

812409

DRY RIDGE PROPERTY

By: E.P. Sheppard & Assoc.
314 - 402 W. Pender St.
Vancouver, B.C.

82-F-11

Prop. Sub.

DRY RIDGE SILVER MINES LTD.

September 22, 1970.

PROPOSED EXPLORATION COSTS _ AS PER ENGINEERING REPORTS BY
E. P. Sheppard & Associates Ltd.,
314 - 402 West Pender Street,
Vancouver B. C.

Dry Ridge Silver Mines Ltd. (N.P.L.)

(1) Dry Ridge Group	\$ 105,500.00
(2) Whitewater Group	
a) nickel claims	85,000.00
b) asbestos claims	105,500.00
c) EK silver claims	<u>85,000.00</u>
sub total	\$ 381,000.00
(3) Reserve for Contingencies, 5%	<u>19,000.00</u>
TOTAL UNDERWRITING REQUIRED	<u>\$ 400,000.00</u>

September 23, 1970.

MEMORANDUM - Re: DRY RIDGE GROUP.

Mr. E. Percy Sheppard P.Eng. and Mr. Henry M. Meixner Consulting Geologist of;-

E. P. Sheppard & Associates Ltd.,
314 - 402 West Pender Street,
Vancouver 3, B.C.

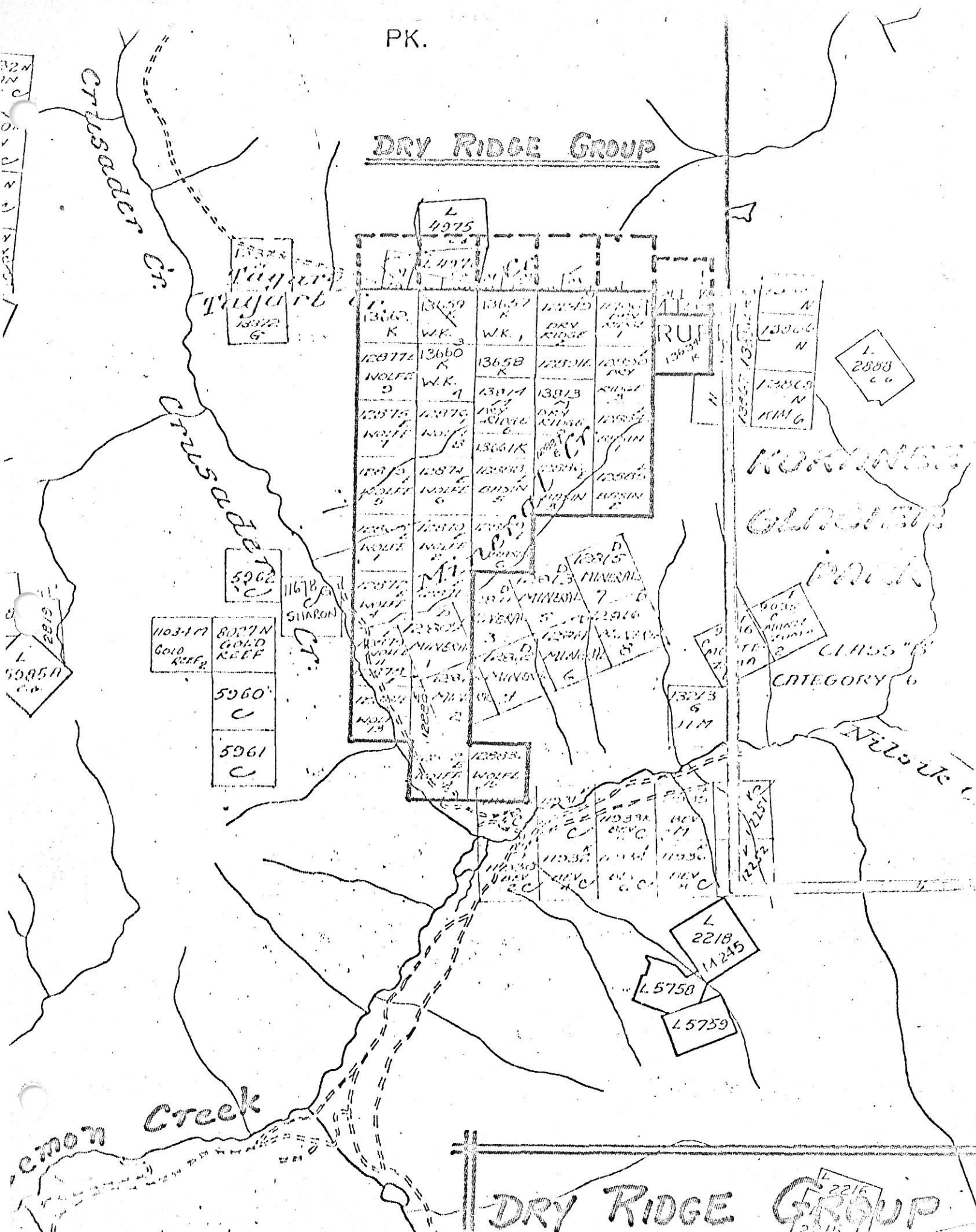
have thoroughly inspected and studied our Dry Ridge Group of 40 claims. They have further studied the work performed for us, the Electro-Magnetic Survey, the Soil Sampling, the Tunnel Mapping, by L. J. Manning & Associates in 1969.

Mr. Sheppard P.Eng. has produced a draft copy of an Engineering Report, the final copy to be submitted at a later date, for this property; wherein he recommends the spending of a further sum of \$105,500.00 on additional exploratory work and diamond drilling.

This additional expenditure will be included in our prospectus for our total underwriting.

PK.

DRY RIDGE GROUP



WOMAN'S
CLOSET
Park
CLASS "B"
CATEGORY 6

DRY RIDGE GROUP

Silver

78.1
159.3
2143.4
105.9
2075.3
342.1

6)4904.1(817.35
48 x x 7
10
6
44
92
21
18
30

Lead

45.75
17.34
29.57
14.14
10.41
11.68

6)128.89(21.48%
126
28
6
28
24
49
48

Gold

0.04
0.07
0.06
0.13
0.06
0.04

6)0.30(0.05

Copper

0.13
0.13
0.23
0.18
0.23
0.20

6)1.10(0.183%
6 x
50
48
20



DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

SAMPLE RECEIVED FROM..... Norman I. Block

ADDRESS..... Slocan City, B. C.

LABORATORY NO.	SUBMITTER'S MARK	LABORATORY REPORT
28873	20506 B	<p>Spectrochemical Analysis: Lead, and a small fraction of 1 per cent of copper were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.04 oz. per ton Silver 78.1 oz. per ton Lead 45.75% Copper 0.13%</p> <p>Radioactivity: No greater than that occurring normally in rocks.</p>
28874	20507 B	<p>Spectrochemical Analysis: Lead, and a small fraction of 1 per cent of copper were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.07 oz. per ton Silver 159.3 oz. per ton Lead 17.34% Copper 0.13%</p> <p>Radioactivity: None was detected.</p> <p><u>SAMPLES FROM DRY RIDGE GROUP.</u></p>

THIS DOCUMENT, OR ANY PART THEREOF, MAY NOT BE REPRODUCED FOR PROMOTIONAL OR ADVERTISING PURPOSES.

TE September 16th 1968

A. Petrucci

CHIEF ANALYST AND ASSAYER.



1966
1937

CENTENARY OF THE UNION OF THE COLONIES OF VANCOUVER ISLAND AND BRITISH COLUMBIA UNDER THE NAME BRITISH COLUMBIA.
CENTENARY OF THE CONFEDERATION OF CANADA.



DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

SAMPLE RECEIVED FROM..... Norman L. Block

ADDRESS..... Slocan City, B. C.

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT
1011 28875	20508 B	<p>Spectrochemical Analysis: Lead, and a small fraction of 1 per cent of copper were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.06 oz. per ton Silver 2143.4 oz. per ton Lead 29.57% Copper 0.23%</p> <p>Radioactivity: No greater than that occurring normally in rocks.</p>
3N 28876	20509 B	<p>Spectrochemical Analysis: Lead, and small fractions of 1 per cent of copper and zinc were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.13 oz. per ton Silver 105.9 oz. per ton Lead 14.14% Copper 0.18%</p> <p>Radioactivity: No greater than that occurring normally in rocks.</p> <p><u>SAMPLES FROM DRY RIDGE GROUP.</u></p>

THIS DOCUMENT, OR ANY PART THEREOF, MAY NOT BE REPRODUCED FOR PROMOTIONAL OR ADVERTISING PURPOSES.

DATE..... September 16th 1968

J. Prindle

CHIEF ANALYST AND ASSAYER.





DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

SAMPLE RECEIVED FROM..... Norman L. Block

ADDRESS..... Slocan City, B. C.

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT
29782	22893 B	<p>Spectrochemical Analysis: Lead, a small fraction of 1 per cent of copper, and a very small fraction of 1 per cent of molybdenum were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.06 oz. per ton Silver 2075.3 oz. per ton Copper 0.23% Lead 10.41%</p> <p>Radioactivity: No greater than that occurring normally in rocks.</p>
29783	22894 B	<p>Spectrochemical Analysis: Lead, and a small fraction of 1 per cent of copper were found; the other base metals found, and their percentages, were those occurring normally in rocks.</p> <p>Assays: Gold 0.04 oz. per ton Silver 342.1 oz. per ton Copper 0.20% Lead 11.68%</p> <p>Radioactivity: No greater than that occurring normally in rocks.</p> <p><u>SAMPLES FROM DRY RIDGE GROUP.</u></p>

THIS DOCUMENT, OR ANY PART THEREOF, MAY NOT BE REPRODUCED FOR PROMOTIONAL OR ADVERTISING PURPOSES.

