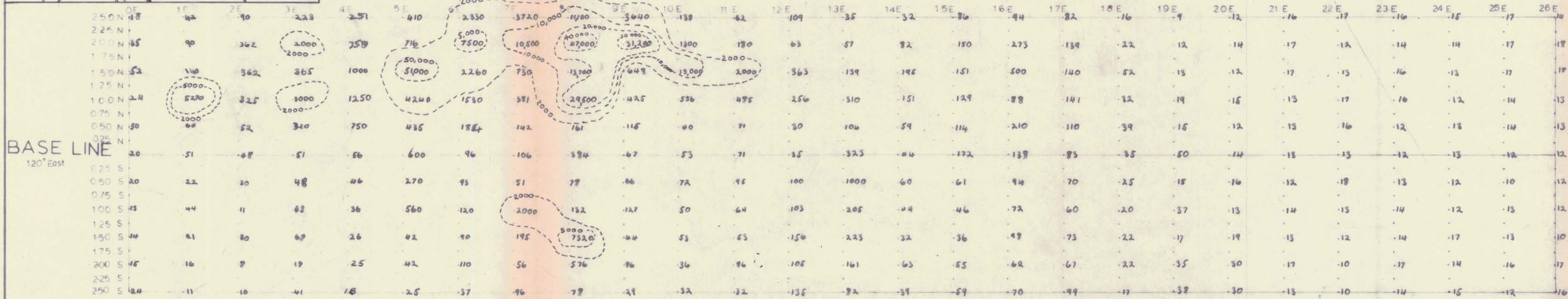
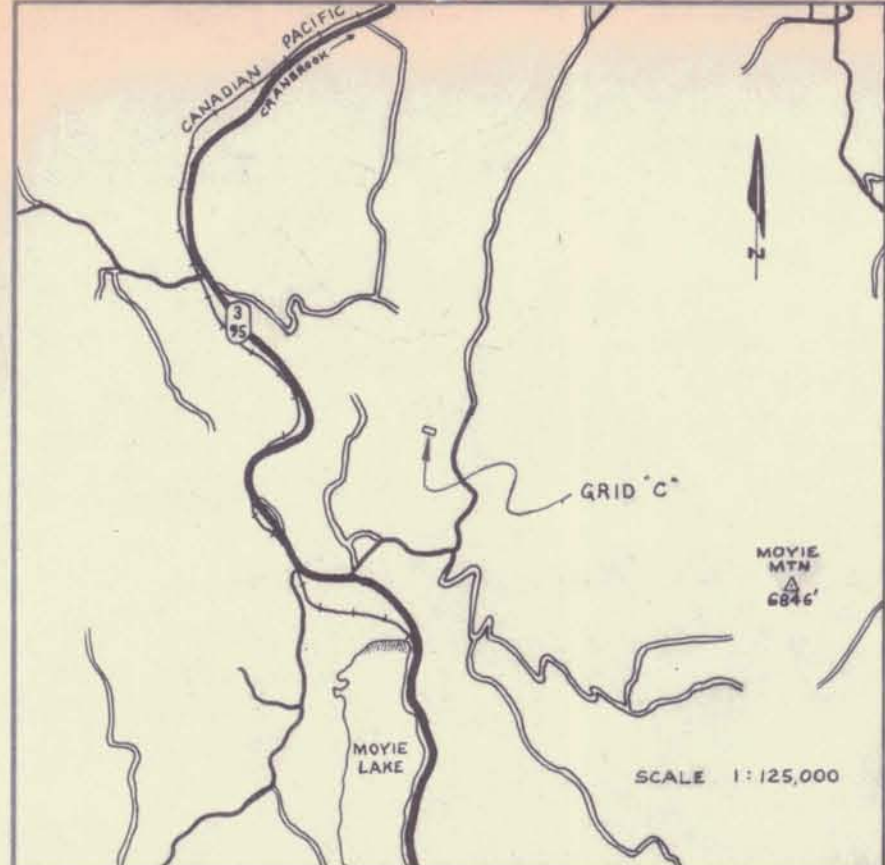
Part 4 of 5

VINE CLAIMS

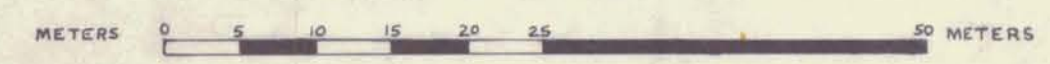
82G/5W

Drawn by: G.L.W.	Traced by:
Revised by: _____	Revised by: _____
Date: _____	Date: _____

