

3227

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3227 MAP

GEOLOGICAL REPORT

On the

WHITEWATER GROUP

117° 10' W ; 50° 05' N

Slocan Mining Division

82 K / 3 E

British Columbia

of

Hi-Ridge Resources Ltd. (N.P.L.)

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

September 15, 1971
Vancouver, B. C.

I N D E X

	<u>Page</u>
SUMMARY & CONCLUSIONS	
INTRODUCTION	1
PROPERTY	1
OWNERSHIP	1
LOCATION & ACCESS	1
HISTORY	2
GENERAL GEOLOGY	2
DETAILED GEOLOGY	3, 4
EXPLORATION PROGRAM	4
ESTIMATED COST OF EXPLORATION PROGRAM	5
CERTIFICATE	
<u>Appendix</u>	
LIST OF REFERENCES	
INVOICE	

Maps

* 1 Location Map	Scale: 1" = 136 miles
2 Claims/Geology	" 1" = 1500'

September 15, 1971

GEOLOGICAL REPORT

WHITewater GROUP

SUMMARY & CONCLUSIONS

Geologic work was carried out on seven claims of the Whitewater Group of Hi-Ridge Resources Ltd in the Slocan Mining Division, B.C., during August 6th to 12th, 1971. The claims are designated as TOM #1, #3, #5, EK #7, #8, #9, #10. Co-ordinates: 117° 10' W, 50° 05' N.

The property is accessible by a truck road and foot trail from Retallack, B. C.

The area is underlain by sedimentary volcanics invaded by granitic and related rocks. They have been folded and thrust into a complex pattern which appears to be one of the chief controls for ore deposition in the district.

An area of serpentized rocks, possibly the alteration product of an ultra basic, contains appreciable amounts of chrysotile asbestos of good quality along the E-W length of claims TOM 1, 3 and 5. The fibre occurs in small hairline fractures of 1/16" to 1/8" in thickness.

Silver, lead and zinc mineralization in a Slocan type vein was opened by a 65-ft. shaft sunk in 1899.

It is concluded that the chrysotile asbestos occurrence located on TOM 1, 3 and 5 is a prime target for exploration on the Whitewater group of claims.

The Slocan type silver, lead, zinc vein on EK claims also warrants exploration and development.

It is estimated that less than \$2,000 would be required to map the seven claims covered in this report.

GEOLOGICAL REPORT
WHITEWATER GROUP
Slocan Mining Division, B. C.

INTRODUCTION

The following report is based on geological mapping carried out by the writer on the Hi-Ridge Resources Ltd. Whitewater Group, claims TOM 1, 3, 5, EK 7, 8, 9, 10, during August 6 to 12, 1971. The writer was accompanied by Mr. Kenneth Millar of New Denver.

Additional data were obtained from previous reports by the following Professional Engineers: J. S. Kermeen, S. M. Manning, and T. R. Buckham. Pertinent Government reports were also reviewed.

PROPERTY

The Whitewater Group comprises 75 staked mineral claims; however, only the following 7 are covered in this report:

<u>Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
TOM 1	15411	Aug. 28, 1971
" 3	15413	" " "
" 5	15415	" " "
EK 7-10	13898-13901	Oct. 15, 1971

OWNERSHIP

The claims are owned by Hi-Ridge Resources Ltd. (N.F.L.) by right of purchase from the owners.

LOCATION & ACCESS

The claims group is located near Retallack, Slocan District, South Central British Columbia. A gravel road extends past the Buchanan Mine 1 3/4 miles south of the claims. A foot trail completed in October 1970 extends to the TOM #28 claim. During the past summer a road was

Whitewater Group

- 2 -

bulldozed to within 3/4 mile of the claims, along Whitewater Creek valley. This creek flows southeasterly through the group.

Elevation is approximately 6000 feet; co-ordinates, 117° 10', 50° 05'.

HISTORY

The area has seen production of silver, lead, zinc ores from the Lucky Jim and Whitewater properties, which are only 3 miles distant from the group under discussion. Occurrences of good quality chrysotile asbestos with up to 3/4" fibres, silver, lead, quartz veins and nickel are present on the property. It is reported that a shipment of ore was made from the shaft on a galena vein about 1899.

GENERAL GEOLOGY

The general area is underlain by sedimentary and volcanic rocks invaded by granite and related rocks. The sedimentary series and volcanics are placed within Triassic or Lower Jurassic ages; granites and related rocks are placed within the Lower Cretaceous. The sedimentaries are known as Slocan Series, and are intruded by granitic and lamprophyre dikes. Greenstones, known as the Kaslo formation, lie below the Slocan Series. Folding is of the complex Alpine type and metamorphism, which is present, does not play an important role in the development of the present rock types.

