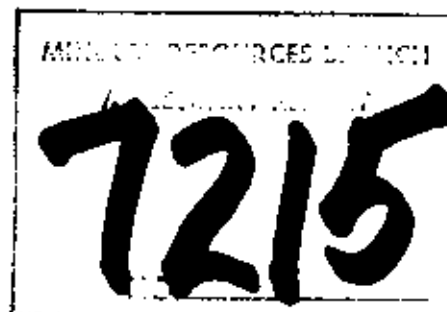


GEOCHEMICAL REPORT  
on  
BLACK ROCK GROUP  
SALMO AREA  
NELSON MINING DIVISION

49°07'N 117°14'W 82F3

by  
J.W. MACLEOD, P. ENG.

Vancouver, B.C.  
April 2, 1979



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ZINC IN SOILS .....	5
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## ILLUSTRATIONS

	<u>SCALE</u>
LOCATION MAP	1" = 30 miles
PLAN OF CLAIMS	1: 50,000
ZINC DISTRIBUTION	
LEAD DISTRIBUTION	
SOIL PROFILES	
SAMONE LOCATIONS	1" = 200'
ZINC IN SOILS	1" = 200'
LEAD IN SOILS	1" = 200'

## APPENDICES

APPENDIX I	-	ANALYTICAL PROCEDURES
APPENDIX II	-	ANALYTICAL RESULTS
APPENDIX III	-	EXPENDITURE
APPENDIX IV	-	ENGINEERS CERTIFICATE

GEOCHEMICAL REPORT  
on  
BLACK ROCK GROUP  
SALMO AREA

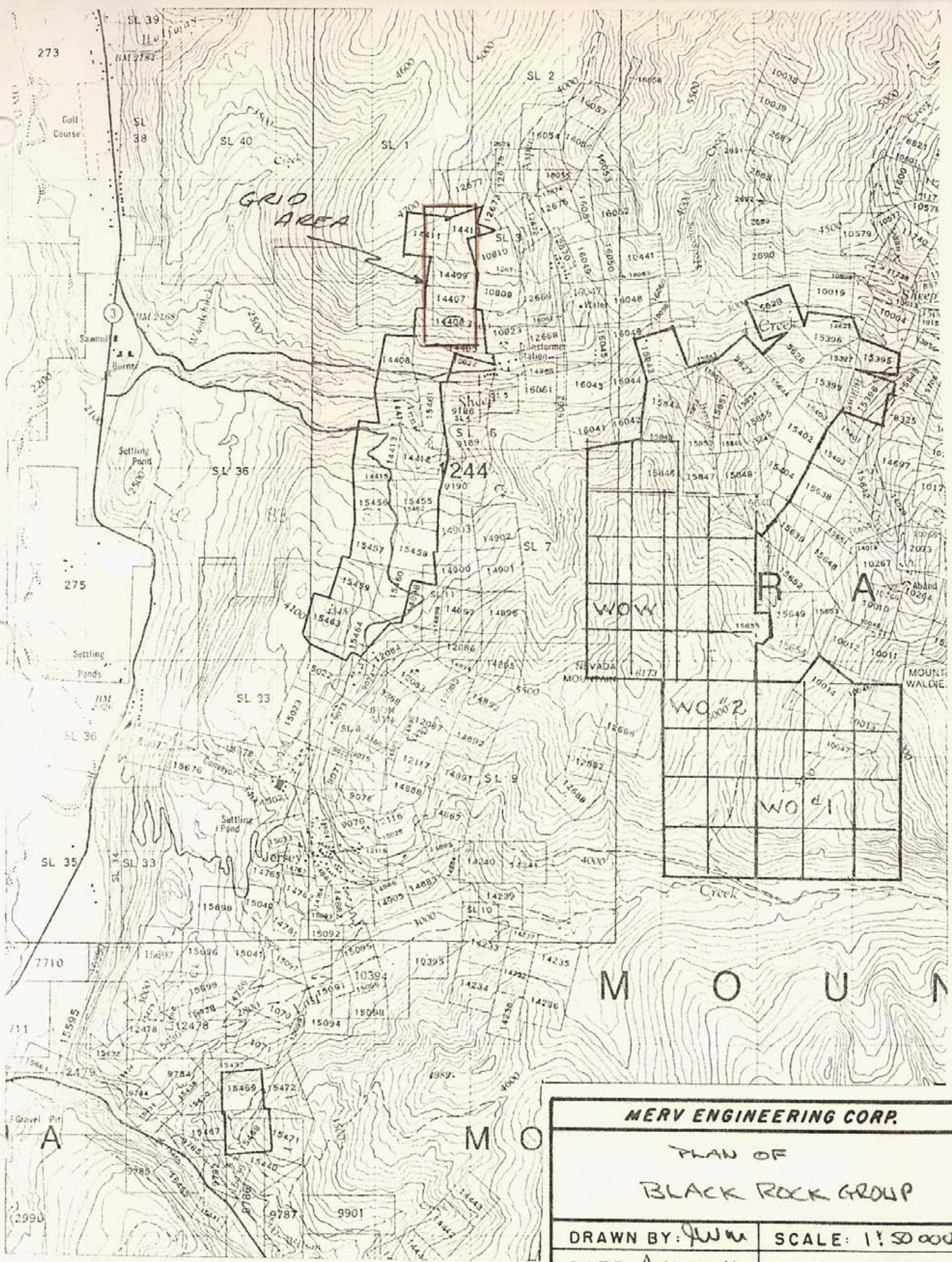
INTRODUCTION

The following report has been prepared to fulfill the requirements of the Mineral Act governing the filing of geochemical surveys for assessment credit.

The report is based on a soil sampling program carried out during August and September 1978 under the direction of the author.



<b>MERV ENGINEERING CORP.</b>	
LOCATION OF <b>BLACK ROCK GROUP</b>	
DRAWN BY: JWM	SCALE: 1" = 30mi
DATE: SEP. 29, 77	N.T.S. : 82F3



MERV ENGINEERING CORP.

PLAN OF  
BLACK ROCK GROUP

DRAWN BY: JWM SCALE: 1" = 50' 000

DATE: APRIL 2, 1944 N.T.S. : 32F3

### SUMMARY & CONCLUSIONS

A soil survey carried out over a portion of the Black Rock group located a significant lead-zinc anomaly trending east-west for a distance of 600 feet. Values in zinc for 400 feet are over 5000 p.p.m. and in lead plus 1000 p.p.m. This east-west trend, where the regional strike is north-south, could be due to mineralization associated with a fold; a favourable indication in the Salmo camp.

Three diamond drill holes are recommended to test this anomaly at a cost of \$20,000.00.

