W.A. No. .....

NAME ..... Geol Rpt. .....

SUBJECT .....

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82FNW219 Alexandria #2

002501

PROPERTY FILE

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M28-1506

82F/11W

GEOLOGICAL REPORT
On the
DRY RIDGE PROPERTY
Of
HI-RIDGE RESOURCES LTD.
Slocan Mining Division
British Columbia

82FNW219
Alexandria #2

PROPERTY FILE

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

Vancouver, B. C.

February 28, 1972

I N D E X

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MAPS

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GEOLOGICAL REPORT

DRY RIDGE PROPERTY

Slocan Mining Division, B. C.

SUMMARY

The Dry Ridge property of Hi-Ridge Resources Ltd. consists of 40 staked mineral claims located 16 miles north of Nelson, British Columbia, at co-ordinates 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 on which the development work was done. This road runs through the lower 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 lamprophyre 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 some are still on

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SUMMARY - cont.

the property awaiting transportation; the others were sampled. This constitutes the work program to date.

CONCLUSIONS

Sampling along the old underground workings (drift and raise) indicates that the shear was barren throughout the length of the drift. Values in silver began at the end of the drift, on surface and in the stopes. Thus it appears that the east end of the drift touched another set of fractures lying at an angle to the shear which carry mineralization at the junction of the two sets.

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 helicopter service used during the initial stages of the exploration work.

RECOMMENDATIONS

It is recommended that an exploration program consisting of geologic mapping and sampling, and geophysical surveying, be carried out over the whole property, as Phase I. Contingent on the results of this work, a diamond drill program should be carried out over the east part of the main vein as well as over any areas which warrant further exploration, as outlined in Phase II.

It is further recommended that Hi-Ridge Resources Ltd. allocate initially the sum of $87,250 to implement Phase I of the exploration program. Contingent upon the results of Phase I, a further $102,000 should be allocated to cover Phase II, for a total of $189,250.00.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E. P. SHEPPARD

E. P. Sheppard.

E. Percy Sheppard, P.Eng.
Consulting Geologist

February 28, 1972

GEOLOGICAL REPORT
DRY RIDGE PROPERTY

Slocan Mining Division
British Columbia

INTRODUCTION

The following report was prepared for Hi-Ridge Resources Ltd. 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 the preparation of this report.

PROPERTY

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

Name	Record No.	Expiry Date
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	Aug. 21, 1976
W.K. 6	13662	Aug. 21, 1976
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 Hi-Ridge Resources Ltd. by right of purchase.

LOCATION

The Dry Ridge property lies 16 miles due north of Nelson, B. C. The co-ordinates 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

Roads are one and one-half miles distant and 2000 feet below the claims on which the development work was done. This road runs through the lower claims. 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 feet 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

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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 lamprophyre 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

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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 program recommended herein 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 two-phase exploration program:

1) Complete geologic mapping of surface;
2) Carry out I.P. and Electromagnetic surveys 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 recommended geophysical surveys.

This program is based on the use of helicopter service until such time as the road is completed.

ESTIMATED COST OF EXPLORATION PROGRAM

Phase I:

Geologic mapping & sampling	$ 10,000
Electromagnetic survey	9,500
Induced Polarization survey	9,000
Assaying & Core boxes	2,750
Camp Installation	3,000
Engineering & Supervision	4,500
Travel & Living Expenses	4,500
Helicopter transportation to property..	10,000
Water supply, pump, pipe line, labor ..	4,000
Diamond drilling, 2000' @ $15/ft.	30,000
	$ 87,250

Phase II:

(Contingent on results of Phase I)

Camp Installation	$ 4,000
Diamond drilling, 4500' @ $15/ft.	67,500
Water supply, etc.	4,000
Assaying & Core boxes	2,500
Core logging & sampling	5,000
Engineering & Supervision	5,000
Travel & Living Expenses	4,000
Helicopter service	10,000
	$ 102,000

Phase I	$ 87,250
Phase II	102,000
	$ 189,250

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E. P. SHEPPARD

E. P. Sheppard

E. Percy Sheppard, P.Eng.
Consulting Geologist

February 28, 1972
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:

I am a Consulting Geologist with offices at 314-402 West Pender Street, Vancouver 3, B.C.;

I am a graduate of Dalhousie University, with a B.So. in Geology, and have been active in mining exploration and geophysics for over thirty years;

This report is compiled from information obtained during my visit to the property on July 14, 1970, and from a study of pertinent data;

