From the desk of J.A.C. Ross

Trophy Silver
674496

J.J.C.

I have looked this over. It doesn't contain high grade narrow veins & has some merit. I wonder what was the result of work done (if any?) by Silver Summit Mines?

Price of silver was about 40¢ (?) when the old timers did this work.

J.B.

John
Note - Ellis has copy of map - Thurwood - Sulmac - should be obtained before examination

82K/6.11

REPORT ON MINERAL PROPERTIES

of

TROPHY SILVER MINES LTD.

on

MOBBS CREEK SLOCAN MINING DIVISION, B. C.

by

J. A. Mitchell, P.Eng.

MAR-70

TABLE OF CONTENTS

REPORT ON MINERAL PROPERTIES
OF TROPHY SILVER MINES LTD
ON MOBBS CREEK SLOCAN MINING DIVISION B.C.

INTRODUCTION

This report is written for the account of Trophy Silver Mines Ltd. (N.P.L.) at the request of Mr. H. Tysseland of that company. It is based on a visit to the property in 1964, and on various reports and other unpublished data of previous investigators.

SUMMARY AND CONCLUSION

Recent geological mapping has added considerable information to that previously available on the mineralized quartz veins in silicified shear zones in the Upper Mobbs Creek - Tenderfoot Basin. A long and reasonably deep vein structure is indicated. High grade assays obtained from the Ruby dump and from the vein at the face of the Grand Solo tunnel warrant the further investigation of the structure. Other investigators have suggested that tonnages of one to two million tons of possible ore may be indicated by the continuity of the structure. It is not likely that all the structure will be ore bearing, but a large part of it may well be. It is therefore concluded that this possibility warrants a fairly intensive investigation by trenching and diamond drilling and underground work.

PROPERTY

The property consists of the following claims:

Group	Name	Record Number	Expiry Date
1.	Dee #1 to #9 incl.	10504-12	10/4/70
	J.J. #1 to #6 incl.	10561-66	9/5/70
	J.J. #13 to #14 & #17	10573-75	9/5/70
2.	Russ #1 and #2	13646&47	14/8/70
	Zip #1 to #16 incl.	10488-503	10/4/70
	Pak #1 to #16 incl.	9779 to 94	26/8/70

LOCATION AND ACCESSIBILITY

The above named claims, in two groups, as shown on attached map, straddle the south fork of Mobbs Creek. The Dee and J. J. mineral claims start at the junction of the south fork with the main stream, and stretch upstream for about one mile in a southerly direction. The Zip and Pak Groups start at a small lake in the cirque of the headwaters of the south fork and extend up the floor to the cirque in a south-westerly by westerly direction to the crest of the cirque and over it to the ice field at the head of the Tenderfoot watershed.

The lower claims are about three to four miles from the junction of Mobbs Creek with the Lardeau Valley and the highway between Nelson and Revelstoke, at a point about 100 miles from Nelson and 61 miles from Revelstoke, either of which points can be reached by car from this point. Each of these towns is on a railroad. This road is now paved from Nelson to Poplar about nine miles south of Mobbs Creek.

The Zip and Pak claims are about ½ to 1-3/8 miles above the J.J. Group and the Russ adjoin them to the east.

An access road built by Kootenay Forest Products extends from the highway to a point two miles up Mobbs Creek. Another two miles would take it to and across the Dee and J.J. ground. At the end of this, a helicopter pad could he made so that supplies could be flown into the upper group camp while the road was being completed into the cirque. It is comparatively simple to complete the road to the boundary of the lower claims but it will be much more difficult and time consuming to get it up into the cirque. To reach the top end of the claims will take about eight miles of road and this will require about $33,000.00 for a road suitable for 4-wheel-drive vehicles. Permission has been obtained from Kootenay Forest Products whereby their road may be used. In the meantime, the only practical means of access is by helicopter. One is available at either Revelstoke or Nelson.

PHYSIOGRAPHY

The area is extremely rugged, lying as it does in the Selkirk Mountains. Elevations range from about 2,000 feet at the mouth of Poplar Creek to over 9,000 feet. The Lardeau river follows a broad valley which is a well marked topographic depression. Numerous

northeasterly flowing streams entering the Lardeau are in deeply incised valleys with structurally controlled slopes, resulting in almost perpendicular walls along portions of their courses. Glacial cirques are common at the higher elevations and some are yet ice-filled. In others there are small lakes from which the streams are fed. These streams often plunge over steep slopes leading to the lower valleys giving rise to waterfalls.