### PROPERTY

The Black Rock Group consists of the following 21 contiguous reverted crown grants:

<u>CLAIM NAME</u>	<u>RECORD NO.</u>	<u>LOT NO.</u>	<u>ANN. DATE</u>
Black Rock #11Fr.	608	14405	May 17, 1979
Black Rock #12Fr.	604	14406	"
Black Rock #14Fr.	610	14407	"
Black Rock #10Fr.	611	14408	"
Black Rock #15Fr.	612	14409	"
Black Rock #16Fr.	613	14410	"
Black Rock No. 17	614	14411	"
Black Rock No. 5	615	14412	"
Black Rock No. 6	616	14413	"
Black Rock No. 7	617	14414	"
Black Rock Fraction	618	14415	"
Black Rock No. 1	619	15455	"
Black Rock No. 2	620	15456	"
Black Rock No. 3	621	15457	"
Black Rock No. 4	622	15458	"
Black Rock No. 8	623	15459	"
Black Rock # 9Fr.	624	15460	"
Black Rock #18Fr.	625	15461	"
Black Rock #19Fr.	626	15462	"
Black Rock No. 20	627	15463	"
Black Rock #21Fr.	628	15464	"

### LOCATION & ACCESS

The Black Rock group is located 6 miles south east of Salmo adjoining to the west of Cominco's HB mine and Placer's lead-zinc tungsten mines.

The portion of the group south of Sheep Creek straddles the road to the old Placer townsite and that north of the creek readily accessible from old mining and logging roads.

### GENERAL

The property was held for many years by the American Zinc Co. now absorbed by the Azcon Corp. There are a number of old workings on the property including 4 adits which have not been reported on. In 1947 Cominco drilled 3 holes south of Sheep Creek and between 1951 and 1953 the American Zinc Co. drilled 34 holes totalling between 17 and 18,000 feet on the ground north of Sheep Creek. No data on this work has been made available.

The property covers the steep slopes of Sheep Creek Valley from 2500 to 4500 feet in elevation. Although overburden is light except for the gravel benches along the creek, outcrop is sparse.

The area has been thoroughly ravaged by fires with sparse second growth of tamarack, willow and huckleberry.

## GEOLOGY

The regional geology of the area is covered by B.C. Dept of Mines Bulletin No. 41 by Fyles and Hewlitt.

The geologic section for the area is as follows:

Ordovician	Active Formation	-	Argillite & limestone
Cambrian	Liab Formation		
	Emerald	-	phyllite
	Reeves	-	limestone
	Truman	-	phyllite
Cambrian	Reno Formation	-	Quartzite

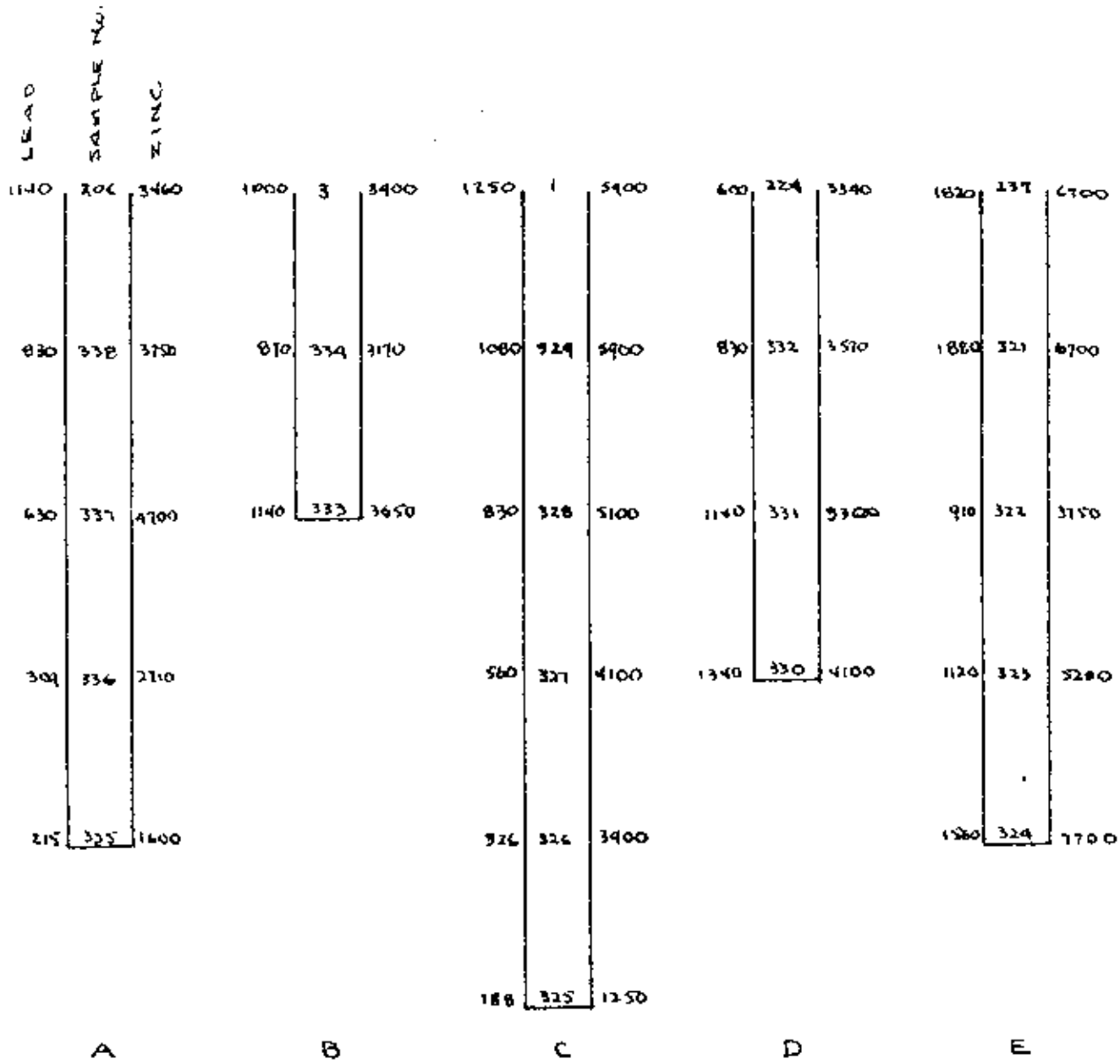
The Reeves member, where dolomitized, hosts the lead-zinc deposits of the Kootenay Arc.