I have no direct or indirect interest whatsoever in the property or securities of Hi-Ridge Resources Ltd., and do not expect to receive any such interest therein;

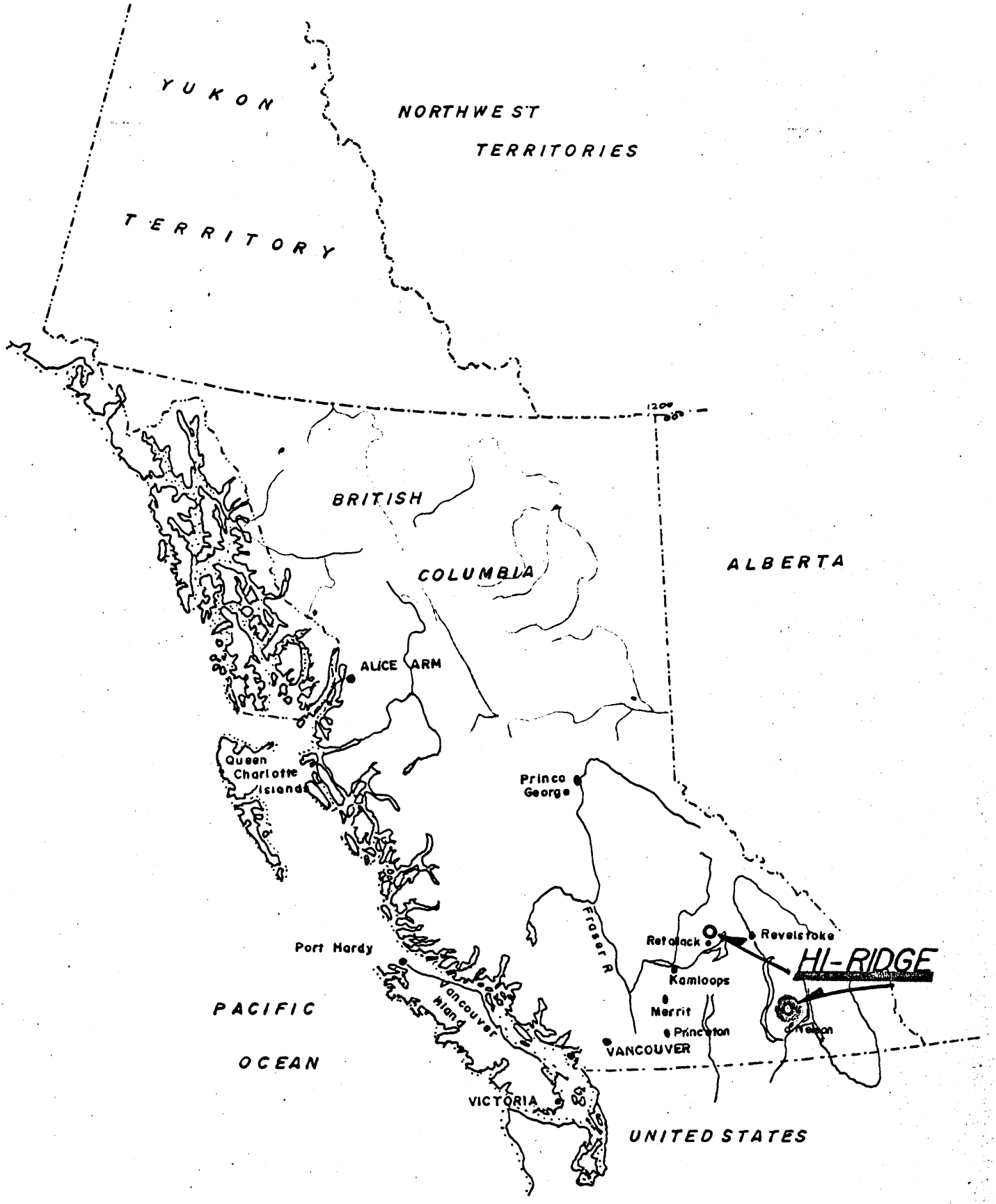
I am a member of the Professional Engineers Association of British Columbia, the American Institute of Mining Engineers, the Society of Exploration Geophysicists, and a Fellow in the Geological Association of Canada.

DATED AT VANCOUVER, B.C., this 28th day of February, 1972.