Regionally, the sedimentaries were folded between the Nelson granite on the south and the Kuskanox granite and Kaslo greenstones on the north. The general form of the folding is complex and is felt to be one of the chief geologic controls on ore deposition. One of the main regional features of the folding is a northeasterly-trending complex characterized by axial planes of little or no dip and low plunge which runs through the area from the Mammoth Mine to Retallack. This structure coincides roughly with the most productive area of the Slocan.

Whitewater Group

- 3 -

DETAILED GEOLOGY

Geologic mapping over claims TOM 1, 3 and 5 revealed a continuation of the serpentine mass previously outlined to the north. These serpentines may have been derived from peridotites. Evidence of conglomerate and schistose-looking float leads to the theory that the rocks may well be serpentized sediments such as argillites or schists.

Chrysotile asbestos of good quality was observed in the serpentized rocks on TOM 1, 3 and 5. The asbestos fibre is light green-white in color and occurs in small, hairline fractures 1/16" to 1/8" thick. Occasionally fibres up to 1/4" to 1" in length were seen. A 1" vein of chrysotile altered to talc was noted. The veinlets usually occur normal to the jointing pattern. The hairline fractures are normally closely spaced - less than 1/2" separations.

Further detailed geologic mapping and additional sampling is necessary before the full extent and grade of the occurrence is determined. The south part of the claims is underlain by quartzite.

Geologic mapping on claims EK 7, 8, 9 and 10 revealed a strong sheared zone striking NE across EK 9 and 7 in the vicinity of the old shaft. The rocks underlying the claims were found to be massive green-grey sheared quartzites of the Slocan Series. Prospecting did not reveal any more occurrences like that on which the shaft, located at corners of EK 7, 8, 9, 10, was sunk before the turn of the century. The shaft was not opened up during the writer's visit, but a description of the occurrence by C. D. McKenzie in 1899 states that: "The shaft is 65 feet deep and shows 28" of "pay ore", made up of 18" of galena intermixed with tetrahedrite, sternbergite and silver

chloride, and 10" of carbonates. The galena assays from 91 oz Ag and 78% Pb to 223 oz Ag and 74% Pb. Carbonates vary in value from 35 to 120 oz of silver per ton." A small shipment of ore from the upper part of the shaft is reported to have run 96 oz Ag and 76% Pb.

A "cat" road is required to be built to the shaft in order to transport sufficient equipment to clear out the shaft, and strip overburden to determine the extent of the quartz vein. The occurrence appears to be a typical Slocan vein and requires careful examination and exploration to assess its potential.

EXPLORATION PROGRAM

Exploration of the 7 claims should be along the following lines:

- (1) Determine the extent, market characteristics, and asbestos content of the mineralized zones exposed in the showings;
- (2) Further determine the extent and attitude of serpentized rock on the claims;
- (3) Continue to search for additional bodies of asbestos within the serpentized zones;
- (4) Open the old shaft and prospect the area by stripping;
- (5) Diamond drilling to follow the preliminary steps outlined above to test depth, extent and continuity of the various showings.

*ESTIMATED COST OF EXPLORATION PROGRAM

Geologic mapping & sampling	\$1,500.00
Transportation	250.00
Living Expenses	135.00
	<u>\$1,885.00</u>

*This estimate is based on exploration of only
the 7 claims covered in this report: TOM 1, 3, 5;
EK 7-10.



E. P. Sheppard

E. Percy Sheppard, P. Eng.
Consulting Geologist

September 15, 1971
Vancouver, B. C.

C E R T I F I C A T E

I, E. PERCY SHEPPARD, of the City of Vancouver, in the Province of British Columbia, hereby certify THAT:

1. I am a Consulting Geologist with offices at 314-402 W. Pender Street, Vancouver 3, B.C.;
2. I am a graduate of Dalhousie University, with a B.Sc. in Geology, and have been active in mining exploration and geophysics for over thirty years;
3. This report is compiled from data obtained during my visit to the property on August 6th to 12th, inclusive, 1971, and a study of reports by Professional Engineers as well as pertinent Government reports;
4. I have no direct or indirect interest in the properties or securities of Hi-Ridge Resources Ltd. (N.P.L.), and do not expect any interest as a result of writing this report;
5. I am a member of the Professional Engineers Association of British Columbia, the American Institute of Mining Engineers, the Society of Exploration Geophysicists, and a Fellow in the Geological Association of Canada.

DATED AT VANCOUVER, B. C., this 15th day of September 1971.