## SOIL SURVEY

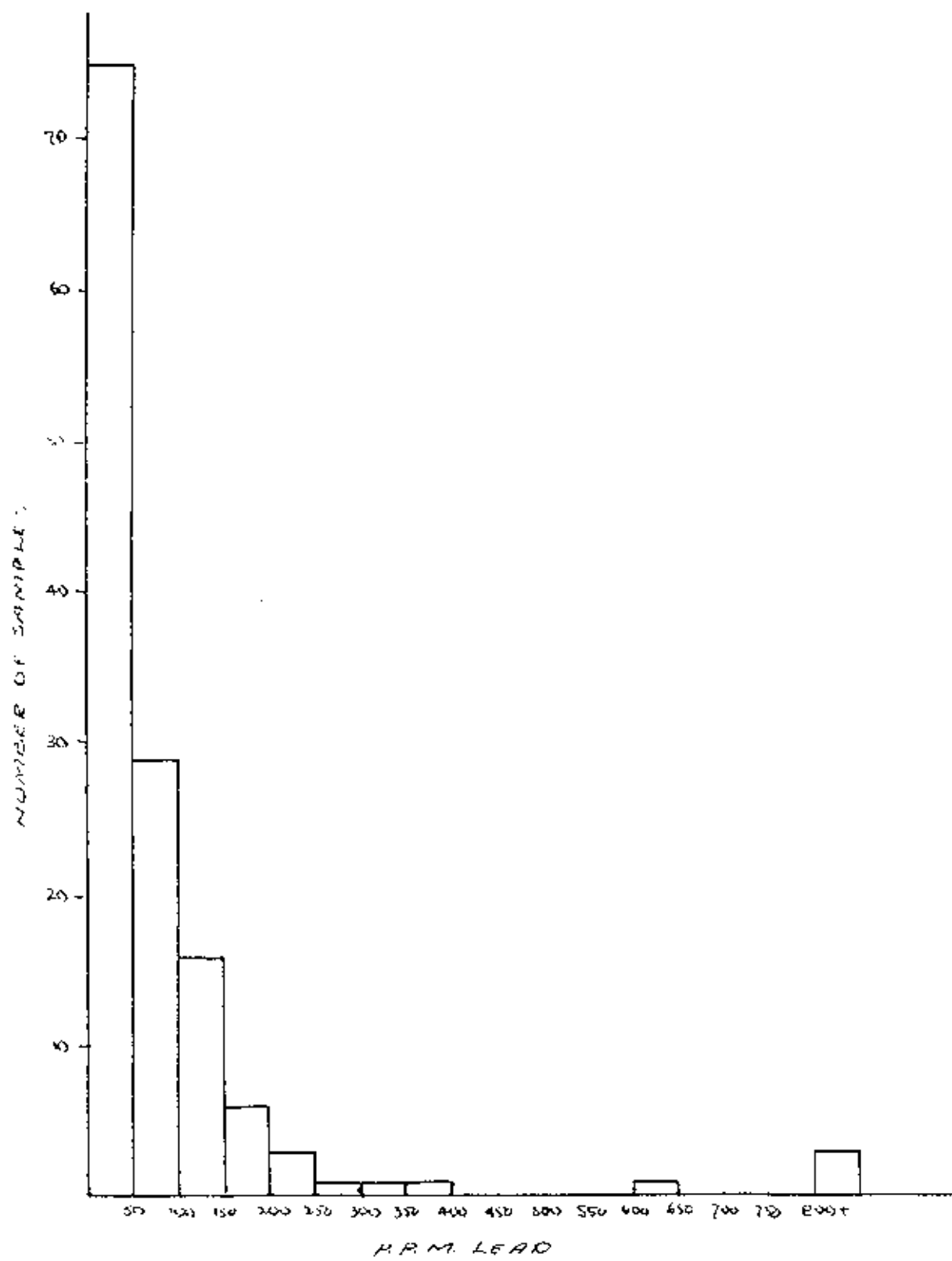
Figure 7 from Bulletin No. 41 shows a considerable portion of Black Rock group north of Sheep Creek to be overburdened and partially underlain by the Reeves Limestone unit. This area was gridded with east-west lines 400 feet apart and samples collected at 100 foot intervals in the initial test. Because of the high assays obtained in the southeast corner of the grid this area was detailed with lines 100 feet apart and sampled at 50 foot intervals.

All samples were collected from the "B" horizon and in the anomalous area 5 pits were dug and sampled at 1 foot intervals.

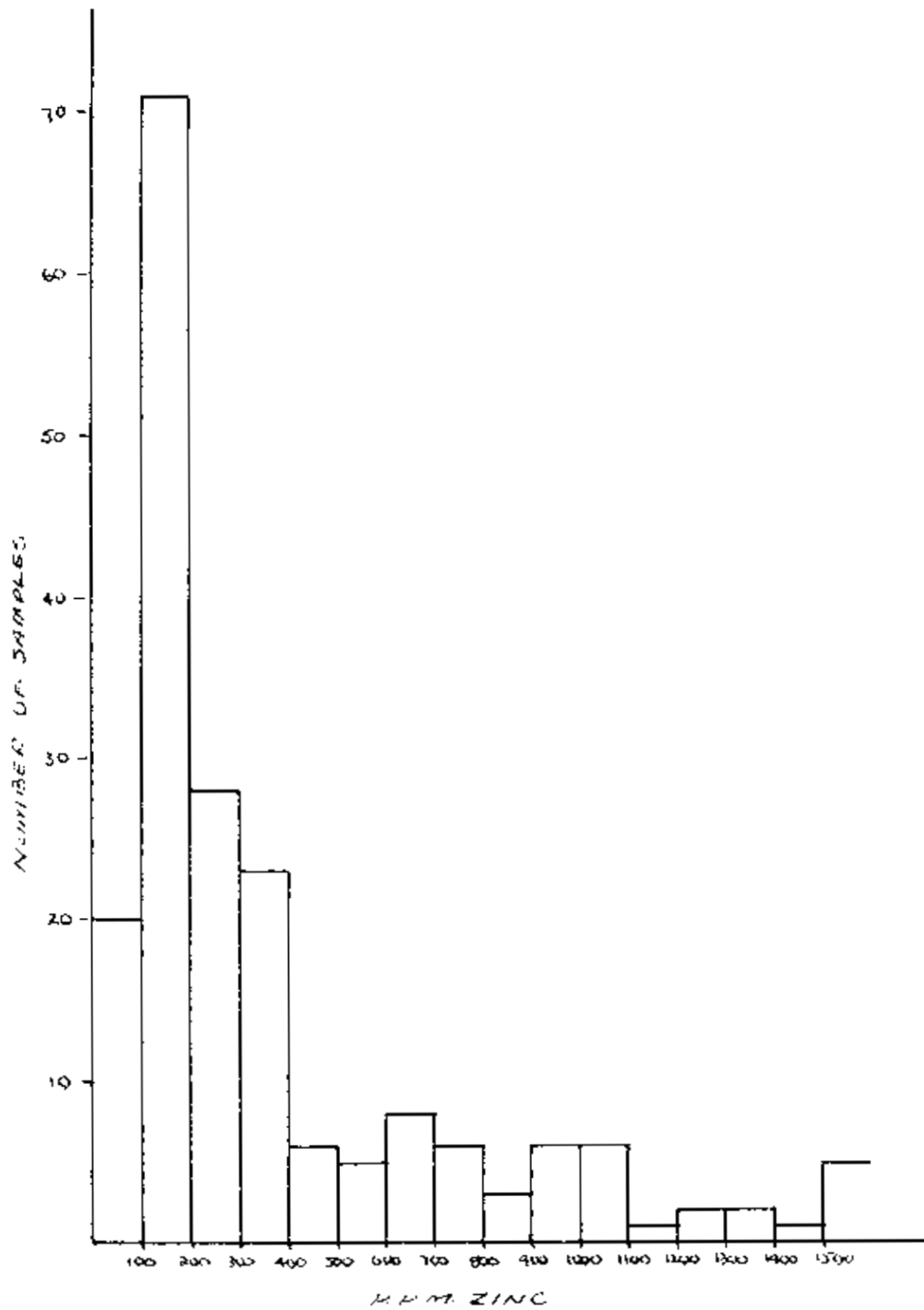




<b>MERV ENGINEERING CORP.</b>	
BLACK ROCK GROUP PIT SECTIONS	
DRAWN BY: WWA	SCALE: 1"=1'
DATE: Oct, 1978	N.T.S.: 8293



<b>MERY ENGINEERING CORP.</b>	
DISTRIBUTION OF LEAD IN SOILS	
DRAWN BY:	SCALE:
DATE:	N.T.S.:



<b>MERY ENGINEERING CORP.</b>	
<i>DISTRIBUTION OF ZINC IN SOILS</i>	
DRAWN BY:	SCALE:
DATE:	N.T.S. :

### ZINC IN SOILS

The distribution curve for zinc in soils for the initial grid indicates values above 1500 p.p.m. to be definitely anomalous. The results are contoured on the accompanying plan per 1000 p.p.m.