E. P. Sheppard

E. Percy Sheppard, P.Eng.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA E. P. SHEPPARD



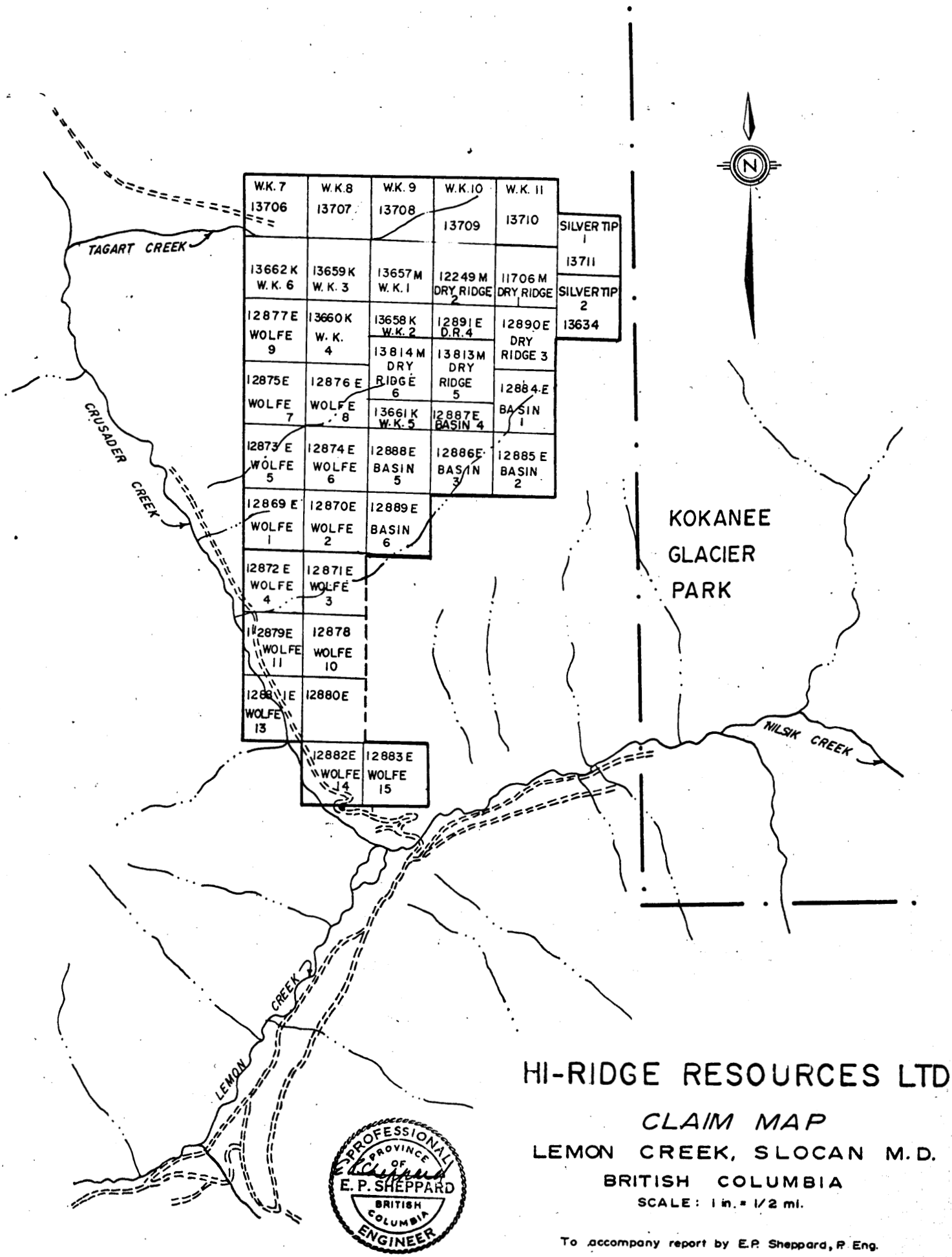
HI-RIDGE RESOURCES LTD

LOCATION MAP

SLOCAN MD

BRITISH COLUMBIA

SCALE 1in = 150 mi



HI-RIDGE RESOURCES LTD

CLAIM MAP

LEMON CREEK, SLOCAN M.D.

BRITISH COLUMBIA

SCALE: 1 in. = 1/2 mi.

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

G.5.

ALEXANDRIA #2 Mine.

Owner: Norm Block,
General Delivery,
Nelson. B.C.

Name of Claim: Chief

Location: Lat. 49° 44.9'N Long 117° 17.1W el. 7250 feet.