E. P. Sheppard

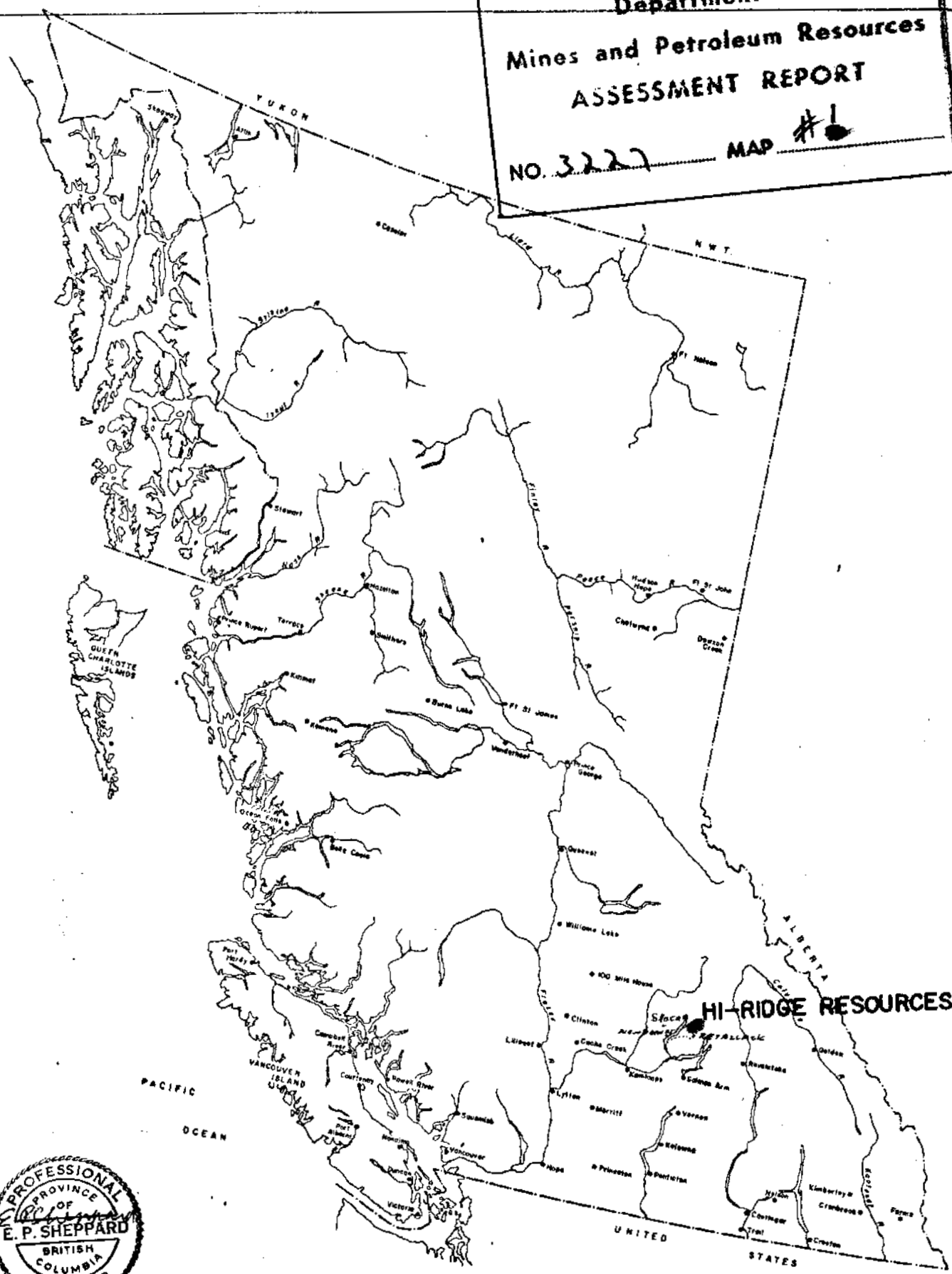
E. Percy Sheppard, P.Eng.



d.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3227 MAP #1



HI-RIDGE RESOURCES LTD



SCALE 1" = 136 miles

E. P. SHEPPARD & ASSOCIATES LTD
HI-RIDGE RESOURCES LTD
LOCATION MAP
WHITEWATER GROUP, SLOCAN, B.C.

LIST OF REFERENCES

1. Structure of the Southern Canadian
Cordillera (CIM)
2. Dept. of Mines Memoir 173: Slocan Mining
Camp, B. C., C.E.Cairnes
3. GEOLOGICAL REPORTS:
T.R.Buckham, P.Eng. (1962)
4. R.E.Renshaw, P.Eng. (1969)
5. J.S.Kermeen, P.Eng. (1969)
6. Letter re. Chrysotile fibre (L.J.Manning
& Associates Ltd.) 1969

* *

August 25, 1971

I N V O I C E

In account with:
Hi-Ridge Resources Ltd. (N.P.L.)
#8-1583 Pemberton Avenue
North Vancouver, B. C.