The plus 2000 p.p.m. contour suggests the presence of mineralized zone 600 feet in an east-west direction. In view of the steep slope width cannot be inferred.

The pit profiles suggest considerable migration for the western portion of the anomaly whereas pit D and E show increasing values with depth.

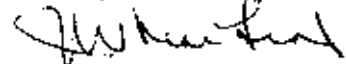
### LEAD IN SOILS

The lead curve indicates values in excess of 400 p.p.m. to be anomalous and this contour compares reasonably well with the anomalous zinc contour. Also the values in pits D and E increase with depth similar to the zinc profiles suggesting that the migration for lead and zinc is similar. Only exposure to surface of mineralization would confirm these indications.

### RECOMMENDATIONS

Diamond drilling will be required to determine the source of the coincident lead-zinc soil anomaly. It is estimated that three holes totaling 1000 feet will be required for an initial test of this anomaly. The cost of this program at \$20 per foot would be \$20,000.00.

Respectfully submitted,



J.W. MacLeod, P. Eng.

APPENDIX I  
ANALYTICAL PROCEDURES



986-5211

VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA ~~604-388-0372~~

V7P 2S3

April 3, 1979

To: Merv Engineering Corp.  
#333, 885 Dunsmuir St.  
Vancouver, B.C. V6C 1N5

From: Vangeochem Lab. Ltd.  
1521 Pemberton Ave.  
North Vancouver, B.C. V7P 2S3

Subject: Analytical procedure used to determine hot acid soluble Pb,  
Zn, in geochemical and soil samples.

Black Rock Group

1. Sample Preparation

- (a) Geochemical soil or silt samples were received in the laboratory in wet-strength  $3\frac{1}{2} \times 6\frac{1}{2}$  Kragt paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted by using a shaking machine with 80-mesh stainless steel sieves. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analyses later.

2. Methods of Digestion

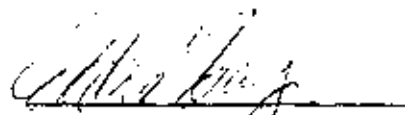
- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively.)
- (c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

.....2

3. Method of Analysis

Pb and Zn analyses were determined by using a Tachtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamps. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

4. The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and the laboratory staff.



Eddie Tang

Vangeochem Lab Ltd.

CC: j1

APPENDIX II  
ANALYTICAL RESULTS





VANGEOCHEM LAB LTD.  
 1521 PEMBERTON AVE.,  
 NORTH VANCOUVER, B.C.,  
 CANADA V7P 2S3

TELEPHONE: 986-5211  
 AREA CODE: 604

# Certificate of Geochemical Analyses

• Specialising in Trace Elements Analyses •

- IN ACCOUNT WITH -

Merv Engineering Corp.  
 #335 - 885 Dunsmuir Street  
 Vancouver, B.C.

Attention:

Report No: 78 60 007 Page 1 of 5  
 Samples Arrived: Aug. 15, 1978  
 Report Completed: Aug. 18, 1978  
 For Project: Salmo  
 Analyst:  
 Invoice #2116 Job #780123

Sample Marking	Pb ppm	Zn ppm	CHECK		
E - 1	1250	5900	1100	4600	BLACK ROCK
2	1550	6100	1340	4300	
3	1000	3400	99	490	
4	240	680			
5	210	960			
6	127	630			
7	107	375			
8	100	1070			
9	74	289			
10	38	130			
11	106	323			
12	115	510			
13	137	1100			
14	145	1030			
15	180	1040			
16	135	1060			
17	115	710			
18	69	345			
19	74	325			
20	100	398			
21	81	350			
22	183	640			
23	650	1600			
24	390	920			
25	190	1030			
26	183	950			
27	132	820			
28	90	650			
29	108	410			
30	105	510			
31	109	800			
32	115	1400			
33	65	880			
34	33	330			
35	35	375			
36	52	240			
37	170	970			
38	43	280			
F - 39	25	150			

REMARKS:

Signature:



VANGEOCHEM LAB LTD.  
 1521 PEMBERTON AVE.,  
 NORTH VANCOUVER, B.C.,  
 CANADA V7P 2S3

TELEPHONE: 906-5211  
 AREA CODE: 604

• Specialising in Trace Elements Analyses •

# Certificate of Geochemical Analyses

-IN ACCOUNT WITH-

**Merv Engineering Corp.**  
 #335 - 885 Dunsmuir Street  
 Vancouver, B.C.

Attention:

Report No: **78 60 007**  
 Samples Arrived:  
 Report Completed:  
 For Project:  
 Analyst:

Page **2** of 5

Sample Marking	Pb ppm	Zn ppm				
E - 40	337	940				
41	90	211				
42	77	197				
43	19	148				
44	27	176				
45	34	382				
46	27	365				
47	23	373				
48	40	1290				
49	133	1350				
50	37	188				
51	30	182				
52	24	220				
53	55	380				
54	80	650				
55	39	295				
56	22	295				
57	29	324				
58	28	156				
59	50	112				
60	22	86				
61	35	336				
62	67	480				
63	168	1460				
64	65	760				
65	31	760				
66	30	335				
67	29	300				
68	25	273				
69	33	220				
70	37	205				
71	31	285				
72	40	660				
73	124	1120				
74	100	1240				
75	46	500				
76	73	730				
77	32	285				
E - 78	75	650				

Signature



VANGEOCHEM LAB LTD.  
 1521 PEMBERTON AVE.,  
 NORTH VANCOUVER, B.C.,  
 CANADA V7P 2S3

TELEPHONE: 986-5211  
 AREA CODE: 604

• Specialising in Trace Elements Analyses •

### Certificate of Geochemical Analyses

-IN ACCOUNT WITH-

Merv Engineering Corp.

Report No: 78 60 007

Page 3 of 5

Samples Arrived:

Report Completed:

For Project:

Analyst:

Attention:

Sample Marking	Pb ppm	Zn ppm				
E - 79	58	324				
80	39	600				
81	34	570				
82	25	250				
83	25	183				
84	27	178				
85	26	170				
86	32	276				
87	35	300				
88	45	376				
89	206	860				
90	30	175				
91	30	148				
92	40	197				
93	33	168				
94	48	134				
95	23	126				
96	17	61				
97	40	116				
98	40	182				
99	28	223				
100	25	110				
101	45	284				
102	32	237				
103	30	250				
104	29	377				
105	35	610				
106	260	990				
107	77	570				
108	110	500				
109	70	323				
110	89	366				
111	65	420				
112	39	200				
113	24	146				
114	27	136				
115	39	137				
116	23	135				
E - 117	39	196				

Signed: 

Mex 10683

5 MeS.

1 Troy oz./ton = 31.28 ppm

1 ppm = 0.0001%

nd = none detected

ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



VANGEOCHEM LAB LTD  
 1521 PEMBERTON AVE.,  
 NORTH VANCOUVER, B.C.,  
 CANADA V7P 2S3

TELEPHONE: 986-5211  
 AREA CODE: 604

### Certificate of Geochemical Analyses

• Specialising in Trace Elements Analyses •

—IN ACCOUNT WITH

Merv Engineering Corp.