Access: Good logging road up Lemon Creek and Crusader Creek for 13 miles. Old (and rough) logging road on Branch No.5 for 2.1 miles to elevation 5375 on Tagart (Tiger) creek. A foot trail is followed for 1.6 miles to the mine on the South slope of Mount Rappel. This trail first goes in an ESE direction to 6500 feet elevation then SSW to a saddle at the 6500 feet elevation, then up the ridge to the mine.

Geology: The host rock for the mineralization is granite to granodiorite of the Nelson batholith. Approximately 0.2 mi before reaching the mine at elevation 7075, Another adit with almost square outline was visited. This goes in at N 60°W for approximately 100 feet and has a small drift to the West for approximately 20 feet. A small E - W vein is present with 1 inch of barren coxcomb quartz. At elevation 7000 about halfway to the Alexandria #2 mine, there are two, two foot vertical dykes of lamprophyre bearing N 15°W.

The Alexandria vein is strong and persistent in strike. It can be seen cutting two ridges, one on Mt. Ruppel, the other to the West to give a strike length of over ½ mile. In the mine the vein is generally measured in inches, but in several locations widths of over 2 feet were seen. Economic mineralisation consists of galena, argentite and chalcopyrite. The owner also reports native silver.

Geophysics: Aeromagnetic map 8481G indicates a magnetic anomaly to the West of Mount Ruppel, at the headwaters of Tagart Creek. However, perhaps of more significance is a long magnetic low extending to the East of Mount Ruppel which may indicate a fault zone and associated veins.

Potential: Massive galena is on the Eastern corner of the first stope. The shaft probably was raised on the vein and galena is present on the West wall. Here the galena forms the matrix of a breccia as compared to the rest of the vein which is normal vein filling. The production from the last two years has all come from a surface cut at elevation 7377. It may be possible then that a stope could be mined between the shaft and first stope to surface. This would give a block 111 feet slope length X 50 feet strike length by 2 feet width. Using a factor of 10 cu.ft/ton this would indicate 1110 tons of ore.

At the end of the tunnel is a caved area indicating another stope which may have a strike length of 35 feet. Taken to surface this may give another 1000 tons.

Survey: A 25 foot chain, brunton compass, and an altimeter were used. The altimeter is only accurate to 25 feet. A bearing from the adit to the surface workings was used to calculate the surface showing elevation. Unfortunately the depression marking for the shaft was not tied in. This causes a problem. If the shaft went down on the vein then the surface showings indicate a new FW vein. On the other hand the surface dip projects exactly to the drift vein suggesting that the shaft started up on a HW vein.

Production:

1976	3.78 tons	Ag. 539.26 oz. Au. 0.589 oz. Pb. 370 lbs. Zn. 15 lbs. Bi. 1 lb.

1977 Approximately 4 tons (assays not yet available)

Conclusion: A small amount of ore is still present in the mine, suitable for the present type of mining. Ground evidence suggests that several veins are in the area and although small, have high silver values. These should also be prospected. One advantage of the ore is that the present smelter contract gives a high net return compared to the gross value.