RE February 14th 1969

S. Mitchell

CHIEF ANALYST AND ASSAYER.



File #316443/447

J. R. WILLIAMS & SON LTD.

PROVINCIAL ASSAYERS AND CHEMISTS

Office and Laboratory:

580 Nelson Street, Vancouver 2, B. C.

I **Hereby Certify** that the following are the results of assays made by me upon samples of ORE herein described and received from Mr. W. MOTTELMAN April 30th 19 69

MARKED	GOLD		SILVER		Copper		Lead		Per Cent.
	Ounces Per Ton	Value Per Ton	Ounces Per Ton	Value Per Ton	Per Cent.	Value Per Ton	Per Cent.	Value Per Ton	
#1 - 4" Galena	0.10	\$	125.90	\$	0.14	\$	30.60	\$	
#2 Brecciated 342.1 oz.	0.04		10.45		0.06		13.00		
#3 Gange along side off 12"	0.03		409.00				5.40		
#4 12" Lead	0.08		767.20				23.40		
#5 12" Lead	0.10		1,071.30				11.70		
			5) 2383.85	(476.77					
			30						
			38						
			35						
			33						
			36						
			35						
SAMPLES FROM DRY RIDGE GROUP.									

Gold calculated at \$ _____ per ounce.

Silver calculated at _____ cents per ounce.

Calculated at _____ cents per lb.

Calculated at _____ cents per lb.

Calculated at _____ cents per lb.

NOTE—Pulps of Samples retained 2 months from date of Receipt. Rejects 1 week unless otherwise instructed.

W. Williams Provincial Assayer.

FILE NO. 318443/453

J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

580 NELSON STREET

VANCOUVER 2, B.C., July 10th 1969

RESULTS of Assays made on samples of ore submitted by: MR. W. NOTTELMAN

MARK	Gold Oz/Ton	Silver Oz/Ton	Lead %
#1 Mud on side	Trace	12.40	0.70
#2 mud on side	Trace	1.15	1.05
#3 dirt	Trace	69.60	1.20
#4	Trace	705.25	2.10
Galena Lower Hole	0.01	56.10	5.75
Quartz Top Hole	Trace	76.05	1.45
E. Wall Top Hole	Trace	4.25	0.60
N. W. Wall Top Hole	Trace	5.80	0.85
Lower Vein Top Hole 12"	0.005	1441.05	5.05
Vein Top Hole 12"	Trace	491.50	3.35
2 Pieces	Trace	58.50	1.05

~~117273465~~
~~266.1~~
266.1

SAMPLES FROM DRY RIDGE GROUP.

Assays made by:

[Signature]

CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET
VANCOUVER 3, B.C.
PHONE 688-8586

Sheet #6
LABORATORIES
7... ARGYLL RD
EDMONTON 82, AL.
PHONE 469-239

CERTIFICATE OF ASSAY

TO Dry Ridge Silver Mines
111 - 845 Hornby Street
VANCOUVER, B.C.

August 4, 1969

Lab No. 74

Samples Rec'd: July 30, 1969

I hereby certify THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	LEAD							TOTAL VALUE PER TON (2000 LBS)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
1	trace	---	0.2	0.02							
2	trace	---	trace	0.02							
3	trace	---	0.6	0.05							
4	trace	---	0.6	0.07							
5	0.02	\$0.70	13.0	2.83							
6	0.34	11.90	296.6	0.29							
7	0.10	3.50	79.8	1.61							
8	0.04	1.40	82.2	0.41	<u>SAMPLES FROM DRY RIDGE GROUP.</u>						
9	0.01	0.35	3.8	0.12							
10	trace	---	20.9	0.05							
11	0.01	0.35	1.7	0.02							
12	trace	---	0.2	0.05							
13	trace	---	25.6	0.10							
14	0.03	0.05	13.3	0.24							

Cont'd on page 2

NOTE:

Rejects retained one month.
Pulps retained three months
unless otherwise arranged.

Gold calculated at \$ 35.00 per ounce

S. P. Rogers
.....
Registered Assayer, Province of British Columbia

CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET
VANCOUVER 3, B.C.
PHONE 688-8586

Sheet 7
LABORATORY
7... ARGYLL RD
EDMONTON 82, AL
PHONE 469-23

CERTIFICATE OF ASSAY

TO Dry Ridge Silver Mines

August 4, 1969

Cont'd from page 1

Lab NO. 74

I hereby certify THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	LEAD	Percent	Percent	Percent	Percent	Percent	Percent	TOTAL VALUE PER TON (2000 LBS)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent							
15	0.04	\$1.40	87.3	1.66							
No Tag	trace	---	0.1	0.05							
		<i>16) 249 (35.0</i>									
	<u>SAMPLES FROM DRY RIDGE GROUP.</u>										

NOTE:

Rejects retained one month.
Pulps retained three months
unless otherwise arranged.

Gold calculated at \$ 35.00 per ounce

S. Burgess

Registered Assayer, Province of British Columbia

September 28, 1970.

MEMORANDUM - Re: DRY RIDGE GROUP.

Attached is the Draft Copy of the Engineering Report for the Dry Ridge Group as referred to in our memorandum of September 23, 1970.

Please file this Draft Copy in the folder given or sent to you. It should be placed in the folder ahead of MEMORANDUM - Re: WHITEWATER GROUP. dated September 23, 1970; and immediately behind the last assay sheet for the Dry Ridge Group.

We expect to have the DRAFT COPY of the Engineering report for the Whitewater Group in approximately two weeks.

Draft only

GEOLOGICAL REPORT
On the
DRY RIDGE PROPERTY
Of
DRY RIDGE SILVER MINES LTD. (N.P.L.)
Slocan Mining Division
British Columbia

By
E. Percy Sheppard, P. Eng.
Consulting Geologist

August 30, 1970
Vancouver, B. C.

* * * *

I N D E X

	<u>Page</u>
SUMMARY	
CONCLUSIONS	
RECOMMENDATIONS	
INTRODUCTION	1
PROPERTY	1
LOCATION.....	2
ACCESS	2
TOPOGRAPHY.....	2
HISTORY.....	2
GEOLOGY	2, 3
DEVELOPMENT WORK	3
WORK PERFORMED	3, 4
GEOCHEMICAL SURVEY	4
EXPLORATION PROGRAM	4
ESTIMATED COST OF EXPLORATION PROGRAM	5
CERTIFICATE	

- -

MAPS:

Location Map	
Claim Map	Scale: 1" = $\frac{1}{2}$ mi.
Geochemical (Lead)	" 1" = 100'
Geochemical (Silver)	" 1" = 100'
Assay Plans & Sections	" 1" = 50'

* * *

GEOLOGICAL REPORT
DRY RIDGE PROPERTY
Slocan Mining Division, B. C.

SUMMARY

The Dry Ridge property of Dry Ridge Silver Mines Ltd. (N.P.L.) consists of 40 staked mineral claims located 16 miles north of Nelson, British Columbia, at coordinates 49°-41'N, 117°-17'W. The claims lie on the southwestern flank of Mt. Ruppel in the Slocan Mining Division.

Elevations range from 4000 feet to 7500 feet. Helicopter service from Nelson constitutes the most direct means of access to the claims. Roads are one and one-half miles distant and 2000 feet below the claims.

Original development work dates back to 1899. A small shipment of high-grade silver ore was reported to have been made in 1941.

The area is underlain by porphyritic granites of the Nelson Plutonic Rocks, which extend in all directions for several miles. Strong northeasterly shears cut the granites and are the loci for the mineralized quartz veins.

The vein on which the old work was done dips 65° SE, ranges up to 24" in thickness, and consists of quartz filling containing sulphides occupying a gouge-filled shear zone. On surface the granites exhibit strong alteration of the feldspar minerals for a distance of over 8 feet from the vein. Several patches were observed along the strike of the shear. Later lamproyre dikes cut the shear zone and the quartz filling.

Development work consists of a drift, crosscut, raise, two small stopes at the end of the drift, several pits and trenches. A total length of 480 feet of vein was explored by these shallow workings. The crosscut encountered two other veins which have not been developed.

In August 1969, thorough sampling of the underground workings, surface pits and trenches was undertaken and a geologic map was prepared. Geochemical and electromagnetic surveys were run along the main vein. Several tons of rock from the 50-ft. surface trench were bagged and are still on

.....

SUMMARY - cont.

the property awaiting transportation. This constitutes the work program for the 1969 season.

CONCLUSIONS

Sampling of the underground drift, raise and surface trenches showed that the shear was barren throughout the drift length. Values in silver began at the end of the drift on surface and in the stopes. It is felt that either a vein deposit begins here or there is a mineralized shoot with a rake to the east.

The geochemical survey did not give any useful data. The electromagnetic survey, however, indicated the position of the vein and gouge-filled shear zone. This method of exploration could be used to good advantage over the property to search out hidden shears and veins.

Diamond drill holes placed at varying elevations, to explore the vein along its length, appear to be the most direct and cheapest method of exploring the structure.

Costly road-building could be postponed and a helicopter-supported program carried out during the initial stages of the exploration work.