Report No: 78 60 007

Page 4 of 5

Samples Arrived:

Report Completed:

For Project:

Analyst:

Attention:

Sample Marking	Pb ppm	Zn ppm			
E - 118	54	66			
119	30	93			
120	29	99			
121	29	170			
122	26	122			
123	27	115			
124	40	114			
125	25	119			
126	27	67			
127	27	122			
128	34	134			
129	25	120			
130	25	135			
131	22	90			
132	25	113			
133	65	388			
134	100	2200			
135	27	158			
136	27	500			
137	27	146			
138	27	148			
139	27	140			
140	27	166			
141	30	131			
142	29	137			
143	28	107			
144	27	275			
145	24	200			
146	20	166			
147	20	151			
148	24	166			
149	24	192			
150	No	Sample			
151	23	71			
152	27	236			
153	20	92			
154	20	92			
155	20	187			
E - 156	22	96			

REMARKS

Signature: 



VANGEOCHEM LAB LTD.  
 1521 PEMBERTON AVE.,  
 NORTH VANCOUVER, B.C.,  
 CANADA V7P 2S3

TELEPHONE: 986-5211  
 AREA CODE: 604

### Certificate of Geochemical Analyses

• Specialising in Trace Elements Analyses •

- IN ACCOUNT WITH -

**Merv Engineering Corp.**

Report No: 78 60 007

Page 5 of 5

Samples Arrived:

Report Completed:

For Project:

Analyst:

Attention:

Sample Marking	Pb ppm	Zn ppm			
E - 157	31	95			
158	28	113			
159	26	158			
160	36	127			
161	35	128			
162	32	124			
163	56	150			
164	36	142			
165	28	99			
166	27	116			
167	34	300			
168	31	290			
169	34	225			
170	30	156			
171	28	150			
172	32	190			
173	32	171			
174	34	78			
175	26	90			
176	26	99			
177	26	158			
178	30	340			
179	56	760			
180	32	250			
181	34	165			
182	30	186			
183	26	104			
184	22	102			
185	28	100			
186	26	96			
187	37	164			
188	49	306			
189	29	158			
190	76	270			
191	37	297			
192	35	116			
193	34	89			
E - 194	36	84			

Signed: 

MSX 1 688 - V.M.C.

1 Troy oz. tin = 34.28 ppm

1 ppm = 0.0001%

nd = none detected

ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



VANGEOCHEM LAB LTD.  
 1311 PHENIX BLVD. SUITE 100  
 VANCOUVER, BRITISH COLUMBIA  
 CANADA V7E 2M2

TELEPHONE 681-1501  
 APPLICABLE TAXES

*For a complete list of our analytical services*

### Certificate of Geochemical Analyses

CLIENT'S REFERENCE

Merv Engineering Corp.  
 #335 - 885 Dunsmuir St.  
 Vancouver, B.C. V6C 1N5

Project # 78 60 010 Page 1 of 3

Sample Analyzed Aug. 30, 1978

Report Issued on Sept. 7, 1978

For Engineer Salmo  
 Eddie Tang

Invoice #2180

Job #780213

	Pb	Zn
	ppm	ppm
E 195	98	300
96	117	510
97	128	730
98	540	2350
99	1480	4300
200	860	3600
01	1410	4600
02	480	1660
03	750	3510
04	224	660
05	840	3200
06	1140	7460
07	850	2610
08	860	3350
09	400	1950
10	380	1670
11	420	1220
12	376	1240
13	630	1420
E 214	460	1380
E 215	700	1950
16	740	2120
17	450	1580
18	353	1450
19	292	1260
20	309	1170
21	265	1160
22	229	1140
23	354	2720
24	600	3740
25	920	3100
26	850	2990
27	158	720
28	110	610
29	138	580
30	244	980
31	245	790
32	146	530
E 233	145	510

Black Rock

REMARKS

Signed:

1 Milligram (mg) = 1,000 Micrograms (µg)

1 Troy ounce (oz) = 31.1035 grams (g)

1 ppm = 0.0001%

1 mg = 1,000 µg

1 mg = 1,000 µg

All values are believed to be correct to the best knowledge of the Analyst based on the method and instruments used.



VANGEOCHEMICAL LTD.  
 1111 BAYVIEW AVE. S.W.  
 VANCOUVER, B.C.  
 CANADA V6P 1G7

TELEPHONE: 604-271-1111  
 AREA CODE 604

\* This is a Trace Element Analysis \*

# Certificate of Geochemical Analyses

Client: **Merv Engineering Corp.**

Report No: **78 60 010** Page **2** of **3**  
 Sample No: \_\_\_\_\_  
 Report Date: \_\_\_\_\_  
 Site Project: \_\_\_\_\_  
 Analysis: \_\_\_\_\_

Sample No.	Pb ppm	Zn ppm
E 234	290	1610
35	1270	7100
36	1160	5300
37	1820	6700
38	820	3430
39	1160	5100
40	650	3320
41	386	2700
42	650	4500
43	154	740
44	144	700
45	109	490
46	300	910
47	215	820
48	340	1300
49	272	990
50	298	1190
51	238	1750
52	190	2000
53	730	3350
54	500	2760
55	420	2300
56	374	1700
57	820	3290
58	1030	3020
59	600	2160
60	195	960
61	126	610
62	115	740
63	156	850
64	97	420
65	115	460
66	112	440
67	87	520
68	107	520
69	100	440
70	93	398
71	80	372
E 272	240	870

Signature:



MINERALOGICAL LABORATORY

1000 UNIVERSITY AVENUE

OTTAWA, ONTARIO K1N 8N7

CANADA K1N 8N7

MIN. 1000-10-1221

APR 1978 (1)

ANALYSE EN CHIMIE DES MINÉRAUX

# Certificate of Geochemical Analyses

CLIENT'S NAME

Merv Engineering Corp.

File No. 78 60 010

3 43

Sample received Aug. 30, 1978

Report No. 1

For Project

Address

City

Sample No.	Pb ppm	Zn ppm
E 273	400	1300
74	610	2030
75	210	910
76	319	1900
77	218	1900
78	186	3440
79	188	2700
80	208	1280
81	203	1010
82	304	1160
83	253	920
84	245	810
85	230	1000
86	202	950
87	186	800
88	178	890
89	95	530
90	146	1660
91	183	3650
E 292	168	4600
E 293	144	3700
94	196	1020
95	218	780
96	330	1060
97	236	840
98	218	770
99	82	294
E 300	80	256
01	108	460
02	81	348
E 303	78	326

W. J. 104

Analyst

W. J. 104-10-1221

1 Tray (total) 34.28 ppm

1 ppm 0.07915

1000 ppm 0.07915

10000 ppm 0.07915

All values are believed to be correct to the best knowledge of the analyst based on the method and instrument used.