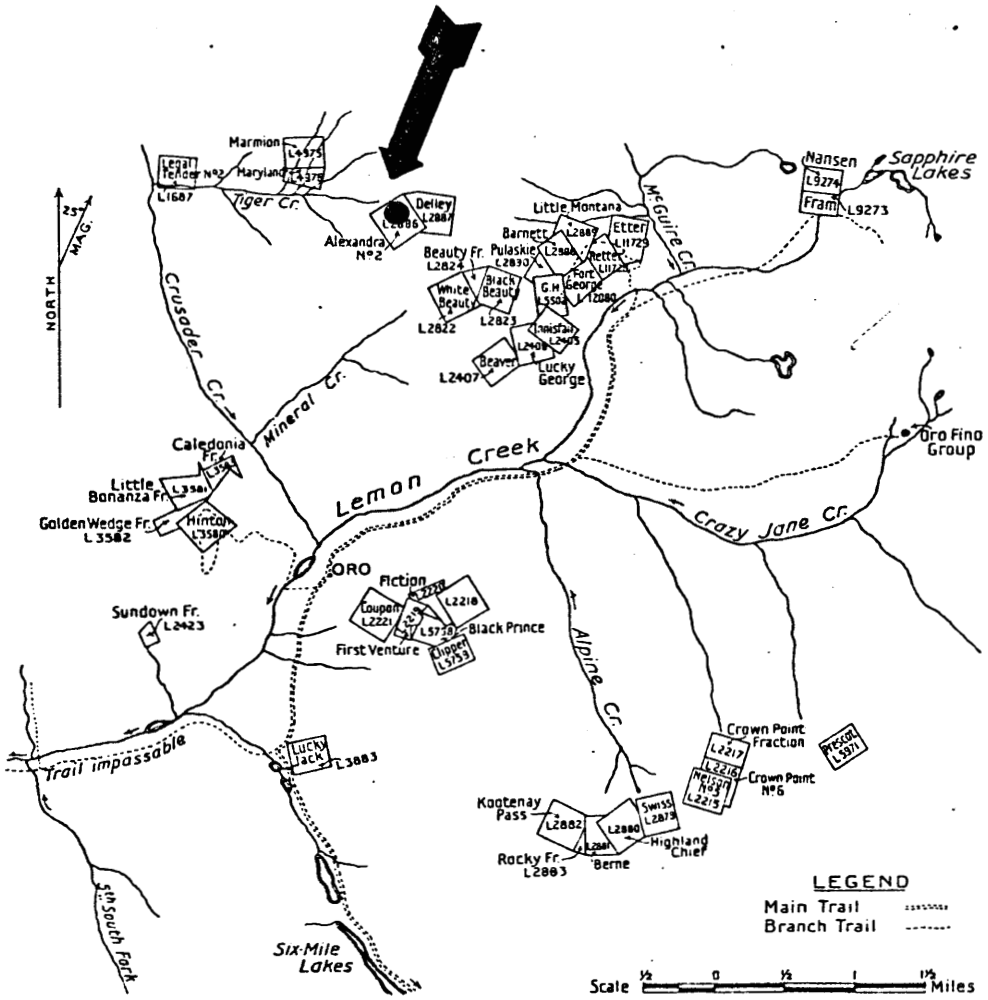


Fig. 2. Headwater area of Lemon Creek showing locations of surveyed mineral claims.

granite to quartz-diorite. The mineralization of current interest consists of an apparently simple sulphide association of pyrite, galena and sphalerite, which carries gold and silver, and occurs in a quartz and calcite gangue in narrow fractures and shear-zones in the granitic rocks. Although none were identified in the specimens examined microscopically, it is probable that the ordinary silver-bearing sulphides and sulpho-salts are present in the veins where the silver to gold ratio is high. By the evidence of the occurrences examined, these veins and shears have a general northeasterly strike and dip from flatly north-westward to steeply north-eastward.

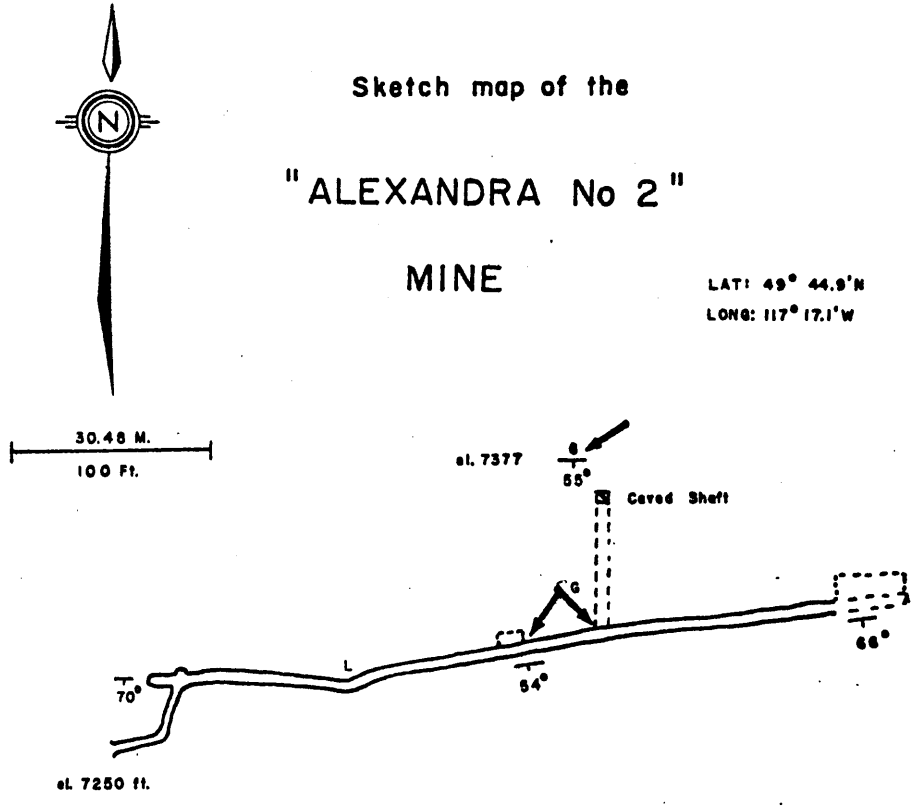
At the present time there is little activity in the district although in years past there has been considerable preliminary development on some of the properties.