RECOMMENDATIONS

It is recommended that an exploration program of geophysical surveying be undertaken over the whole property, and a diamond drill program be carried out on the east part of the main vein as well as over any areas which warrant further exploration.

It is further recommended that Dry Ridge Silver Mines Ltd. (N.P.L.) allocate the sum of \$105,500 to implement the above program.

GEOLOGICAL REPORT
DRY RIDGE PROPERTY

Of

Dry Ridge Silver Mines Ltd. (N.P.L.)

Slocan Mining Division
British Columbia

INTRODUCTION

The following report was prepared for Dry Ridge Silver Mines Ltd. (N.P.L.) at the request of Mr. W. F. Nottelman, President. Data for the report were obtained by the writer on a visit to the property on July 14, 1970. Mr. H. M. Meixner, Geologist, accompanied the writer and assisted in the mapping and sampling.

The data collected by L. J. Manning & Associates Ltd. in 1969 were analyzed and incorporated into the following compilation. The results of their survey, along with a study of the geologic environment from Government reports, aided in preparing the report.

PROPERTY

The Dry Ridge group of claims comprises 40 full-size staked mineral claims, as follows:

<u>Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Dry Ridge 1	11706	July 12, 1976
Dry Ridge 2	12249	Sept. 13, 1976
Dry Ridge 3-4	12890-91	May 21, 1976
Wolfe 1-11	12869-79	May 20, 1975
Wolfe 12-15	12880-83	May 20, 1972
Basin 1-6	12884-89	May 20, 1976
W.K. 1-5	13657-61	May 21, 1976
W.K. 6	13662	May 21, 1975
W.K. 7-11	13706-10	Sept. 8, 1975
Silver Tip 1	13711	Sept. 8, 1976
Silver Tip 2	13634	Aug. 18, 1976
Dry Ridge 5	13813	Sept. 24, 1976
Dry Ridge 6	13814	Sept. 24, 1976

The claims are held by Dry Ridge Silver Mines Ltd. (N.P.L.) by right of purchase from the owners.

LOCATION

The Dry Ridge property lies 16 miles due north of Nelson, B. C. The coordinates are 49°-41'N; 117°-17'W.

The area is covered by the Kokanee Peak Sheet, 82-F-11W, of the National Topographic System.

The claims cover a ridge on the southwest flank of Mt. Ruppel, Slocan Mining Division, and extend into the valleys of Tagert and Mineral Creeks on either side of the ridge and into the valley of Crusader Creek to the southwest. Elevations range from 4000 to over 7500 feet. Much of the area lies above timberline.

ACCESS

The nearest roads are about one and one-half miles distant and some 2000 feet lower in elevation. Helicopter travel constitutes the most convenient method of access at the present time.

TOPOGRAPHY

The topography is mountainous, varying from gentle grass and shrub-covered slopes to steep rock faces with talus slopes below. Mt. Ruppel, over 7500 ft. high, lies in the eastern part of the property. A large cirque bites deeply into the north flank of the mountain.

There is very little useful timber on the property. Water is not plentiful on the ridge but may be obtained by pumping from the creeks at lower elevations.

HISTORY

The main showings were found on claims Alexandra No. 2L2886 and Delley L2887, for which Crown Grants were obtained in 1898. Most of the work was done from 1895 to 1899. A small shipment of ore was reported to have been made in 1941.

GEOLOGY

The area is underlain by porphyritic granites of the Nelson Plutonic Rocks. This body of intrusives extends for several miles in all directions.

Strong northeasterly shears cut the granites and these are the loci for the mineralized quartz veins. The vein on

....

which the old work was done dips 65° SE, ranges up to 24" in thickness, and is composed of quartz and sulphides which carry silver values. It occupies a gouge-filled shear zone in the granites. The granites on surface exhibit strong alteration of the feldspars for a distance of over 8 feet from the vein. There are several local patches of alteration in the granite further along the strike of the shear zone. Later lamproyre dikes cut the shear.

DEVELOPMENT WORK

Existing development work consists of a drift, crosscut, raise, two small stopes, and several pits and trenches.

The drift, which begins as a crosscut, is 480 feet long and follows the main vein. A raise has been driven 300 feet from the portal. The purpose of this raise was to explore the high-grade mineralization exposed in a surface pit. There are two small stopes near the end of the drift. The crosscut was collared 1100 feet southwest of the drift portal. At 50 feet from the portal the crosscut intersected a vein about 1-ft. thick, with a strike more southeasterly than that of the others. At 100 feet west, the crosscut intersected a 3-ft. thick vein with a strike parallel to the main vein.

The largest pit lies about 250 feet NE of the drift portal. This pit is about 50 feet in length and appears to be the source of the early shipment of ore. At present several tons of ore are bagged and ready for shipment. The material in the bags came from the pit described above.

Several other pits and trenches are sloughed-in and were not reopened.

WORK PERFORMED

In August 1969 an electromagnetic survey was carried out over a strike length of 2500 feet along the "main vein" and extended 200 feet north and south of the vein. The instrument used was a Ronka E.M. 16. Readings were taken at 50-ft. separations on lines spaced 200 feet apart. Cross-over points were obtained on all cross-lines. Coincidence with the known mineralized vein near the drift was good. Several irregularities in the pattern occurred over lamproyre dikes which cut the veins and suggest fault displacement.

Thorough sampling of the drift, raise, crosscut and surface pit showed good silver values around the main pit, on surface, the face of the drift, and in a short raise 25

....

feet from the face. The distribution of the silver values indicates the beginning of a mineralized zone or a rake to the east of the shoot outlined by sampling. Insufficient openings are available to prove or disprove either of the theories advanced.

GEOCHEMICAL SURVEY

This survey was carried out over most of the area covered by the electromagnetic survey. Samples were taken at 25-ft. separations on lines 100 feet apart. Two samples were taken up-hill to the north from cross-over points, one at the cross-over and 6 below it. Samples were assayed for silver and lead. The highest values were obtained in the areas of the open pit and dump mostly on the down-hill side, suggesting contamination from old workings.

The above geophysical program was carried out in September 1969 under the supervision of L. J. Manning & Associates Ltd. of Vancouver, B. C., in a most workman-like and professional manner.

EXPLORATION PROGRAM

The previous program was concentrated on a small part of the property around the old workings. The electromagnetic survey indicated a long linear set of cross-overs. The present program would investigate this area and perform more electromagnetic work over the property to search for the existence of blind veins.

Diamond drilling on the east end of the adit and below the large pit will determine whether the mineralization continues eastward and downward. The general target appears to be high-grade veins or plunging shoots within the through-going shear zones.

The following steps are outlined as the basis for a continuing exploration program:

- 1) Complete geology mapping of surface;
- 2) Carry out an electromagnetic survey in attempt to locate new or hidden veins;
- 3) Implement a diamond drill program to investigate the shoot shown up by the 1969 program, and any anomalies outlined by the present electromagnetic survey.

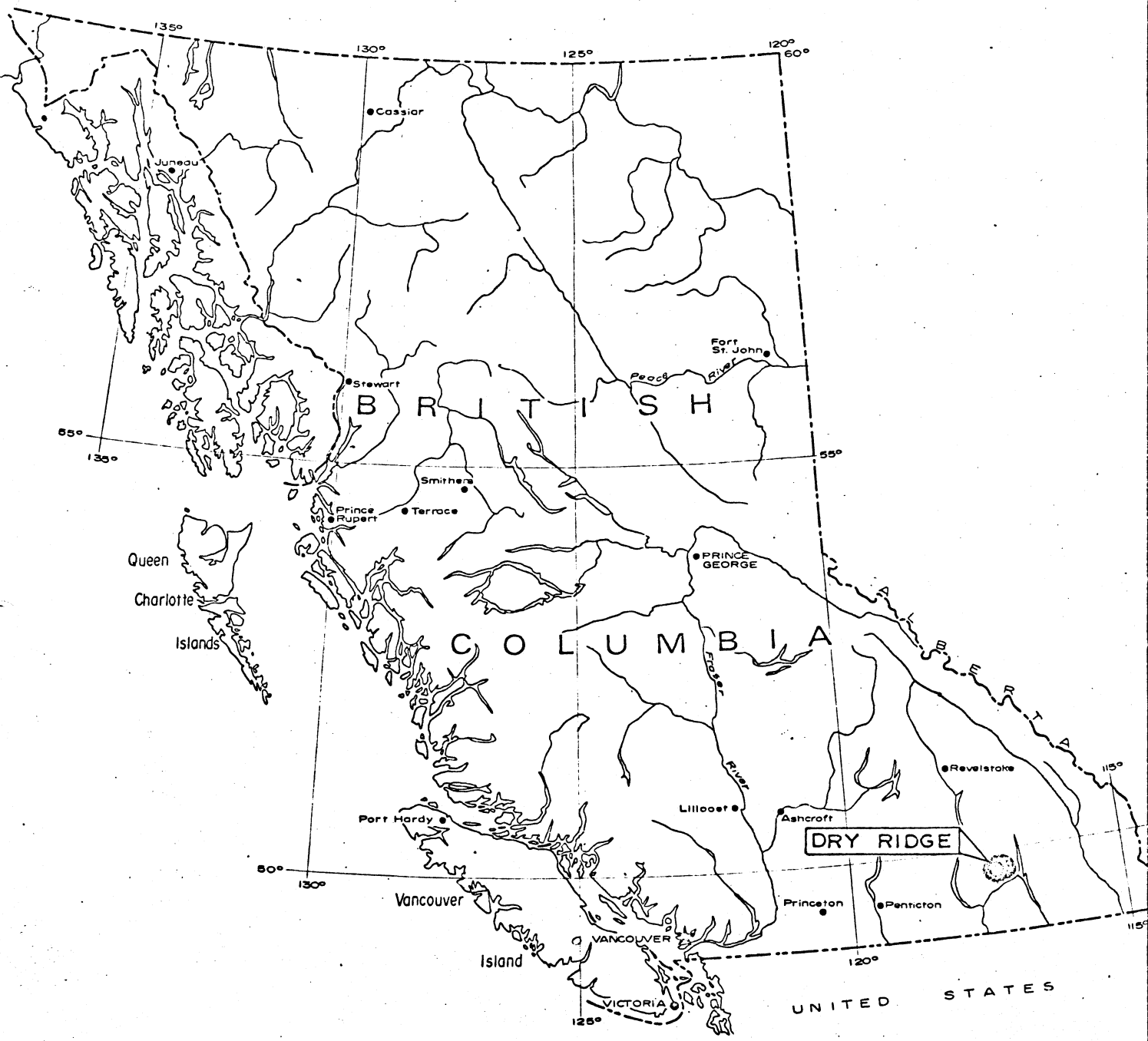
This program is to be based on helicopter service as to complete the road would take too much of the remaining season.