VANGEOCHEM LAB LTD  
 1521 HUNTERTON ST.  
 VANCOUVER, B.C. V6C 1N5  
 CANADA V6C 1N5

TELEPHONE: 682-5211  
 FACSIMILE: 682-1004

### Certificate of Geochemical Analyses

Merv Engineering Corp.  
 #335, 885 Dunscombe St.  
 Vancouver, B.C. V6C 1N5

Job # 78 60 012  
 Date of Analysis: Sept. 15, 1978  
 Date of Report: Sept. 22, 1978  
 Analyst: Eddie Tang  
 Invoice #2712 Job #780232

	Pb	Zn
	ppm	ppm
E - 304	200	1100
5	250	1230
6	280	1330
7	252	1400
8	263	1270
9	186	1050
10	188	870
11	162	840
12	183	920
13	109	650
14	107	620
15	100	1060
16	184	930
17	312	1400
18	223	1200
19	163	1070
20	129	970
21	1880	6700
22	910	3750
23	1120	5200
24	1560	7700
25	188	1250
26	326	3400
27	560	4100
28	830	5100
29	1080	5900
30	1340	4100
31	1140	3300
32	830	3570
33	1140	3650
34	870	3170
35	215	1600
36	309	2710
37	630	4700
E - 338	830	3750

*Black Rock*

Signed:

APPENDIX III  
EXPENDITURE

## EXPENDITURE

The program on the Black Rock group was carried out in August and September in conjunction with a similar survey on the Victory group with the crews time distributed as shown on the accompanying invoices:

### BLACK ROCK TOTALS

<u>MOTEL</u>	<u>LIVING EX.</u>	<u>ANALYSES</u>	<u>TRANSPORT</u>	<u>SALARIES</u>
272.48	174.53	707.70	386.98	1,609.53
TOTAL FROM INVOICES			-	\$3,151.22
REPORT PREPERATION			-	<u>550.00</u>
				\$3,701.22

DISTRIBUTION OF INVOICES

INVOICE #353

	<u>MOTEL</u>	<u>EXPENSE</u>	<u>ANALYSES</u>	<u>TRANS.</u>	<u>SALARIES</u>	<u>CAT</u>	<u>DRAFTING &amp; TELEPHONE</u>
Victory	458.15	298.52	2172.86	623.09	2665.55	635.00	13.97
Black Rock	166.63	108.57	405.30	204.82	969.45	-	-

INVOICE #360

Victory	291.05	181.38	2143.10	500.84	1759.92	-	148.13
Black Rock	105.85	65.96	302.40	182.16	640.08	-	-

INVOICE #351

Victory	170.10	204.73	48.95	99.35	1185.00	-	-
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INVOICE #365

Victory	-	-	184.95	53.43	600.00	-	451.43
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TOTALS

Victory	919.30	684.63	4549.86	1276.71	6210.47	635.00	583.53
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	<u>LIVING EX.</u>	<u>TRANSPORT</u>	<u>SALARIES</u>	<u>CAT</u>	<u>ANALYSES</u>	<u>DRAFTING</u>	<u>TOTAL</u>
Road	80.00	60.00	230.00	635.00	-	-	1005.00
Lines	507.98	405.57	1993.49	-	-	-	2907.04
Samples	1015.95	811.14	3986.98	-	4549.86	583.53	10947.43

\$14859.47

Cost of lines - 15.24 km @ \$190 per km.

Cost of samples - 1032 samples - collection - 5.63 per sample  
- analysis - 4.40 per sample  
- total -13.42 per sample

Very nice 22 days  
Pike Park 3

MERV ENGINEERING CORP.  
333 - 885 DUNSMUIR ST.,  
VANCOUVER, B.C. V6C 1N5

PHONE: (604) 689-8325

Oct. 8, 1978.

Invoice # 360

Mentor Exploration and Development Ltd.,  
c/o W. A. Hubacheck,  
Ste. 1411,  
44 King St. West.,  
Toronto, Ont.

Expenses to Oct. 7, 1978.

Selkirk Motel	In. # 051928	.....	\$	264.60	--
Selkirk Motel	In. # 051929	.....		132.30	-
Machine Equipment	In. # 28170	.....		36.98	
Vancouver Lab.	In. # 2180	.....		228.90	Due to client
Vancouver Lab.	In. # 2206	.....		1,667.10	
Vancouver Lab.	In. # 22152	.....		73.50	Pike Park
Vancouver Lab.	In. # 2032	.....		496.00	
Altair Drafting	In. # 028130	.....		118.13	
Truck Rental.....	\$ 635.00 plus \$ 48.00 mileage	.....		683.00	
Nick Wychopen Expense Account		.....		210.36	

Salary Disbursements:

Mr. Nick Wychopen	1 to 15th Sept.	\$900.00		
	16th to 30th Sept.	900.00	.....	\$ 1,800.00
	Plus 25% overhead		.....	450.00
Mr. J. W. MacLeod	one day		.....	150.00
				<u>150.00</u>
			Total	\$ <u>6,290.87</u>

Respectfully submitted,

J. W. MacLeod, P. Eng.

*Asst  
Sudger*  
*Page 39*

*2400.00 Fees*  
*Rec Exp 3890.87*

Monday - 22 days  
 change back - 9 " 26667



MERV ENGINEERING CORP.  
 333 - 885 DUNSMUIR ST.,  
 VANCOUVER, B.C. V6C 1N5

PHONE: (604) 689-8325

Sept. 8, 1978.

Invoice # 353

Merco Exploration and Development Ltd.,  
 c/o W. A. Hubachek,  
 Ste. 1411,  
 44 King St. West,  
 Toronto, Ontario.

Expenses to Sept. 8th, 1978.

Selkirk Motel - July 30 - Aug. 12th	\$ 283.50	
Selkirk Motel - Aug. 13 - Aug. 30th	341.28	
Deakin Equipment	37.08	
J. Klevance Cat Rental	635.00	
Vangeochem Invoice # 2116	405.30	Black Rock
Vangeochem Invoice # 2087	159.60	
Vangeochem Invoice # 2132	460.75	
Vangeochem Invoice # 2165	960.30	
Vangeochem Invoice # 2080	592.21	
Budget Rent A Truck Invoice # 47259 1/2	\$ 587.14	
Budget Rent A Truck Invoice # 46263 1/2	\$ 650.00	
M. Stavast - Truck Rental	60.00	
Gas - Shell and Esso	149.34	
Telephone	13.97	
N. Wychopen Exp. Acct. 29/31 X 247.86	.....	231.86
J. W. MacLeod Exp. Acct.		138.15

Salary Disbursement:

J. W. MacLeod ... 2 days @ \$ 150.00 per day		300.00
Robert Stavast 29 days @ 32.00 per day	\$ 928.00	
plus 25% overhead	<u>232.00</u>	1,160.00
N. Wychopen ... 29 days @ \$ 60.00 per day	1,740.00	
plus 25% overhead	<u>435.00</u>	2,175.00
		<hr/>
	TOTAL	<u>\$ 8,721.91</u>

Respectfully submitted,

J. W. MacLeod, P. Eng.

*1 page 30  
 Robert  
 MacLeod*

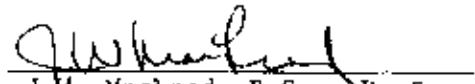
*Yes Klevance  
 All Exp. - 3635.00  
 5086.91  
 8721.91*

APPENDIX IV  
ENGINEERS CERTIFICATE

## CERTIFICATE

I, James W. Macleod, of 1220 Arbutus Street, in the City of Vancouver, in the Province of British Columbia,  
DO HEREBY CERTIFY:

1. That I am a Consulting Engineer, with a business address at #333-885 Dunsmuir Street, in the City of Vancouver, in the Province of British Columbia.
2. That I am a graduate of the University of Alberta with the degree of B.Sc. in Mining Engineering.
3. That I have actively practiced my profession in mineral exploration since graduation in 1946.
4. That I am a registered Professional Engineer in the Province of British Columbia.
5. That this report is based on data obtained as a result of directing the soil sampling program which included two days spent on the property.