Scale: 1:50,000 Date: SEPT. 9/77 Plate: 1



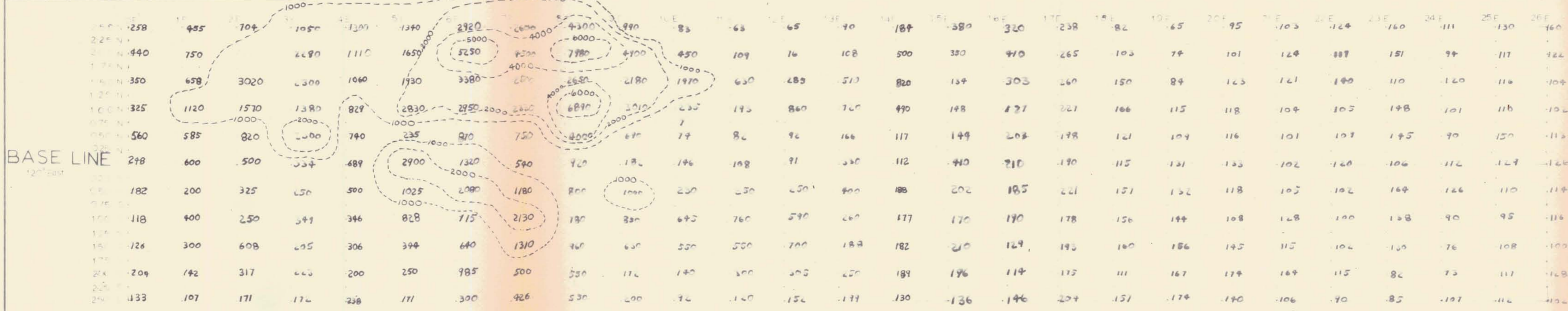
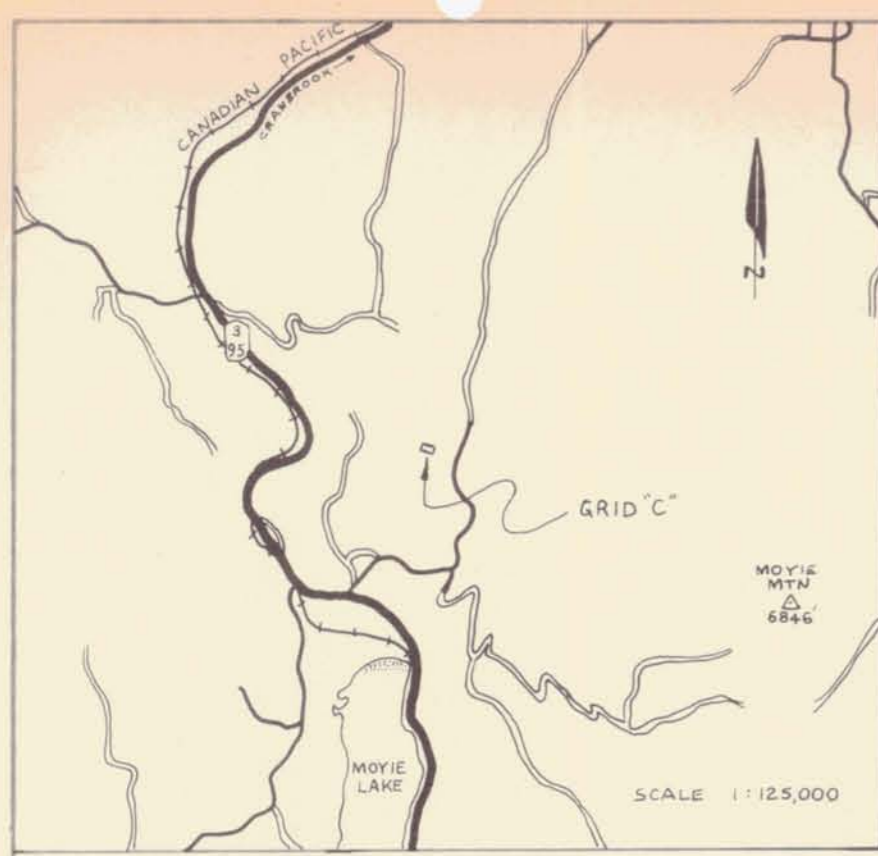
SCALE 1:500 OR 1 cm. TO 5 m.



8946

Part 4 of 5
 MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 6998
 NO. _____

GRID "C" VINE #1 LEAD		VINE GEOCHEM SURVEY	
Drawn by: WBS.	Traced by:		
Revised by: Date:	Revised by: Date:		
GMM 8/77			
Scale 1:500		Date 27.4.77	Plate 3



SCALE 1:500 OR 1cm TO 5m



8942

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6998
NO. _____

Part 4 of 5

GRID "C" VINE #1 ZINC		DOMINGO	
Drawn by: WBS	Traced by:	VINE GEOCHEM SURVEY	
Revised by: GMM	Revised by: [Signature]		
Date: 8/7/77	Date:	Scale: 1:500	Date: 27.4.77
		Plate: 4	