RE: WHITEWATER GROUP Property

Professional Services:

August 6-12 incl.
42 hours @ \$25/hr.\$1,050.00

Expenses:

Airfare	\$ 73.00
Taxis, parking	12.00
Rental, 4-w.d.	137.70
Gas	6.40
Field groceries	49.54
Field equipment	12.00
Gratuities	19.00
Motel & meals, New Denver	<u>35.00</u>

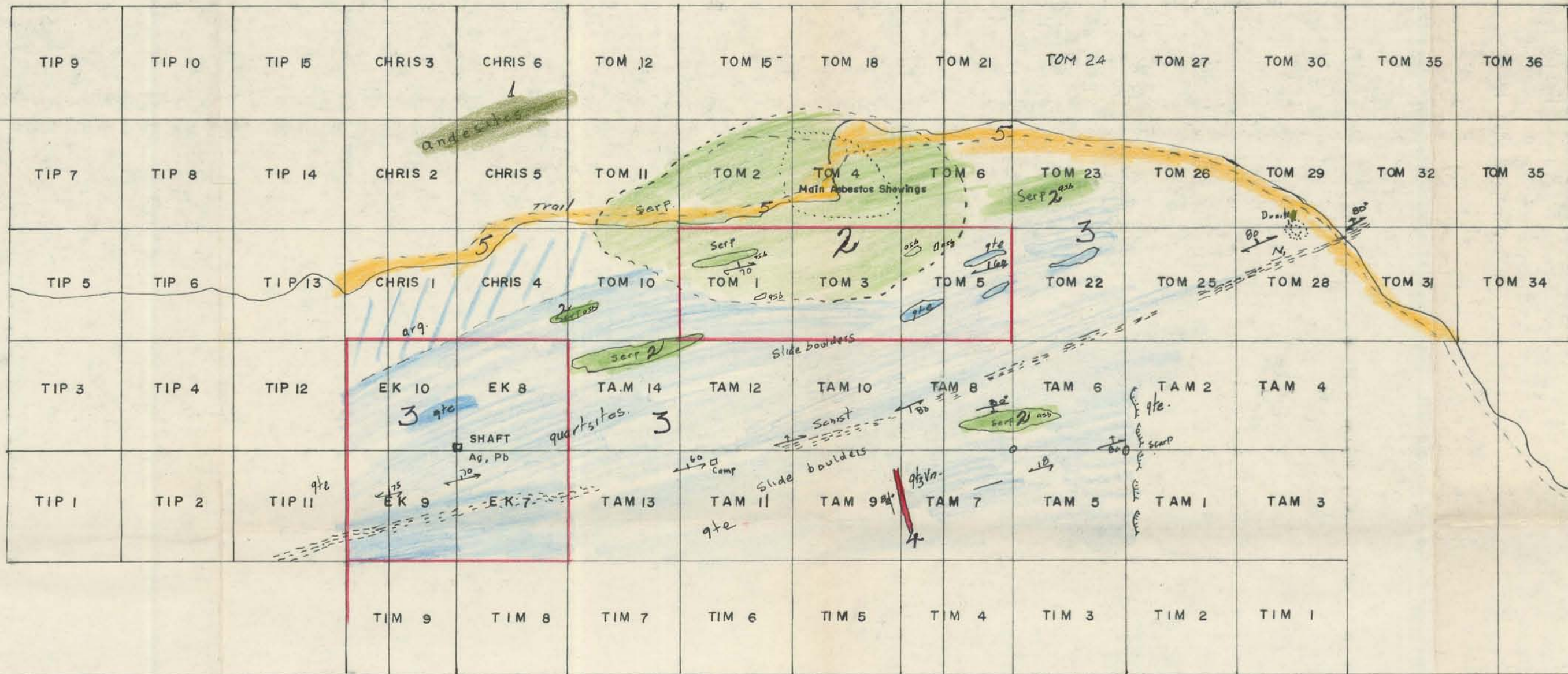
344.64

\$1,394.64

(Receipts on file)

Signed: E. P. Sheppard
E. Percy Sheppard, P.Eng.
Consulting Geologist





LEGEND

- 5 RECENT
- 4 POST TRIASSIC - Syenite Porphyry
- 3 TRIASSIC - Slocan Series. argillites, slates, limestone, quartzite and tuffaceous sediments
- 2 KASLO Series Serpentine - ASBESTOS
- 1 Andesites
- Dunite Dike
- T_{60} DIP & STRIKE BEDS
- \swarrow SCHISTOSITY
- $\sim\sim\sim$ FAULT
- $\equiv\equiv\equiv$ SHEAR ZONE

3227

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3227 MAP #2



M-2

HI-RIDGE RESOURCES LTD (NPL)

CLAIMS GEOLOGY

WHITewater GROUP

SLOCAN M-D BC

SCALE 1" = 1500'

9-15-1971

E.P. SHEPPARD & ASSOCIATES LTD