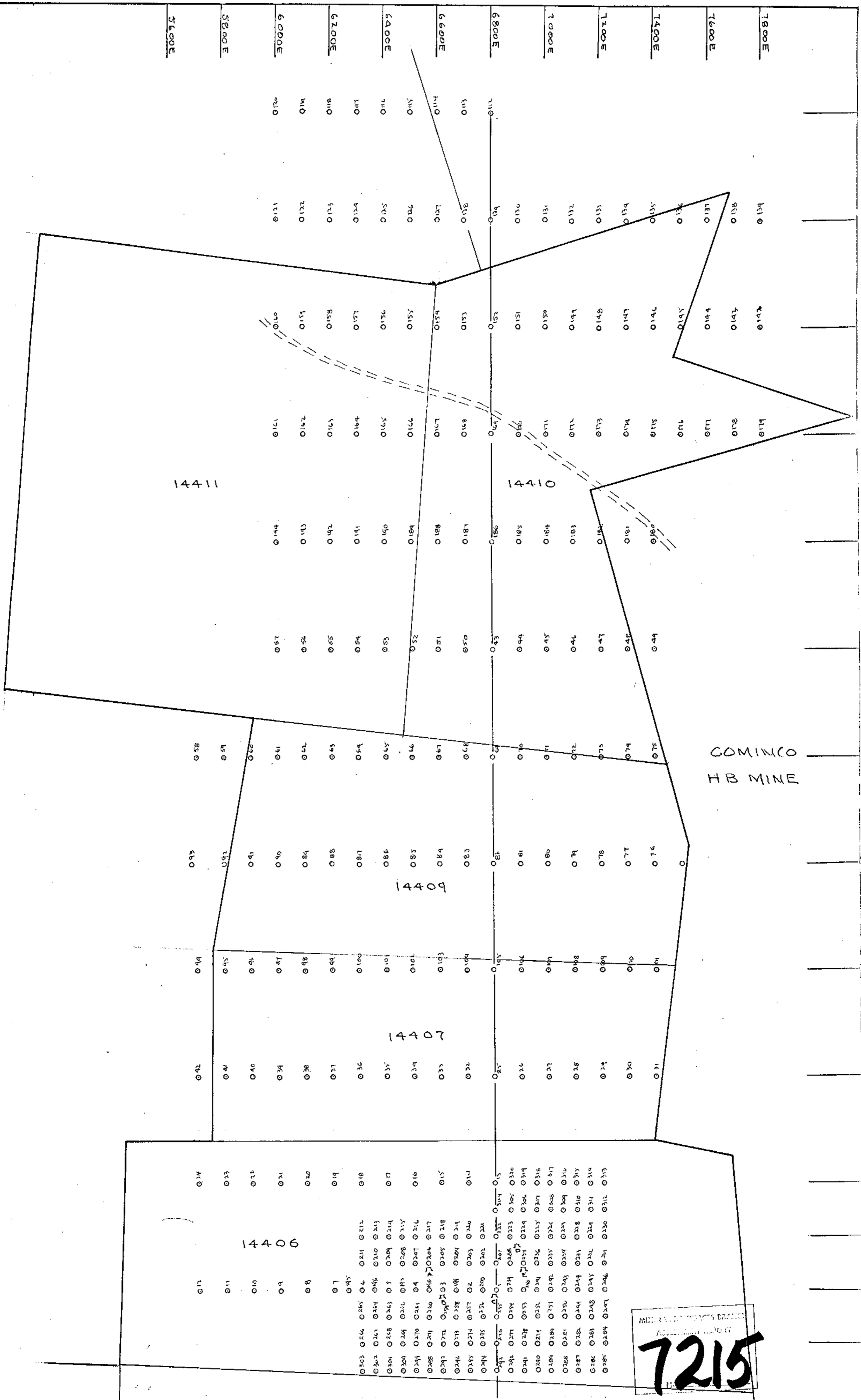
  
\_\_\_\_\_  
J.W. Macleod, B.Sc., P. Eng.

Dated at the City of Vancouver,  
Province of British Columbia  
this 2nd. day of April, 1979



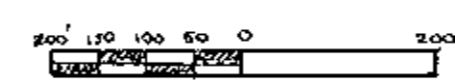
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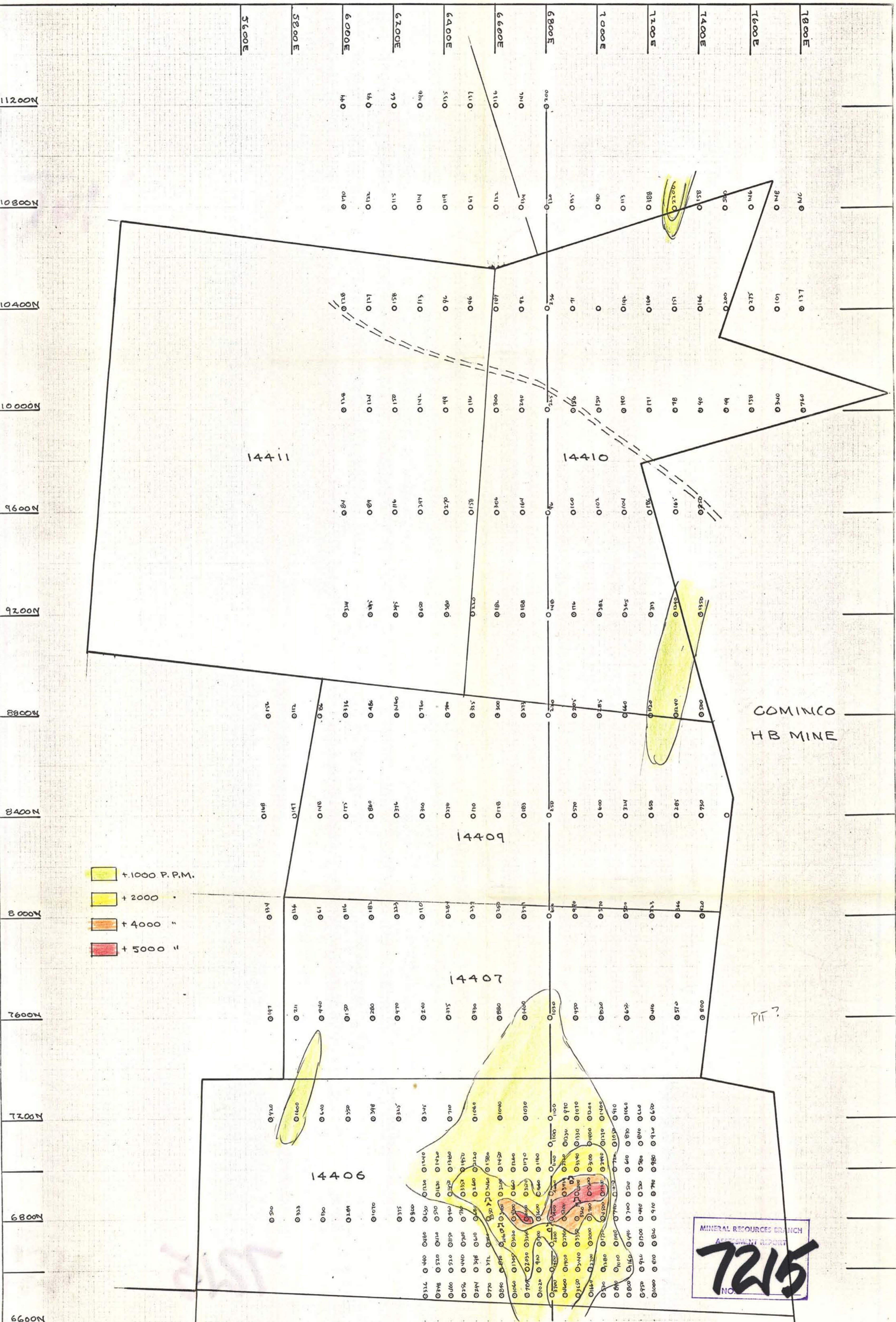
COMINCO  
HB MINE