Sketch map of the

"ALEXANDRA No 2"

MINE

LAT: 49° 44.9'N
LONG: 117° 17.1'W



LEGEND

— Strike and Dip of the Vein

L Lamprophyre

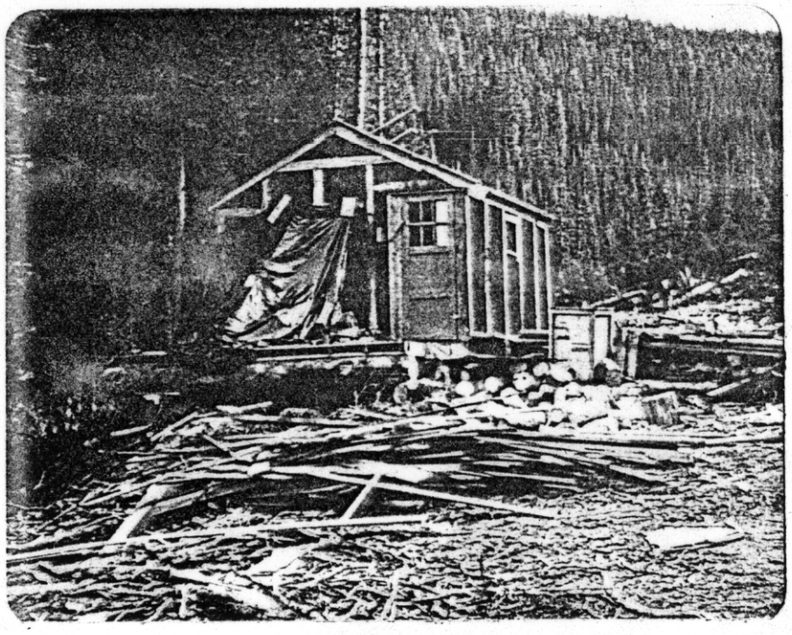
G Galena

Oct. 6, 1977

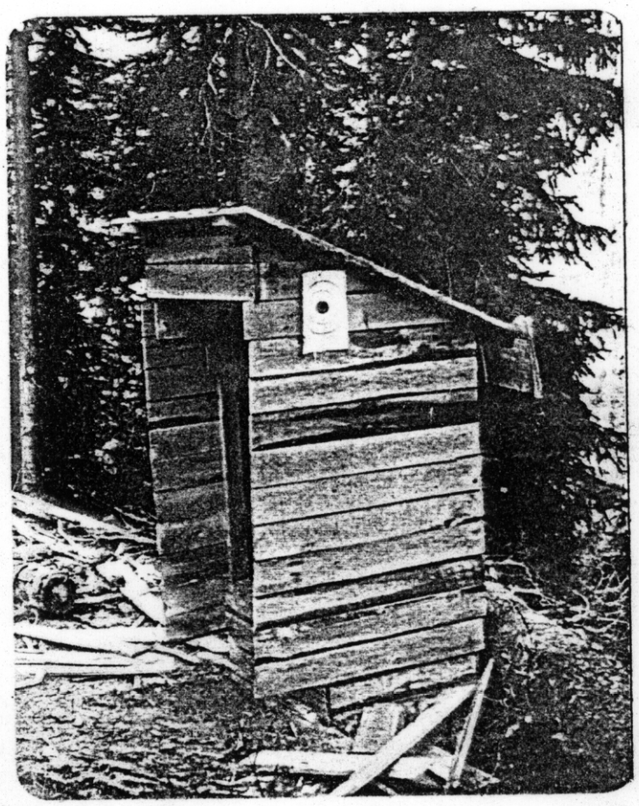
by George G. Addie P.Eng., P.Geol.
District Geologist - Nelson, B.C.