ESTIMATED COST OF EXPLORATION PROGRAM

Electromagnetic survey	\$ 7,000
Geological mapping & sampling	4,000
Diamond drilling, 4000' @ \$15/ft.	60,000
Camp installation	4,000
Water supply for drilling, pipeline, pump, labor	4,000
Assaying & Core boxes	2,500
Engineering & Supervision	5,000
Travel & Living expenses	4,000
Helicopter service	10,000
Administration & Head office expenses	<u>5,000</u>
	\$105,500

E. Percy Sheppard, P. Eng.
Consulting Geologist

August 30, 1970
Vancouver, B. C.



E.P. SHEPPARD & ASSOCIATES LTD.
 DRY RIDGE SILVER MINES LTD. (NPL)
LOCATION MAP
 LEMON CREEK, SLOCAN M.D.
 BRITISH COLUMBIA
 SCALE: 1 in = 136 mi.

To accompany report by E.P. Sheppard, P. Eng.

September 23, 1970.

MEMORANDUM - Re: WHITEWATER GROUP.

Mr. E. Percy Sheppard P.Eng. and Mr. Henry M. Meixner Consulting Geologist of;-

E. P. Sheppard & Associates Ltd.,
314 - 402 West Pender Street,
Vancouver 3, B. C.

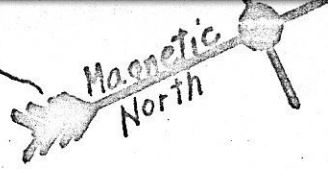
have both been on this property. Both have thoroughly inspected the the mineralization in evidence, as well as the general geological structure of the surround.

Mr. Sheppard is currently producing an Engineering report on the total potential of this Whitewater Group. He has, and still is studying the prior Engineering Reports produced by Buckham, Kermeen and Renshaw, and will incorporate all findings and decisions in the final report being prepared by himself. Tentative further exploration and diamond drilling expenditures will amount to a total sum of \$275,500.00.

This additional expenditure will be included in our prospectus for our total underwriting.

SILVER & LEAD

Location of shaft as per T.R. Buckham P.Eng report of 1962, and E.P. Sheppard report 1970



Kane Cr.

MT. DRYDEN

WHITEWATER WEST

TIP 1	TIP 3	TIP 5	TIP 7	TIP 9	
TIP 2	TIP 4	TIP 6	TIP 8	TIP 10	
TIP 11	TIP 12	TIP 13	TIP 14	TIP 15	
TIP 9	EK-9	EK-10	CHRIS 1	CHRIS 2	CHRIS 3
TIP 8	EK-7	EK-8	CHRIS 4	CHRIS 5	CHRIS 6
TIP 7	TAM 13	TAM 14	TOM 10	TOM 11	TOM 12
TIP 6	TAM 11	TAM 12	TOM 1	TOM 2	TOM 15
TIP 5	TAM 9	TAM 10	TOM 3	TOM 4	TOM 18
TIP 4	TAM 7	TAM 8	TOM 5	TOM 6	TOM 21
TIP 3	TAM 5	TAM 6	TOM 22	TOM 23	TOM 24
TIP 2	TAM 1	TAM 2	TOM 25	TOM 26	TOM 27
TIP 1	TAM 3	TAM 4	TOM 28	TOM 29	TOM 30
			TOM 31	TOM 32	TOM 33
			TOM 34	TOM 35	TOM 36

Goat Cr.

SOUTH

NORTH

South Cooper Cr.

MT. BRENNAN

ASBESTOS

Location of showings, per report or letter :-
 J.S. Kermec - P.Eng. 196
 S.H. Manning - P.Eng. 196
 H.M. Meixner - Geo. 197
 E.P. Sheppard - P.Eng. 197

NICKEL

Location of samples taken, R.E. Renshaw P.Eng. report of Dec. 1964

Whitewater Cr.

EAST

DRY RIDGE SILVER MINES LT. (N.P.L.)

WHITEWATER GROUP

ALL TAM; ALL E.K.; CHRIS-1,2,4,5
 TOM-1 to 6, 10, 11, 22, 23, 25, 26, 28, 29, 31, 34 & 35.

GLACIER GROUP

ALL TIM; ALL TIP; CHRIS-3 & 6;
 TOM-12, 15, 18, 21, 24, 27, 30, 33 & 36

NOV. 10, 1970

Whitewater - Pres.

SK - #I(a)

Retallack

November 20, 1970.

INDEX FOR CLAIMS MAP "SK-I(A)", DATED NOVEMBER 10, 1970.

Location - North of Retallack B.C., half way between Kaslo & New Denver B.C.

Index For Claims Map Of Whitewater Group, dated September 23, 1970 is now obsolete. Please remove this from your folder and destroy same.

Claims Map "WHITEWATER GROUP" is now obsolete. Please remove this from your folder and destroy same.

In their palce insert this INDEX FOR CLAIMS MAP "SK-I(a), plus the CLAIMS MAP SK-I(a), attached.

- (1) Immediately to the West of our TIP CLAIMS, a group of approximately 150 claims were staked on behalf of United Bata Resources on or around August 15, 1970. A drilling rig was flown in by helicopter and a hole, reported to be around 500 feet deep, was drilled. The results of the drill core have not been made public. It is reported (unauthoratively) that United Bata Resources intends to drill additional holes during the 1971 season, to a total of approximately 7,000 feet.
- (2) Our claims acquisition program for Dry Ridge Silver Mines is now complete in this area. The only possible exception would be three additional claims on the South-West corner of this group. This will be done in 1971, when convenient, and if still available. Their value is an unknown entity at this time.
- (3) Note the correction in the location of the E.K.#7 to #10. These are now located two claim lengths to the West. To the best of our knowledge and ability, these claims have been relocated by triangulation on two lakes and two mountain tops.
- (4) Claims E.K.#1 to #6 have been allowed to lapse because of a discrepancy in their Bill of Sale from Walter Kondra to Dry Ridge, and have been restaked as TAM #9 to #14.
- (5) Because of an apparent contravention on the Bill of Sale, as mentioned in (4) above; the P&W#1 to #10 and the D&W#1 to #6 were also allowed to lapse. These were restaked, and currently held by Dry Ridge Silver Mines Ltd. as the TOM#25 to #36. The P&W and D&W claims are those referred to in the R. E. Renshaw P.Eng. Report of December 1969.
- (6) These claims have been divided into two contigeous blocks, namely;-
 - a) WHITEWATER GROUP, consisting of TAM #1 to #14; E.K. #7 to #10; CHRIS #'s 1, 2, 4, 5; TOM #'s 1 to #6, 10, 11, 22, 23, 25, 26, 28, 29, 31, 32, 34 & 35.
 - b) GLACIER GROUP, consisting of TIM #1 to #9; TIP #1 to #15; CHRIS #3 & #6; TOM #'s 12, 15, 18, 21, 24, 27, 30, 33 & 36.

E. P. SHEPPARD & ASSOCIATES LTD.

CONSULTING GEOLOGISTS

314-402 WEST PENDER STREET,
VANCOUVER 3, B.C.

July 27, 1970

Mr. W. F. Nottelman
1902-Board of Trade Tower
Vancouver, B. C.

Dear Mr. Nottelman:

The following is a brief summary of our visit to the Whitewater Creek asbestos property on July 22, 1970. Mr. Ken Millar acted as our guide.

The property, located at the headwaters of Whitewater Creek, is approximately 3 miles due north of Retallack, B. C., and is easily accessible by helicopter from Nelson. The WP, DW, Crescendo and Karen staked claims comprise the area of interest, presently owned by various individuals.

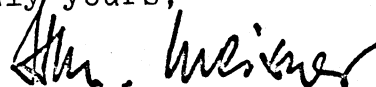
An ultrabasic intrusion (possibly a peridotite) is the source of the serpentine and accompanying chrysotile fiber. The most common thickness of the chrysotile encountered was 1/16" to 1/4". Samples of 1/2" thickness were also noted and specimens of 3/4" to 1" have been reported from this locality.