MINE & QUARRY'S DRAFTER  
ADAMSON 1970  
**7215**



TO ACCOMPANY GEOCHEMICAL REPORT ON  
THE BLACK ROCK GROUP BY: J.W. MERRILL

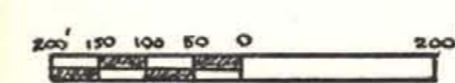
MERY ENGINEERING CORP.	
BLACK ROCK GROUP SAMPLE NUMBERS.	
DRAWN BY: J.W.M.	SCALE: 1" = 200'
DATE: Oct. 1978	N.T.S.: 82 F3



- + 1000 P.P.M.
- + 2000 "
- + 4000 "
- + 5000 "

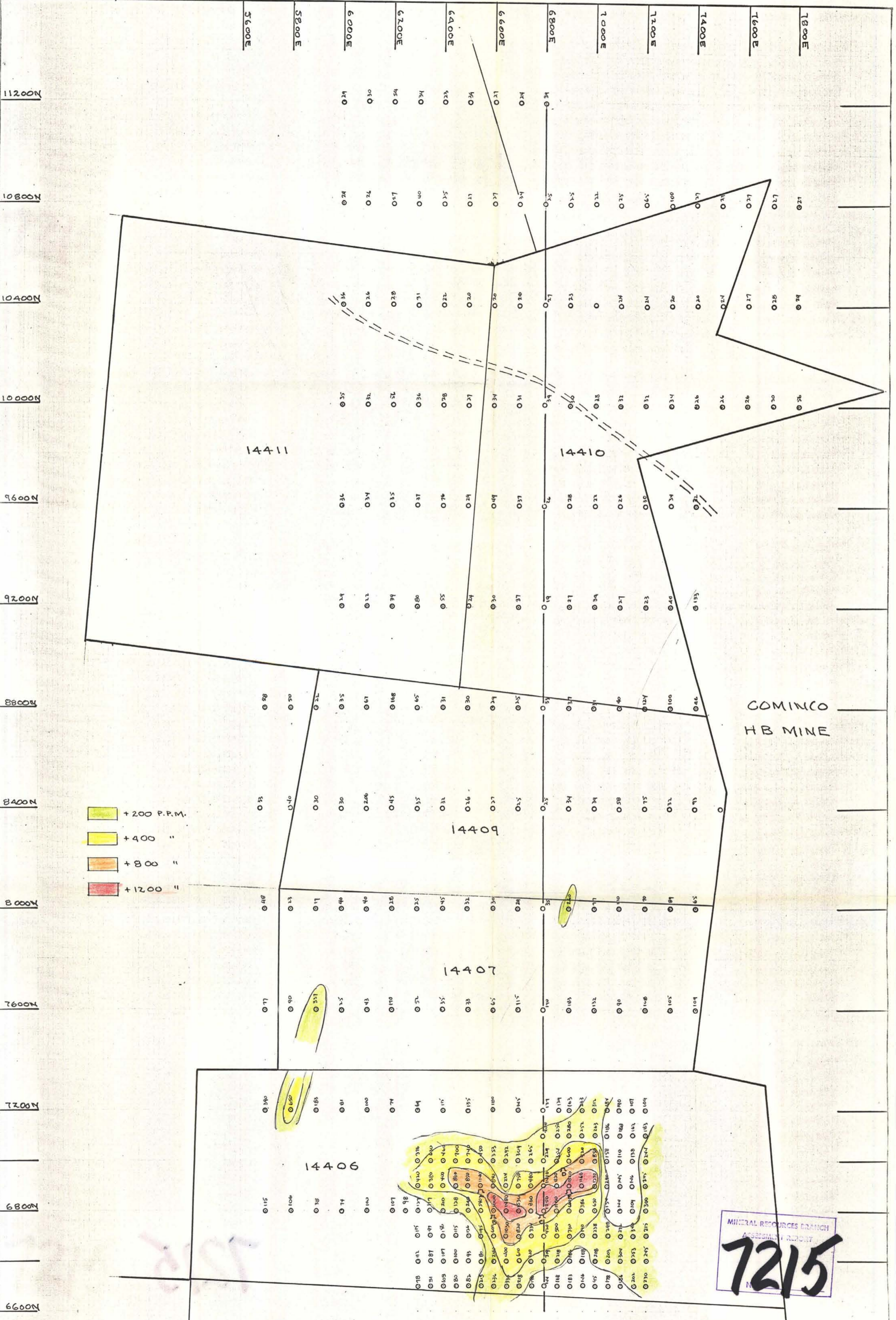
COMINCO  
HB MINE

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7215**  
NO.



TO ACCOMPANY GEOCHEMICAL REPORT ON  
THE BLACK ROCK GROUP BY: J.W. McLeod

MERY ENGINEERING CORP.	
BLACK ROCK GROUP ZINC IN SOILS	
DRAWN BY: J.W.M.	SCALE: 1" = 200'
DATE: Oct. 1978	N.T.S.: 82 F 3



- +200 P.P.M.
- +400 "
- +800 "
- +1200 "

COMINCO  
HB MINE

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7215**

MERV ENGINEERING CORP.  
BLACK ROCK GROUP  
LEAD IN SOILS.  
DRAWN BY: *[Signature]* SCALE: 1"=200'  
DATE: Oct. 1978 N.T.S.: B2F3

To accompany GEOCHEMICAL REPORT ON  
THE BLACK ROCK GROUP BY: *[Signature]*