ALEXANDRIA MINE

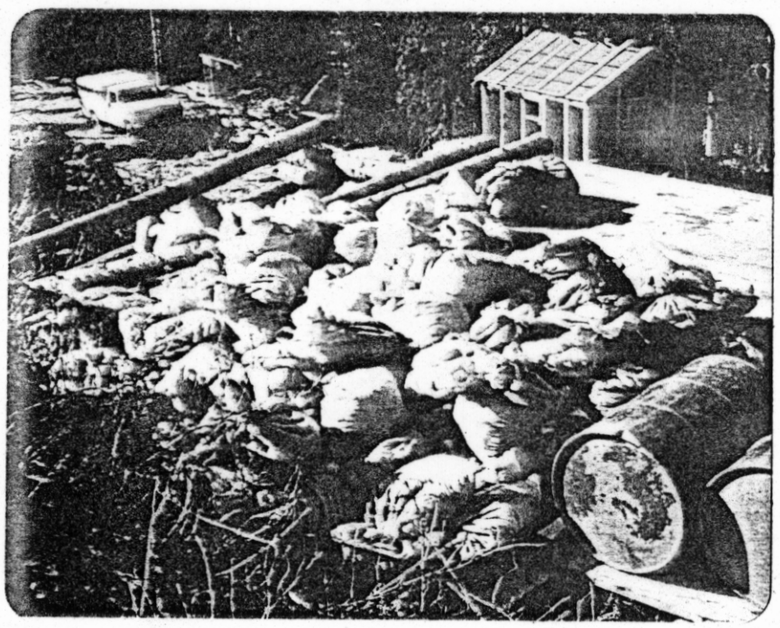
"CHIEF"CLAIM



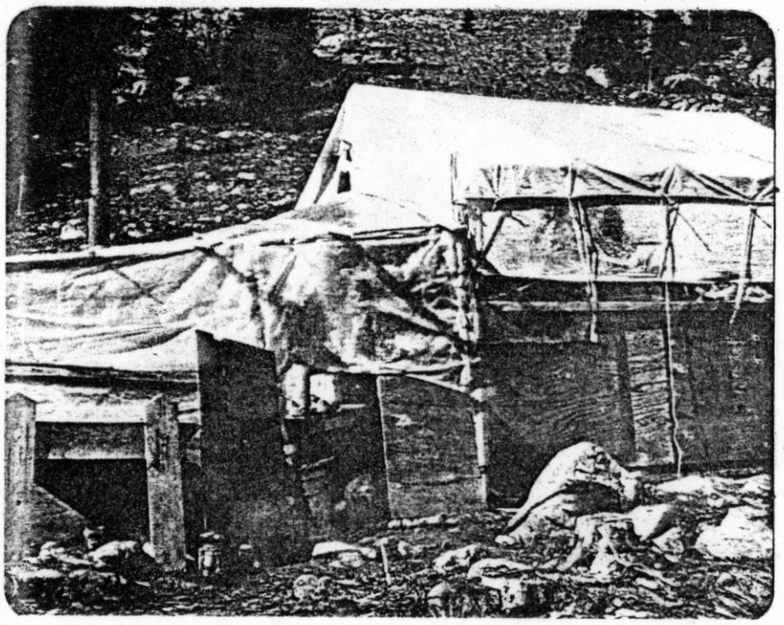
Norm Block's prospect cabin on Tagart Creek el. 5375 feet.



Hard on tall geologists!

