

REPORT ON
1980 WORK PROGRAM

BLACK ROCK GROUP
SALMO AREA
NELSON MINING DIVISION
82 F 3

by

J.W. MacLeod, P.Eng.

VANCOUVER, B.C.
February 22, 1980

MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES			
REC'D.	FEB 25 1980		
GD			
FILE			

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INTRODUCTION

The following report has been prepared to outline the work carried out in investigating a lead-zinc anomaly obtained by a soil survey during the 1978 field season.

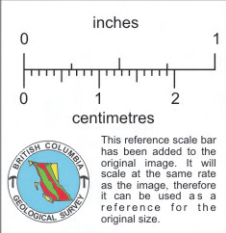
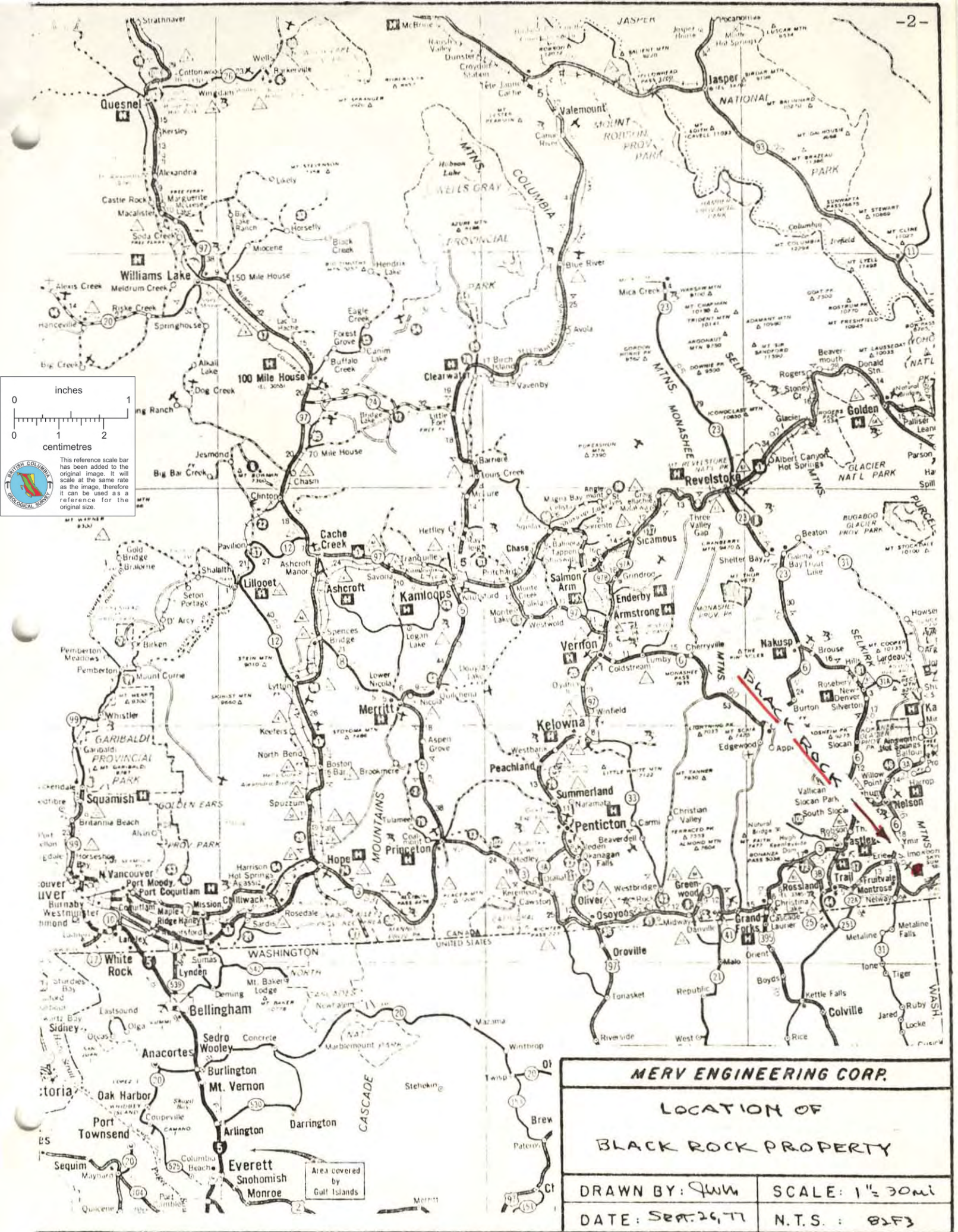
SUMMARY AND CONCLUSIONS