The chrysotile is not confined to the intrusive alone as hairline fractures up to 1/4" wide were observed in the surrounding serpentinized metamorphic rocks. The adjacent assemblage of rocks is best described as serpentinized sediments (possibly from the Slocan series some miles to the west) which are schistose and conglomeratic.

Mineralization was traced on the Crescendo claim for over three claim lengths. A showing on a fourth claim which was not examined would indicate chrysotile mineralization over one mile in length over the serpentinized rocks and intrusives.

Further investigation and assessment is definitely warranted to determine the true extent of the intrusive, the extent of serpentine alteration and the continuity of chrysotile mineralization.

Very truly yours,



Henry M. Meixner
Consulting Geologist

A REPORT ON
THE WHITEWATER GROUP
OF MINERAL CLAIMS
SLOCAN DISTRICT, BRITISH COLUMBIA
FOR
CHINA EXPLORATION & DEVELOPMENT LTD.

BY
J. S. KERMEEN, P. ENG.

GRAND FORKS, B.C.

OCTOBER 21, 1969.

TABLE OF CONTENTS

	<u>PAGE</u>
<i>SUMMARY & CONCLUSIONS</i>	1
<i>RECOMMENDATIONS</i>	3
<i>INTRODUCTION</i>	5
<i>PROPERTY DETAILS</i>	6
<i>LOCATION & ACCESS</i>	8
<i>PHYSIOGRAPHY</i>	9
<i>HISTORY</i>	10
<i>MINING ASPECTS</i>	11
<i>GENERAL GEOLOGY</i>	12
<i>GEOLOGY OF WHITEWATER GROUP</i>	13
<i>ASBESTOS MINERALIZATION</i>	15
<i>OTHER MINERALIZATION</i>	17
<i>PLANS</i>	
<i>Location Map</i>	
<i>Whitewater Property - 1 inch = 1000 feet</i>	
<i>ENGINEER'S CERTIFICATE</i>	18

SUMMARY AND CONCLUSIONS

The Whitewater Group of sixteen full and contiguous mineral claims, located near Retallack in the Slocan District of south-central British Columbia, is held under option by China Exploration & Development Ltd.

A serpentized ultrabasic rock was observed at a number of locations on the property. These exposures are tentatively interpreted to represent a dike, or series of dikes 1000 to 1500 feet in width, striking N50W and dipping steeply to the southwest. The strike length of this dike is undetermined; it could extend for the full length of the property.

Occurrences of good quality chrysolite asbestos (maximum fibre length 3/8 inch) were observed at four separate locations in the serpentized ultrabasic rock. There is little evidence to indicate the possible extent of this mineralization. The asbestos showings are not in themselves indicative of an economically recoverable ore body; however there are good indications that a large body of the favorable ultrabasic rock exists, and the chances for large asbestos deposits in it are considered sufficiently good to justify an exploration program.

Exploration of the property should be directed toward;

- (1) Determining the extent, marketing characteristics, and asbestos content of the mineralized zones exposed in the known showings.*
- (2) Determining the extent of favorable serpentized ultrabasic rock on the property.*
- (3) Locating possible additional bodies of asbestos mineralization within the favorable rock.*

A magnetometer survey would probably be effective in outlining the ultrabasic rock; the method has also been used to locate asbestos bodies within the ultrabasic rock in the asbestos belt in the Eastern Townships of Quebec.

RECOMMENDATIONS

- (1) Geological mapping of entire property on a scale of one inch equals 200 feet. Elevations should be taken at all significant geologic points.
- (2) A magnetometer survey of the entire property with readings taken at 100 feet intervals on cross lines spaced at 300 foot intervals along the apparent strike of the dike.
- (3) Stripping of overburden in the vicinity of locations 1, 2, and 3; subsequent trenching and sampling.
- (4) 2000 feet of diamond drilling to test depth extension of asbestos mineralization in the vicinity of known occurrences. Drilling should be deferred until items (1), (2), and (3) are completed; specific location and attitude of holes can be planned more effectively after completion of other work.

Note; The possibility of a road to the property from the Buchanan Mine should be investigated. If the required rock work is not prohibitive, the construction of such a road would probably be economical for the above program; otherwise the program can be carried out using helicopter service.

INTRODUCTION

This report pertains to a group of sixteen full and contiguous mineral claims designated the Whitewater Group, located in the Slocan district of south-central British Columbia. The group is held under option by China Exploration & Development Ltd. of 215-543 Granville Street, Vancouver 115, B.C.

An examination of the property and this report were made at the request of Mr. Walter W. Uyeyama, Secretary, China Exploration & Development Ltd.

This report is based mainly upon a personal examination of the Whitewater Group made by the writer on September 17, 18 and 19, 1969, accompanied by Mr. Edwin McGibbon. Mr. McGibbon staked the original claims in the group and was familiar with the location of mineral showings on the property.

*These claims form a continuous block, two claims wide
and eight claims long, covering an area of approximately 800
acres.*

PROPERTY DETAILS

The Whitewater Group comprises the following staked mineral claims:

<u>Name</u>	<u>Record Number</u>
Crescendo 1	11570
Crescendo 2	11571
Crescendo 3	11572
Crescendo 4	11573
Crescendo 5	11574
Crescendo 6	11575
Karen 1	13625
Karen 2	13626
Karen 3	13627
Karen 4	13628
Karen 5	13629
Karen 6	13630
Karen 7	13631
Karen 8	13637
Karen 9	13632
Karen 10	13633

LOCATION & ACCESS

The Whitewater Group straddles Whitewater Creek, which flows southerly from Whitewater Mountain to join the Kaslo River at Retallack. The southeast end of property is 2 miles north of Retallack, the location of a former mining town, on a good gravel road roughly midway between New Denver and Kaslo, and forty air miles north of Nelson, British Columbia.

A road to the now - dormant Buchanan Mine, a mile north of Retallack, ends at a point 1 3/4 miles south of the southeast end of the Whitewater property. No particular difficulties are anticipated to extend this road to the property, although some rock work may be necessary.

Presently, access to the property may be gained by foot path from the Buchanan Mine road or by helicopter available for charter in Nelson.

PHYSIOGRAPHY

The Whitewater property lies within the rugged Selkirk Mountains; nearby peaks rise to the elevations in excess of 9000 feet above sea level. Elevations on the property vary from 5200 to 7800 feet. The valley occupied by Whitewater Creek is steep-sided and V-shaped in cross-section with an average stream gradient of about 800 feet per mile on the property. The southwesterly wall of the valley is marked by near vertical cliffs up to 1000 feet high; slopes on the flank of Mount Brennan on the northeast side average about 40°. The valley is terminated to the northwest by Whitewater Mountain where a small glacier occupies part of claims Karen 9 and 10. Talus slopes are generally present along both sides of the valley.

The valley floor in the northwesterly half of the group is largely covered with glacial moraine consisting chiefly of large angular boulders; toward the southeast the Moraine gives way to alpine meadow.

The southeast end of the group has some forest cover, but for the most part the only trees are sparse, scrub jackpine.

Snow conditions on the property can be expected to persist from October through April, with snow pack up to 15 or 20 feet at the higher elevations.

HISTORY

The area now covered by the Whitewater Group was originally staked by Mr. Ken Millar, a prospector of Silverton, B.C., in the early 1950's. An option was held on the group by McLeod-Cockshutt Mines for a period of 14 months, during which time three packsack diamond drill holes were drilled (in the vicinity of locations 2 and 3). No results are available from this drilling; it is doubtful they were in any way conclusive, in any case. The original claims were allowed to lapse and the present claims staked to cover part of the original ground.

MINING ASPECTS

A determination of the feasibility of open pit mining in the Whitewater Creek Valley would require study beyond the scope of this report. Two points merit mention at this time: the anticipated heavy snowfall at this elevation might necessitate seasonal pit operation; if the pit rim were to fall at the base of the steep southwestern wall of the valley, the danger of slides and rock falls might be excessive.

With careful selection of shaft or portal sites, low cost large-scale underground mining could probably be carried out without excessive interference from snow and topographical features.

Adequate water could be made available from Whitewater Creek for mining and milling purposes.

Timber is plentiful at lower elevations downstream from the property..

GENERAL GEOLOGY

There are no detailed government geological maps covering the immediate area of the Whitewater Group. The north boundary of the Nelson Sheets (Geological Survey of Canada Maps 603A and 1090A) lies a few miles south of the property.

The property lies within a belt of Triassic or Lower Jurassic sedimentary and volcanic rocks intruded by granite and related rocks of Lower Cretaceous age. The main expressions of these intrusives are the Kuskanox batholith a few miles north of the property and the Nelson batholith a few miles to the south.

The sediments and volcanics have generally been tightly folded and steep dips are common.

GEOLOGY OF THE WHITEWATER PROPERTY

Exposures of serpentized ultrabasic rock were observed at several locations on claims Crescendo 4, 5, and 6. They are believed to represent a dike or series of dikes 1000 to 1500 feet in width underlying and paralleling White-water Creek Valley. Confirmation of the continuity of this rock both across and along strike is hampered by overburden. Although a positive determination of the dip of this dike was not made, there is some evidence suggesting a westerly dip of about 60 degrees. The rock is typically mottled green and black on fresh surfaces and light greenish-grey on weathered surfaces. The degree of serpentization varies but is estimated to vary between 20 and 40%. This rock is described in greater detail under "Asbestos Mineralization."