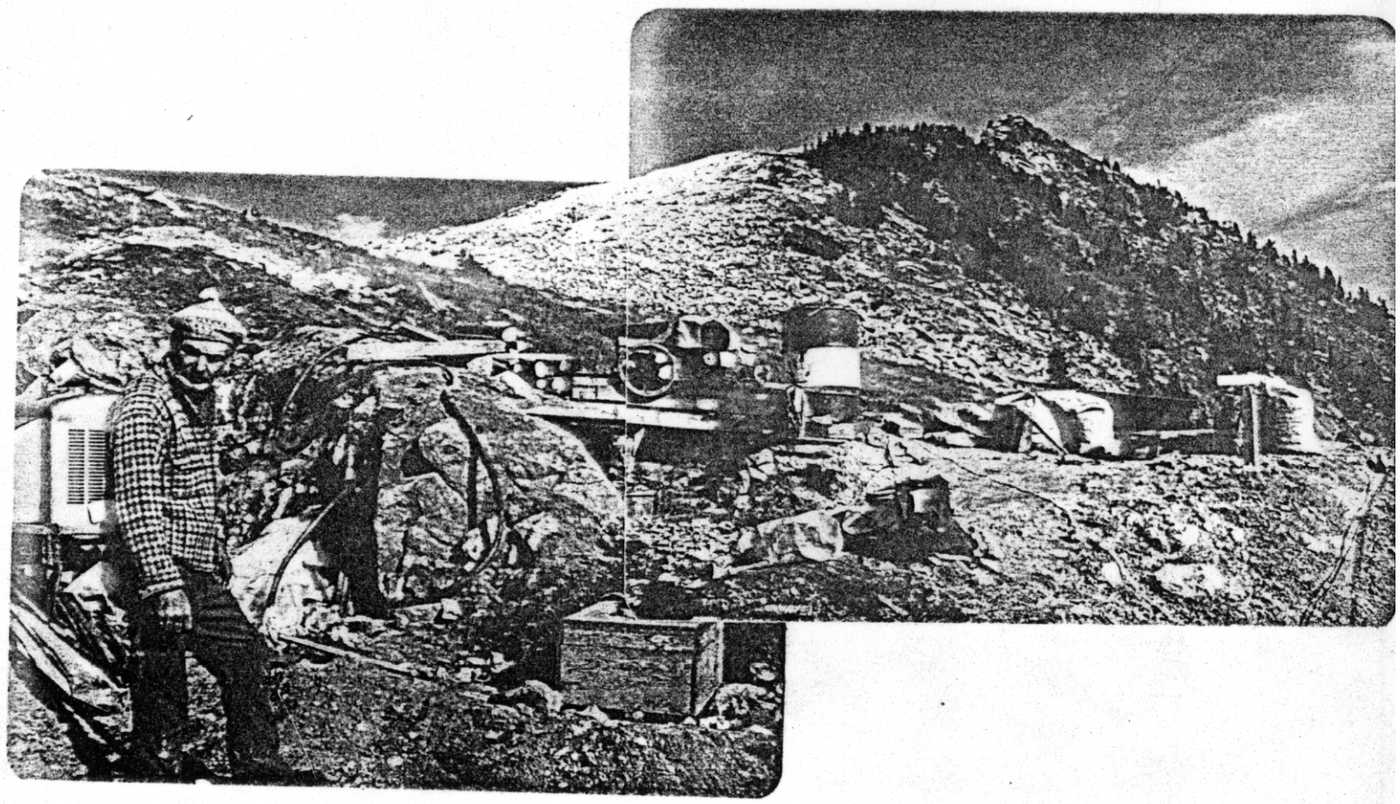


1971 4-5 tons sacked ore at heliport - el 5,400.



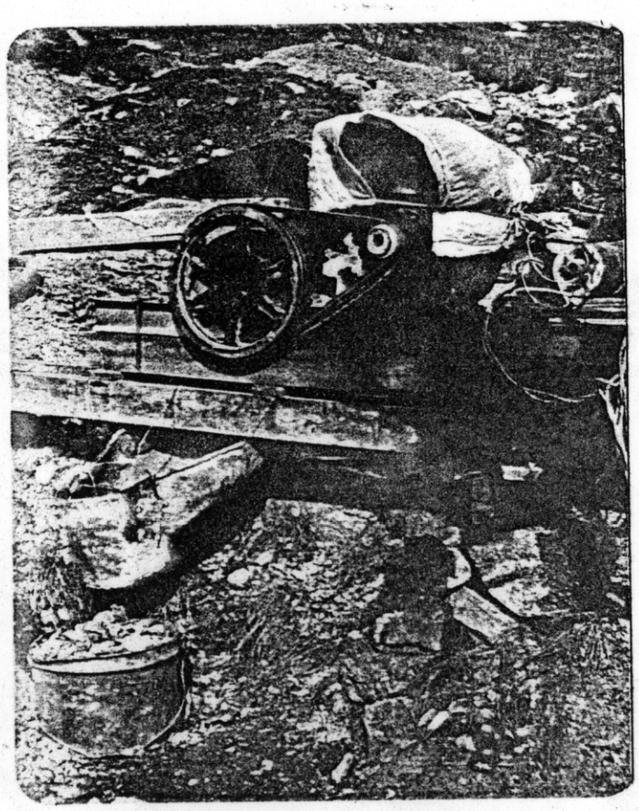
Mining Camp at 7000 ft on Mount Ruppel

Norm Block, P.A.A.



NORM BLOCK, P.A.A.

el 7400 feet looking towards Mount Ruppel. Note slusher trench to right and compressor in trench to left.



Crusher used to break rock before picking high grade.