Bulldozer trenching was unsuccessful in locating the source of the anomaly primarily due to the presence of hardpan which prevented bedrock exposure with the equipment at hand.

Soil sampling of the trench bottom indicates a source farther up the hill than the area tested, and further follow-up is required using a bulldozer with rippers.

PROPERTY

The Black Rock Group consists of the following twenty-one contiguous reverted crown grants:



MERV ENGINEERING CORP.	
LOCATION OF BLACK ROCK PROPERTY	
DRAWN BY: JWM	SCALE: 1" = 30mi
DATE: Sept. 26, 77	N.T.S.: 82F3

SALMO PROVINCE

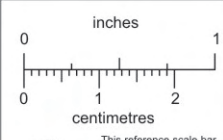
N E

AREA OF ANOMALY

MERV ENGINEERING CORP.

BLACK ROCK GROUP
LOCATION OF ANOMALY

DRAWN BY: JWM	SCALE: 1:50000
DATE: Feb, 1980	N.T.S. :



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

<u>CLAIM NAME</u>	<u>RECORD NO.</u>	<u>LOT NO.</u>	<u>ANNIVERSARY DATE</u>
Black Rock No. 1	619	15455	May 17, 1981
Black Rock No. 2	620	15456	May 17, 1981
Black Rock No. 3	621	15457	May 17, 1981
Black Rock No. 4	622	15458	May 17, 1981
Black Rock No. 5	615	14412	May 17, 1981
Black Rock No. 6	616	14413	May 17, 1981
Black Rock No. 7	617	14414	May 17, 1981
Black Rock No. 8	623	15459	May 17, 1981
Black Rock #9 Fr.	624	15460	May 17, 1981
Black Rock #10 Fr.	611	14408	May 17, 1981
Black Rock #11 Fr.	608	14405	May 17, 1981
Black Rock #12 Fr.	609	14406	May 17, 1981
Black Rock Fr.	618	14415	May 17, 1981
Black Rock #14 Fr.	610	14407	May 17, 1980
Black Rock #15 Fr.	612	14409	May 17, 1981
Black Rock #16 Fr.	613	14410	May 17, 1981
Black Rock No. 17	614	14411	May 17, 1981
Black Rock #18 Fr.	625	15461	May 17, 1980
Black Rock #19 Fr.	626	15462	May 17, 1980
Black Rock No. 20	627	15463	May 17, 1980
Black Rock #21 Fr.	628	15464	May 17, 1980

LOCATION AND ACCESS

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

The lead-zinc anomaly is accessible by way of a Cominco mine road to a point 1200 feet east of the anomaly. An intermittent creek cuts a sharp gulley between the end of the road and the anomaly. A steep slope and light overburden

along the 1200 feet, require a long detour to get the cat to the anomaly location.

GENERAL

Since the report on the 1978 soil survey was prepared, logs of the holes drilled between 1951 and 1953 were made available by the American Zinc Co.

No mineralization is recorded in the logs but only Hole 34 is a limiting factor in relation to the anomaly. This hole intersected mostly limestone where one would expect argillite and quartzite from Figure 7 in Bulletin No. 41.