Rocks forming the steep cliffs along the southwestern side of the valley on Crescendo 4 are grey-green argillites, probably of the Triassic Slocan Series. They appear to strike northwesterly and dip southwest. A contact between these sediments and serpentized rocks was observed at location 7 (see Fig. 2).

The talus on Karen 4 at the base of Mount Brennan is an intermediate volcanic rock. Basic and intermediate volcanics containing thin, sheared slate beds striking 135 to 145 and

dipping vertically were observed on Karen 8 and 10 near location 6. These rocks are believed to represent the Triassic Kaslo Group of greenstones.

Ultrabasic dikes or sills exhibiting only minor serpentinization were observed intruding the greenstones in the vicinity of location 6. These include a dull grey dike, forty feet in width, tentatively identified as dunite. In the same area narrow dark brown lamprophyre dikes and light orange-brown acid dikes were also observed.

At location 5 a sheared, magnetic, serpentinized ultrabasic rock is intruded by a light grey syenite porphyry. The shearing is intense across 30 feet, strikes 135 and dips 80 SW.

A strong, sheared breccia zone up to 40 feet in width was traced for several hundred feet along strike in serpentinized rock near location 4. Fragments are angular to sub-rounded and vary in size from microscopic to several feet across. The zone strikes NW-SE and dips 80 SW.

An interpretation of the main geologic features is indicated on figures 2 and 3.

ASBESTOS MINERALIZATION

Location 1

Serpentinized peridotite is exposed in a pit measuring roughly 9' by 12' and averaging 6 feet in depth. The rock varies in colour from light green to almost black and for the most part has a mottled appearance. About one third of the exposure is "leopard rock": sub-rounded fragments of greenish-grey serpentine are surrounded by fine black material to give a pattern resembling that of a leopard's skin. The rock is fractured in several directions. A brittle, apple green variety of serpentine occupies some of the fractures of each set. Chrysotile cross-fibres are present along the northeast side of the trench in a set of joints striking 095 and dipping 58 N.

In the best section three parallel veins spaced nine inches apart have cross fibres from 1/8" to 3/8" long over strike lengths of from three to five feet. The fibre is pale green to white in colour, and fluffs readily when scraped with the fingernail. Other veins of weathered chrysotile are visible in the bottom of the trench.

A sample of selected asbestos-bearing rock from this trench was examined by an engineering firm experienced in asbestos evaluation and their report is appended hereto.

Testing with a hand magnet on a string indicates the rock is quite magnetic.

Location 2 & 3 (500 degrees WNW of Location 1)

Small veinlets of chrysotile cross-fibre asbestos, similar to that described under location 1, occur at both locations 2 and 3. The host rock is similar except that the "leopard rock" is absent. "X-ray" diamond drill holes, previously mentioned under "History" were drilled at both these locations. The rock is again magnetic.

Location 4 (2000 degrees NW of Location 1)

A few minor veinlets of cross-fibre chrysotile were observed here in serpentinized ultrabasic rock. Veinlets and blebs of apple green, brittle, massive and columnar serpentine are more prevalent here than at location 1, 2, & 3, in places making up 25% of the rock. The rock is magnetic but not as strongly so as the rock in locations 1, 2, & 3.

General

The area between the above-described occurrences and the probable extensions of serpentinized rocks both up and down the valley are covered with overburden so the extent of asbestos mineralization remains to be determined.

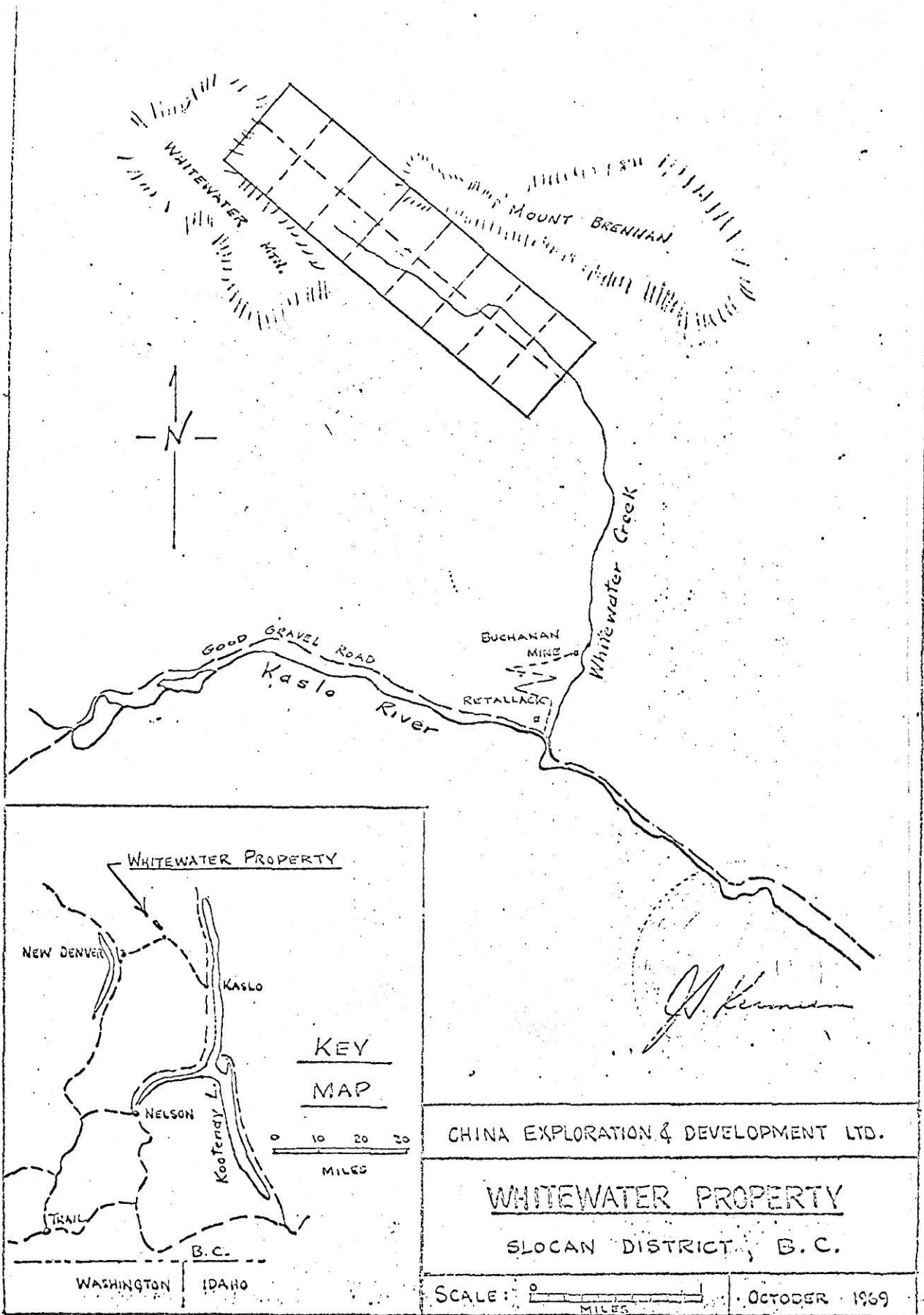
Numerous boulders of serpentinized ultrabasic rock were noted in the moraine in the northwesterly part of Crescendo 4 and 6. Fine stringers of cross-fibres were noted in two of these boulders.

OTHER MINERALIZATION

The possibility of nickel mineralization in the ultrabasic rocks, lead-zinc-silver veins in adjoining Slocan argillites, and gold bearing quartz veins in the Kaslo greenstones should be kept in mind during any exploration program on the property.

Respectfully submitted,

J. S. Kermeen, P. Eng.



L. J. MANNING & ASSOCIATES LTD.
CONSULTING MINING ENGINEERS

610-000 WEST PENDER STREET VANCOUVER 1, B.C.

OFFICE PHONE
603-5061

RESIDENTIAL PHONE
L. J. MANNING - 908-5600

November 26, 1969

Mr. J. S. Kermeen, P.Eng.,
Consulting Geological Engineer,
P. O. Box 83,
Grand Forks, B. C.

Dear Mr, Kermeen:

Two bags of Chrysotile fibre. Mark WWJ.

Colour: Good, namely white to very light amber.
Length: 1/32 to 5/8. Many partings.
Texture: Soft to silky.

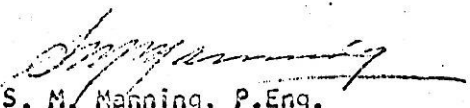
Due to partings will probably produce high percentage of 1/16" fibre possibly 70% = Cassiar AK = High grade shingle = Canadian medium Group 4 to Cassiar AX = low grade shingle = Canadian upper Group 5. All based on having a low 20% to 30% dust count (-200 mesh) which, of course, can't be determined except by bulk mill tests.

The walls of the fibre veins are fairly hard and adhere strongly to the fibre tops and, therefore, the ore might require considerable hammer mill treatment before clean separation occurs thus increasing the percentage of short fibres after milling.

In our estimation, based on the samples submitted, this is a good quality fibre and warrants further investigation.

Yours very truly,

L. J. MANNING & ASSOCIATES LTD.


S. M. Manning, P.Eng.

SMX:mjb

c.c. W. Uyeyama

GEOLOGICAL REPORT ON THE "NICKEL" SHOW
COMPRISING THE P & W AND D & W CLAIMS
WHITEWATER AREA, SLOCAN MINING DIVISION

BY

R. E. RENSHAW, P. ENG.

50°-05' North Lat.
117°-10' West Long.

December, 1969

Vancouver, B. C.

R. E. RENSHAW, P.ENG.
CONSULTING GEOLOGIST

GEOLOGICAL REPORT ON THE "NICKEL" SHOW
COMPRISING THE P & W AND D & W CLAIMS
WHITEWATER AREA, SLOCAN MINING DIVISION

INTRODUCTION

This report is prepared at the request of Mr. Robert G. Hutchings and Associates on behalf of Dry Ridge Silver Mines Ltd.

It is based upon a personal examination of the property made upon October 5th, 1969 plus my intimate knowledge of the area dating back to 1950.

Mr. Walter Kondra, prospector of Port Coquitlam, B. C. acted as a guide and assistant during the examination.

LOCATION

The claims are located on an unnamed west fork of Whitewater Creek, north of the Kaslo-New Denver Highway at an approximate elevation of 5,500 feet.

ACCESS

A road takes off from the Whitewater (Retallack) settlement and goes north from Whitewater to service the Whitewater, Homestake, Sunset, Charledton, and Wellington Claims as well as several others.

Approximately 1 mile or more of road will be required to connect the Nickel Group with the upper workings of the Charleston Property.

R. E. RENSHAW, P.ENG.
CONSULTING GEOLOGIST

TIMBER

Very little timber is available on the property. However, sawn timbers and lumber can be purchased from contractors in Kaslo or New Denver.

WATER

Ample water to operate diamond drills, mining, milling and domestic requirements are present on the property.

POWER

No close source of hydro-electric power is available. The closest source is Kaslo or New Denver.

ACCOMODATION

No buildings or accomodation are present on the property. Arrangements to use facilities at the Charleston property can be made until such time as a road can be punched through to the claims of the Nickel group.

HISTORY

No past history of the Nickel group is known. It is thought that the mineralization has been known for at least 60 years. One of the detriments to the area has been the fact that the claims lie to the north of the geology mapped on the Sandon Sheet by the Geological Survey of Canada, Map 273 A and by Dr. Hedley, Bulletins 22 and 29, British Columbia Department of Mines. Just because the the area has not been mapped does not mean that the geology is not favourable.

CLAIMS

The Nickel group comprises the following claims P and W 1 to 10, Record Numbers 13338 to 47 and tag numbers 50001M/10M, recorded at Kaslo 30 Jun 69: D and W 1 to 6, Record Numbers 13948 to 53, and tag numbers 11022 M to 27 M, recorded at Kaslo 30 Jun 69.

The sixteen claims consist of 800 acres more or less.

The claims are well staked and no apparent contravention of prior locations are apparent.

GEOLOGY

A serpentine inclusion of Triassic age is exposed in a canyon of a small branch of Whitewater Creek. Magnetite, pyrrhotite, and minor chalcopyrite are present. Little or no work has been done in way of exploration across the serpentine. Several chip samples were taken across a width of 50 feet and along a strike length of 150 feet before passing into overburden.

The results of five samples taken from Copco drilled and blasted trenches are summarized below:

<u>Trench</u>	<u>Silver</u>	<u>Copper</u>	<u>Nickel</u>	<u>Width</u>
1.	Not Assayed	Not Assayed	0.21%	50 feet
2.	Trace	0.13%	Not Assayed	"
3.	Trace	0.07%	Not Assayed	"
4.	Trace	0.21%	Not Assayed	"
5.	Trace	0.08%	0.42%	100 feet

While the results of these samples have not indicated

D&W 5	D&W 3	D&W 1	
D&W 6	D&W 4	D&W 2	
P&W 8	P&W 1	P&W 4	P&W 5
P&W 7	P&W 2	P&W 3	P&W 6
P&W 10	P&W 9		

SAMPLES

WHITEWATER CREEK

To NEW DENVER

WHITEWATER

To KASLO

Scale: 1 inch to 3000 feet

R. E. Renshaw, P. Eng.

17 Dec 69.

R. E. RENSHAW, P. ENG.
CONSULTING GEOLOGIST

or outlined any commercial ore body they appear to have indicated sufficiently mineralized formation to warrant extensive exploration on the serpentine body.

A fairly comprehensive exploration program is warranted to test the mineral potential of the serpentine plug.

RECOMMENDATIONS

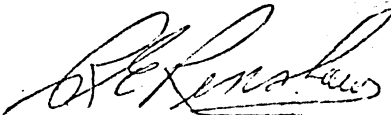
1. Cut at least 25 miles of grid line on the 16 claims on a grid spacing of 400 feet with stations every 100 feet.
2. Test all outcrops along the grid lines with dimethylglyoxine. This is a delicate test for nickel and the intensity of light pink to red will indicate the amount of nickel present.
3. Take soil samples at each station and run for copper using the hot acid extraction method.
4. Make a magnetometer survey over the grid lines using a fluxgate instrument, having a sensitivity of 25 gammas/S.D.
5. Also make a Turam electrical survey over the grid.
6. Bulldozer strip any target zones outlined by the surveys to assist in their interpretation.
7. Drill, blast, and sample the zones if possible.
8. Follow up by at least 4,000 feet of BQ wire line diamond drilling.

SUMMARY

The Nickel group of 16 claims is underlain by a serpentine plug containing values in copper and nickel which should be examined by an extensive exploration program.

ESTIMATED COSTS

The estimated costs to carry out the above program is shown in Appendix "A" of this report.




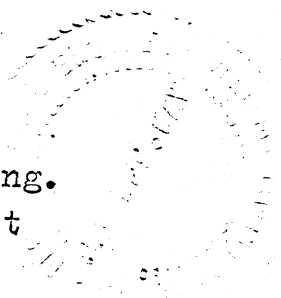
R. E. Renshaw, P. Eng.
Consulting Geologist
Vancouver, B. C.
17 Dec 69

CERTIFICATE OF QUALIFICATION - NICKEL SHOW

I, Rodney E. Renshaw, hereby certify that:

1. I reside at and maintain an office at #64-845 Hornby St., Vancouver, B. C.
2. I am a graduate of the University of British Columbia and hold the degree of Bachelor of Applied Science in Geological Engineering. I have also taken two years post graduate studies at the University of British Columbia in specialized courses in geology and geophysics.
3. I am a Registered Professional Engineer of the Province of British Columbia and hold Certificate #2135.
4. I have been practising my profession as Consulting Geologist during the past 25 years.
5. I have no interest in the claims or shares of any Company associated with the P&W or the D&W claims, direct or indirect, nor do I expect to receive any.


R. E. Renshaw, P. Eng.
Consulting Geologist
Vancouver, B. C.
17 Dec 69




R. E. RENSHAW, P.ENG.
CONSULTING GEOLOGIST

APPENDIX "A" *TABLE OF ESTIMATED COSTS-NICKEL SHOW

1.	Road building	\$2,000.00
2.	Tent Camp	1,500.00
3.	Supplies	2,500.00
4.	Used truck or Pick up truck	1,500.00
5.	Gas and oil, truck maintainence	1,000.00
6.	Cut and chain 25 miles of picket line	2,500.00
7.	Soil sample survey	2,500.00
8.	Soil assays and other assays	2,000.00
9.	Map Geology and claims	1,500.00
10.	Magnetometer and Turam electrical surveys	4,000.00
11.	Bulldozer stripping and diamond drill setups	2,000.00
12.	Four thousand feet of BQ diamond drilling	48,000.00
13.	Engineering and supervision	4,000.00
14.	Head office, legal, and administration	5,000.00
15.	Reserve for contingencies	<u>5,000.00</u>

Total----- \$85,000.00


R. E. Renshaw, P. Eng.

Consulting Geologist

Vancouver, B. C.

17 Dec 69

R. E. RENSHAW, P.ENG.
CONSULTING GEOLOGIST

GEOLOGICAL REPORT
on
SKYLINE GROUP OF MINERAL CLAIMS

Slocan Mining Division, B.C.

T.R. Buckham P.Eng.
703 Donegal Place
North Vancouver, B.C.
YUkon 5-4389

August 14, 1962

SITUATION

The property consists of four claims held by location; they are centred about an old shaft that was sunk between 1895 and 1899. At an elevation of 6000', they are immediately accessible by a 2½ mile trail from a jeep and truck road that presently extends to 5000' elevation.

The claims are tributary to the 31-mile Kaslo - New Denver road at Retallack almost midway between New Denver and Kaslo, in the Slocan Mining Division. Within a radius of three miles are the notable former producers Lucky Jim and Whitewater; the former owned by Sheep Creek Mines Ltd. and the latter now owned by the C.M. & S. Co.

The general district is served by the villages of New Denver and Kaslo, whose business communities can supply the basic needs of supplies and labor and offer daily freight and mail services with the larger centres. A factor of some interest is the existence of custom mills within practical trucking distance of the claims. The Trail smelter, only 100 miles away, provides an outlet for lead and zinc ores.

Sufficient water is available on the property and timber for mining purposes is nearby, a short distance down the mountain. Between two and three miles of road will have to be built, most of which will be easily done in light brush with ample overburden. The last one-quarter mile would be in rock. Once established as a regular small mine there is no reason why work should not proceed on a year-round basis.

HISTORY

The present claims were staked by the writer on August 24, 1961. The previous history goes back to 1895 and is dealt with at length by B.W.W. McDougal, P.Eng., in his report on the Star Group in 1957.