TRENCHING

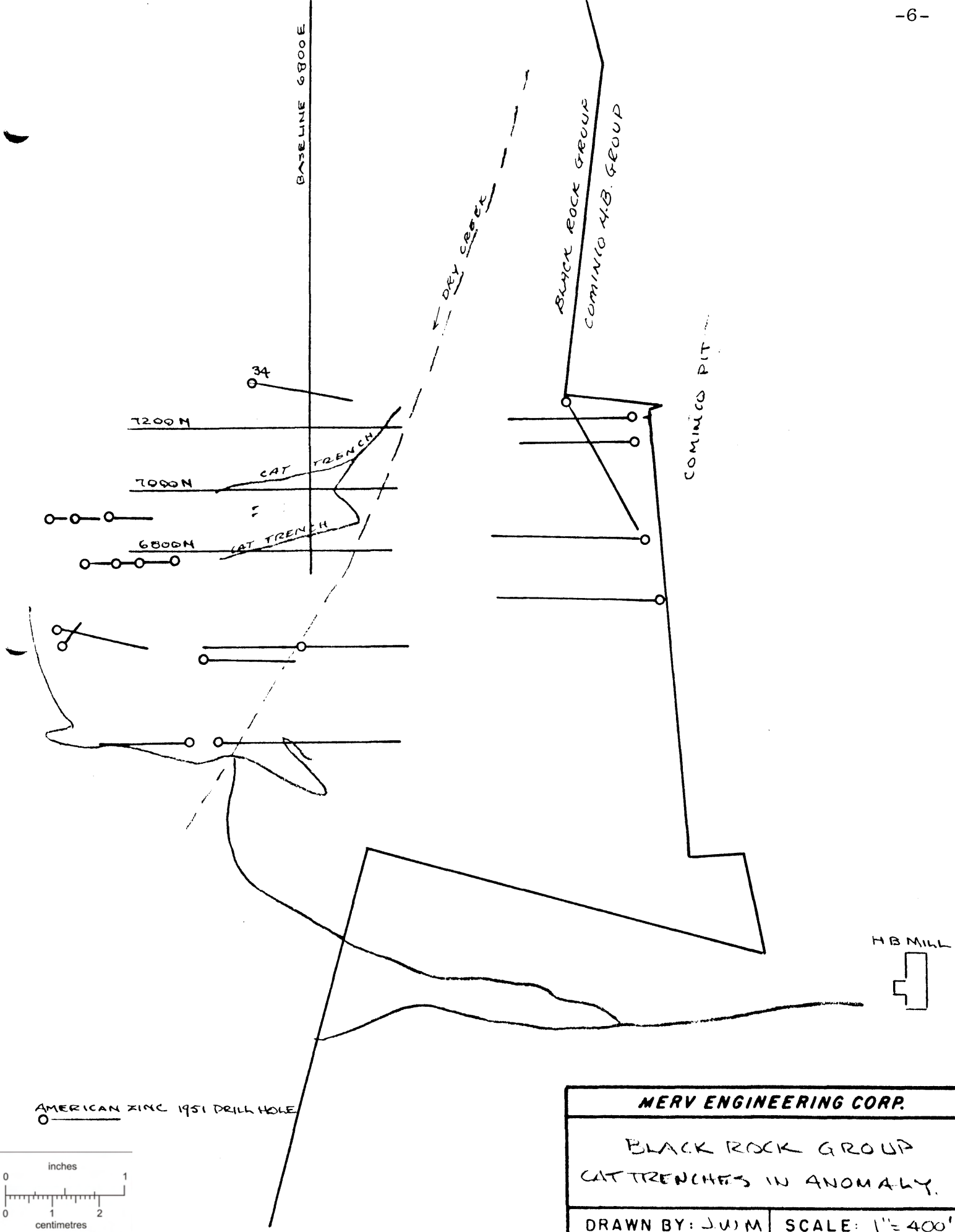
An east-west cut in the area of the highest soil readings between 6500E to 7000E, and 6800N to 6900N exposed 230 feet of brown, thinly bedded argillite under less than a foot of overburden. To the east of this exposure the trench is in grey and black layered hardpan with numerous angular fragments of limestone.

The trench on 7000N is up to six feet deep in grey hardpan.

SOIL SAMPLING

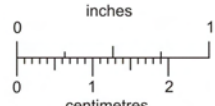
Samples were taken in the bottom of the trenches in an attempt to determine the direction of the anomaly's migration.