The claims were originally located in 1895 and were Crown-Granted in 1899 as the Hera, Heba, Pluto and Oppollo claims. Mr. W.J. Trotheway, a well known mining engineer of that time, paid the taxes on these claims until his death in 1936. Since that date the claims passed through various interests. Searches were made for the shaft by these interests but these failed, apparently due to the use of inaccurate maps. During one of these periods the claims reverted to the Crown for unpaid taxes and the Crown Grants were cancelled. The writer learned of the claims in 1957 during one of these searches and was actually responsible for sending out a party that located it in 1958.

GEOLOGY

General

The geology of much of the Slocan has been closely mapped and studied and several publications issued. However no details have hitherto been made on the geology of this group. One reason was that the owners of the property did not allow the knowledge of the values in the shaft to become general. A second reason was that the property was North of the map boundary as on the Sandon Sheet, C.G.S. Map 273A. The only published map that shows this area is the Mineral Reference Map, which shows the old Crown Grants, although not quite in accurate relation to other Crown Granted claims.

The geological field mapping as done by the writer last August on the property was of a reconnaissance nature and it ties in with the general Slocan geology as mapped by Dr. M.S. Hedley in his Bulletins 22 and 29. A very brief description

of this general geology is desirable in so far as it affects the property, which is in the Slocan Series close to the lower contact with the Kaslo greenstones.

The Slocan Series are mainly sediments intruded by granitic and lamprophyre dikes. Metamorphism is present but is relatively unimportant compared to the folding which is of the highly complex Alpine type. It is only by a combination of plan and section that it can be studied. Regionally the sediments were folded by compression between the Nelson granite on the South and the Kuskanax granite and Kaslo greenstones on the North. The general form of the folding is understood but the details are variable and intricate and need close study at all stages of exploration and mining. The details often are the main influences on the deposition of ore.

One of the main regional features of the folding is a North-Easterly trending complex characterized by axial planes of little or no dip and low plunge that stretches from near the Mammoth mine to Retallack, distance of nine miles. This structure roughly co-incides with the most productive area of the Slocan. The Skyline is near the northeast end of this complex on the northwest flank, near enough to consider to be favorable factor.

Ore-Bearing Structures

The term "lode" is used to define a crosscutting fault, fissure, or system of fissuring that is known to be mineralized. "Vein" refers to the mineralized part of the lode, which may occur in certain restricted parts where conditions were most favorable for such to occur. During the last 15 years a very great deal of study has been carried out by outstanding geologists to recognize these favorable conditions. The value of these studies has been recognized by firms still operating in the district and it is a fact that the application of this knowledge has kept some operations in business during

the low metal prices of the past several years. The application of this knowledge to finding new, non-outcropping orebodies has been done and there is every reason to believe it can be done many more times in the future.

The mineralization in the district is widespread and it may be considered that the ore-bearing solutions had access to virtually all the lodes, even those so weak as to be termed fractures. However, the orebodies occupy very restricted positions in the lodes, so much so that it is uneconomic to blindly explore every lode for orebodies. Thus to properly search for ore in this area all the known geological data must be gathered and studied with the greatest care before money is expended on exploration such as diamond drilling or tunnelling.

Dr. M.S. Hedley, in Bulletin 29, p.55, discusses the structural controls of orebodies in the Slocan camp at some length. To quote:

"Perhaps the most fundamental fact is that ore is not as a rule deposited in or associated with strong gouge The second most fundamental fact, related to the first, is that orebodies other than those of fissure-vein type occur in zones of shattering rather than of shear. A third fact, stemming from the other two, is that in the larger orebodies do not as a rule form in the main plane of movement but in or associated with minor accessory planes."

Thus, in a nutshell, the search for ore resolves itself to predicting where zones of shattering may be found along a lode.

Skyline

The Eastern end of the Skyline claims are underlain by argillaceous quartzites of a hard, fine-grained, light grey appearance. The dips are generally flat, steepening to the South and with a slight inclination to the East on the East end of the Group. The bedding is prominent and after forms parting planes at roughly 10" intervals. Jointing is present but is not well developed.

The Western end of the Group is underlain by argillites of a darker gray and more massive appearance. Any bedding or jointing that is present is tight, thus these rocks resist erosion very well and consequently form a steep cone-shaped peak in this direction. The contact with the quartzites is obscured by debris from the argillite slope but is probably quite steep. No Kaslo Series rocks were seen but some may be present on the Northern side of the claims.

Folding of the quartzites has taken place in at least two directions. There is a series of gentle folds with a N-S axis and vertical axial planes, resembling corrugations when viewed as a group. Some of these were strong enough to affect the local topography sufficiently to form cross-ridges up to 10 or more feet high.

The second system of folding is indicated by the dips of the quartzites tending from flat on the top of the ridge in the vicinity of the vein to steep both to the North and South. This indicates that the whole ridge is a large fold with an East-West axis. Possibly the axial plane is recumbent but no conclusive evidence of this was seen. If so the open part of the fold would be to the North.

Three veins were seen, with some branching, but the central vein was the only one traced out. This was easy to see in the rocky terrain and was, in places, visible for hundreds of feet at a glance.

Starting at the East, the direction from which the group is approached, the vein crosses under a large rockslide and is seen near the trail as consisting of three feet of quartz and gossan in tight walls of quartzite. The dip is steep to the South although an exact measurement could not be made. No sulphides were seen at this point. A similar outcrop was observed several hundred feet to the East on the other side of the rockslide. The quartzites here have a general dip of 15 degrees to the SE. The vein persists continuously for

several hundred feet toward the West with little change until the quartzites flatten toward the top of the ridge. Here an escarpment starts on the South side of the vein and rises to 6-10 feet high. Debris from the escarpment has obscured the vein in this section so that a close examination cannot be easily made. This is the area where the old report mentions the presence of galena in the vein. At the time of examination only a very little mineral was seen due to the debris and moss which all but obscures the vein along this interval. Approximately 400 feet to the West from the start of the scarp, it suddenly disappears, leaving smooth quartzite sloping to the South; beyond this point the vein narrows to 12" to 18". The West end of the scarp is sunk the old shaft on a reported lens of galena. The shaft bottom was inaccessible last August, being half full of snow. The collar was standing firm and square, being in solid rock.

Regarding this shaft, a quote is taken from the report by C.D. McKenzie who was an agent and scout for Mr. W.J. Tretheway, dated March, 1899: "From the commencement of this work to the lowest level, 65 feet, the values have improved steadily in quality and quantity until there is at present exposed 28 inches of pay ore; 18 inches of galena intermixed with gray copper sternbergite and chloride of silver and 10 inches of carbonates.

The galena assays from 91 oz. Ag and 78% Pb to 223 oz. Ag and 74% Pb --- the carbonates vary in value from 35 to 120 oz. Ag per ton.

A shipment of ore from the upper part of the shaft is reported to run 96 oz. Ag and 76% Pb.

No sulfides were seen on the walls of the shaft near the collar. Scattered around the shaft collar and the nearby vicinity samples of cubic galena and of quartz with galena may be easily picked up. Quartz pieces show a honeycomb effect with well-developed crystals. Gray copper was identified but other minerals were difficult to identify due to oxidization.

The shaft follows the vein and dips at 85 deg. South.

About 50 feet to the West the vein enters the argillites and the main vein filling changes to crushed rock and gouge, up to 18" wide.

Summary

This is a typical Slocan vein and as such can be considered for its merits. The vein is barren where the wall rocks are regular in composition and attitude, but shows signs of mineralization where the hanging wall is disturbed; in this case by the escarpment. The abrupt Western ending of the scarp formed a quick flexure that accounts for the short, relatively deep oreshoot in the shaft. Similar occurrences are known in the area, although rarely of such depth compared to the strike length. Such pipes are usually rooted in a larger orebody, from which it acts as a "feeler".

With this possibility in mind all the recorded facts have to be studied to see if any further favorable geologic factor is present. The following points are interesting and significant:

- (1) The average dip of the vein in the argillites is 75 deg. S as seen on the peak at the West end. In such a mass of uniform rocks this should be close to average for the vein in a general way. This is similar to the dip in the tight vein section 1000 feet to the East.
- (2) The vein dips for its observed depth in the shaft at 85 deg. S.
- (3) The escarpment on the South side of the vein indicates that this section at least is a reverse fault, i.e. the hanging wall moved up in relation to the footwall. This is typical of this section of the district.

The above points indicate that there must be a flexure along the strike of the vein as well as down dip, simply to connect the parts with different dips together. With the movement on the vein of a reverse fault, areas of lesser pressure would be formed on the flatter parts of the vein. These would conform to Hedley's zones of shattering. The flatter dips observed in the argillites in the West and the quartzites in the East end are average dips in uniform rocks and are tight gouge zones. The steeper part in the quartzites that does contain some ore are feelers, influenced by differential movements on the hanging wall. In themselves they are probably only of minor value but as indicators they may be of great value in leading exploration to the larger ore traps indicated below.

The probable size and location of the surmized orebody cannot be forecast except in a very rough way. The type of ore in the shaft should be representative of any ore found in any orebody nearby in the same vein. The position of the projected orebody would most easily be reached by following down the feeler in the shaft. Thus there is a very good chance of finding a body of high grade ore by following down the values in the bottom of the shaft. As the net smelter value of the past shipment is \$160 per ton, ³⁴⁸⁰ even a relatively small body of ore would be very valuable and profitable.