On the accompanying sketches, the plus 700 ppm lead



AMERICAN ZINC 1951 DRILL HOLE

MERV ENGINEERING CORP.	
BLACK ROCK GROUP CAT TRENCHES IN ANOMALY.	
DRAWN BY: JUM	SCALE: 1" = 400'
DATE: FEB. 1980	N.T.S. :



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200N

300N

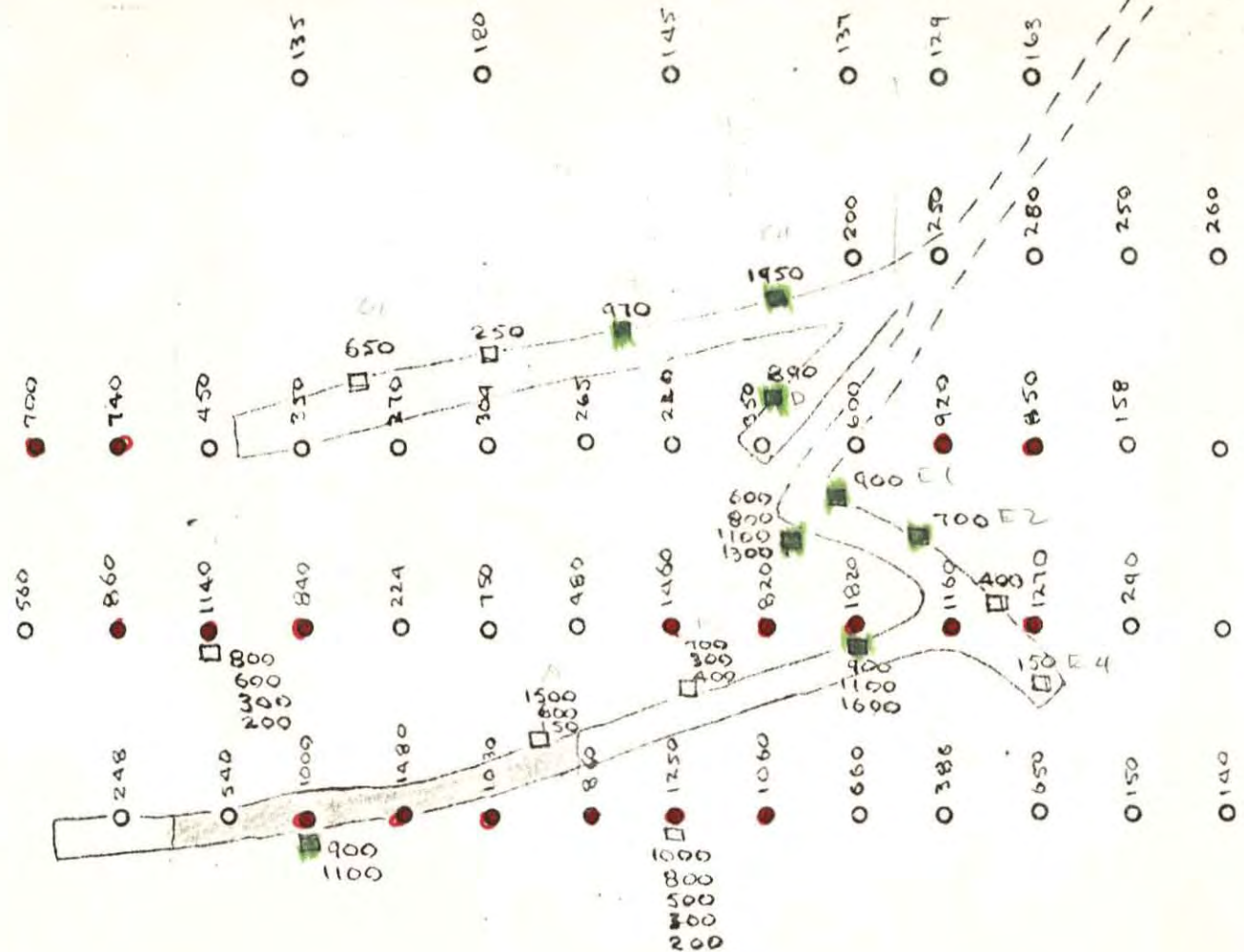
400N

500N

600N

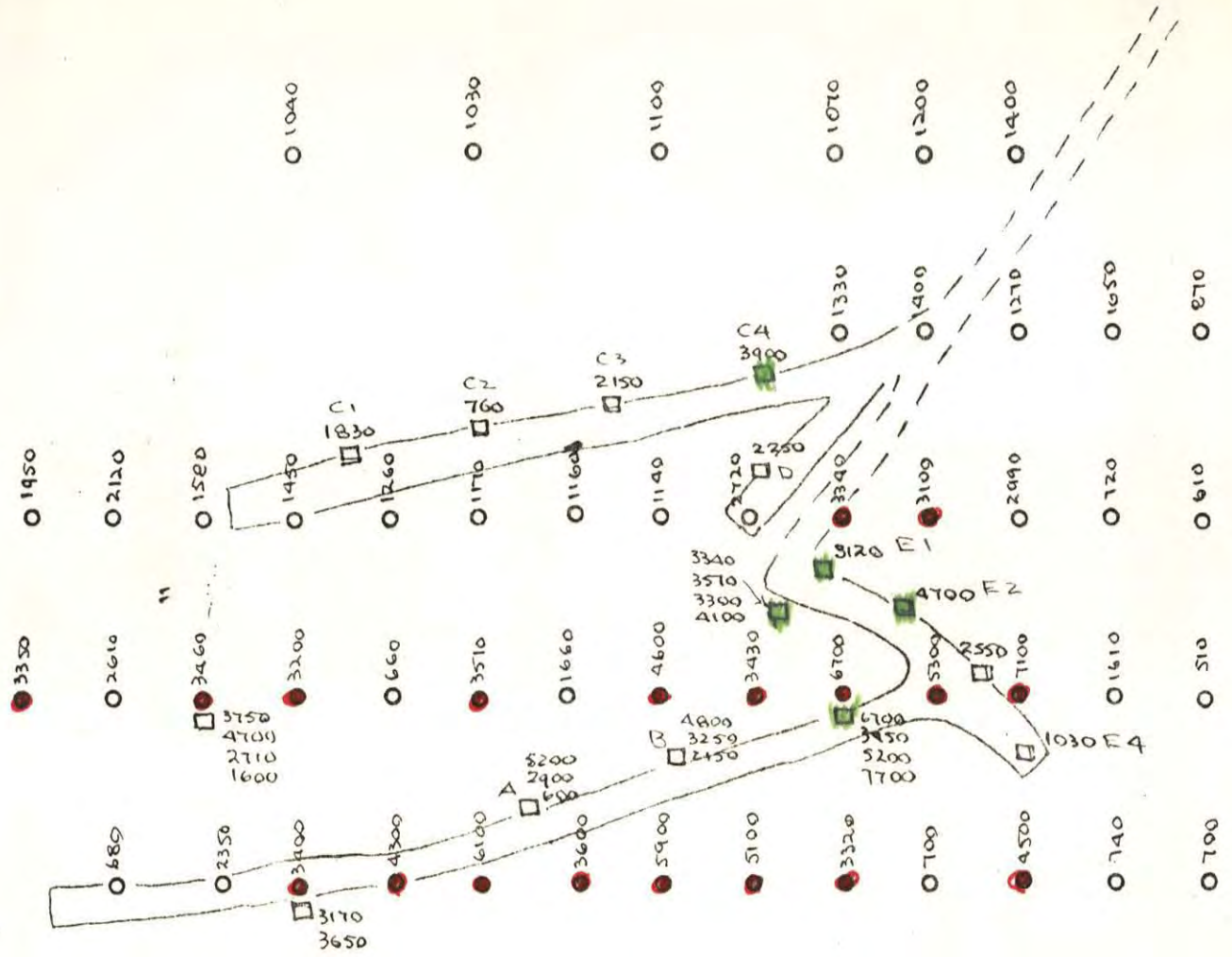
700N

6500E 6600E 6700E 6800E 6900E 7000E 7100E



6700N
6800N
6900N
7000N
7100N
7200N

6500E
6600E
6700E
6800E
6900E
7000E
7100E



○ SOIL SAMPLE
□ PROFILE SAMPLE OR BOTTOM OF TRENCH.

MERV ENGINEERING CORP.	
BLACK ROCK GROUP	
ZINC IN SOILS	
DRAWN BY: JWM	SCALE: 1" = 100'
DATE: FEB, 1980	N.T.S. :

and plus 3000 ppm zinc in the surface soils are shown in red. The same values for the trench bottom and profile samples are shown in green.

A north-south source for the anomaly is suggested between 6850E and 6950E.

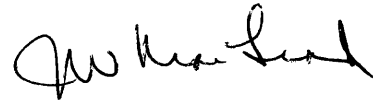
RECOMMENDATION

Deeper trenching employing a D8 with rippers is required, and it is anticipated that this work performed in the area of anomalous readings in the bottom of the 1979 trenching, will uncover diamond drill targets.

1979 EXPENDITURES

Swift Creek Logging Ltd.	
Invoice # 012	\$ 1,665.00
Hauling	173.75
Truck 4 x 4- 4 days @ \$65	260.00
A.D. Wilmot - 4 days @ \$75	300.00
J.W. MacLeod - 2 days @ \$150	300.00
	<hr/>
TOTAL	<u>\$ 2,698.75</u>

Respectfully submitted,



J.W. MacLeod, P.Eng.

OCTOBER 11, 1979

TO MENTOR EXPLORATION & DEVELOPMENT

300-365 BAY ST.

TORONTO, ONTARIO

M5H 2V1

RECEIVED OCT 26 1979
AMOUNT FORWARDED

[Handwritten signature]
M5H 2V1

DESCRIPTION	DATE	Trans. No. Debit or Credit
1 EQUIPMENT RENTAL		
2 TDIS B		
3		
4 INVOICE # 010		1327.50
5 INVOICE # 012		1665.00
6 HAULING (ONE WAY)		173.75
7		
8 BALANCE OCTOBER 19 79		<u>3166.25</u>
9		
10		
11		
12 PLEASE REMIT TO:	Oct 20 1979	
13		
14 SWIFT CREEK LOGGING LTD.		
15 BOX 529		
16 SALMO, B. C. V0G 1Z0		
17 357-9613		
18 <i>Confirmed correct</i>		
19 <i>B. W. W.</i>		
20		

E. & O. E.

2% PER MONTH CHARGED ON OVERDUE ACCOUNTS

PLEASE PAY LAST AMOUNT IN THIS COLUMN



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1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
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Certificate of Geochemical Analyses

-IN ACCOUNT WITH-

Mentor Explor.
333, 885 Dunsmuir Street
Vancouver, B. C.
Attention: VGC 1N5

Report No: **79 01 21** Page **1** of **1**
Samples Arrived: **Nov. 1, 1979**
Report Completed: **Nov. 5, 1979**
For Project: **---**
Analyst: **E.T. & VGC Staff**
Invoice # **5381** Job # **79-331**

Sample Marking	Pb ppm	Zn ppm				
A 1	1510	5200				
A 2	620	2900				
A 3	165	600				
B 1	770	4800				
B 2	325	3250				
B 3	440	2150				
C 1	650	1830				
C 2	250	760				
C 3	970	2150				
C 4	1950	3900				
D	830	2250				
E 1	920	3120				
E 2	670	4700				
E 3	410	2550				
E 4	165	1030				

REMARKS:

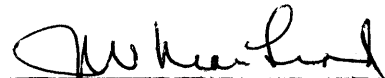
Signed:

% Mo x 1.6683 = % MoS₂ 1 Troy oz / ton = 34.28 cpm 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.

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 335-885 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 a 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 the program on the Black Rock claims was under the direction of the writer and that I took soil samples A to E.



J.W. MacLeod, B.Sc., P.Eng.

Dated at the City of Vancouver,
Province of British Columbia,
this 21st day of February 1980.

APPENDIX

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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LEAD 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.

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.

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.

Vancouver, B.C.
April 2, 1979