Only low brush and grass or moss and occasional clumps of stunted trees cover the upper slopes. In the lower valleys there are good stends of spruce timber interspersed with alder covered slides and patches of willow in the valley bottoms.

The climate is that of the Interior Wet Belt, somewhat similar to the Coast, but with a little less rain, more snow, greater extremes of temperature and subject to sudden and violent thunderstorms. In the higher reaches the snow fall is generally quite heavy and usually remains on the ground well into the summer.

HISTORY

There are references in the Reports of the Minister of Mines as far back as 1898 regarding properties now covered by these claims or very close to them. These include claims such as the Silver Crown, Black Jack, Pedro, Grand Solo, Ruby Silver, Columbia, Brandford, Linson View and Latton. There is also a report in the Journal of the Canadian Mining Institute 1909, and in the Rossland Engineer, date deleted. Summarizing these reports according to claims the following has been extracted:

1. Black Jack Group

   Two veins were traced several hundred feet on the Pedro claim totalling 4½ to 5 feet wide. These were mineralized with galena and grey copper in encouraging amounts. They were later explored by a short adit (Emmons, 1914) but there is no information on the results. It is understood that this adit has recently been found caved and almost completely hidden by brush.

2. Columbia and Latton

In 1898 an inclined shaft, apparently on the Latton, had been sunk 82 feet, the upper part of which followed a vein which steepened and a crosscut was started from the bottom of the shaft to cut it. On the Columbia a shaft had been sunk on the lead for 66 feet. These claims are not again mentioned.

3. Brooklyn Group

The Brantford claim, which was apparently one of the claims of a Brooklyn Group, was reported as showing high grade copper ore in a lead which outcropped at various places on the surface.

Ruby Silver

On this claim near the top of the cirque of the south fork of Mobbs Creek, a tunnel had been driven 94 feet on a quartz vein, two to four feet wide, impregnated with grey copper and galena which gave values of $65.00 a ton. (This is presumably near the forge found by the writer at elevation 7000 feet but there is now little recognizable evidence of a tunnel. The cuts here should be bulldozed out.) A later report stated that selected samples from this vein assayed 129 ozs. Ag 30% lead, 4% copper and that the vein was proved to be the extension of the Grand Solo.

The Grand Solo

This showing was just mentioned in 1905 at which time a tunnel had been driven for seventy feet on a lead impregnated with grey copper and galena. In 1909 it was reported that a footwall streak from 4 inches to 18 inches wide assayed 555 ozs. silver and 17% lead to the ton. From another point, 36 sacks of ore yielded $63.17 a ton in 1901. Apparently there are 4 veins all carrying argentiferous galena, tetrahedrite, and sometimes argentite or other silver sulphides with assays as high as 95 ounces silver to the ton.

Linson's View

On this claim by the falls on the steep slope between Kay Lake and the lower valley, and some 2000 feet lower than the Ruby Silver, a crosscut started in 1905 intersected a vein. A shaft was sunk on the vein and a drift made on it. A paystreak nine inches wide in 4 feet of vein yielded a 1000 pound sample which assayed 201 ounzes silver, 12% lead, 4% copper, 9% zinc. A later shipment of 875 pounds from the shaft and lower drift assayed 261.2 ounces silver and 12.3% lead per ton. This ore lies as streaks and bunches in the vein according to the 1909 report. The vein has a southwesterly strike and a northwesterly dip. Two other veins on the property, one narrow and one 10 feet wide are reported to have a southeasterly strike and southwesterly dip.

GEOLOGICAL CONSIDERATIONS

According to P.W. Read* the rocks underlying the claims belong to the Milford Group of late Paleozoic or early Triansic age. They consist of metamorphic rocks of both sedimentary and volcanic origin which include plagioclase schists, amphibolites, limestones, sandstones and quartzites.

These rocks have been intruded by monzonites of the Kuskanax Batholith of lower Jurassic age on the west of the claims and to the east of the claims, by one of a series of later, but related, stocks. The foliation of the intruded rocks has been deflected from the usual northwest strike to an east-west strike, then to a northeast strike by the stock as it compressed them against the main Kuskanax Batholith, which is also metamorphosed. The deflection is clearly shown by a prominent limestone marker band which can be followed for miles. It is almost certain that this distortion of the older rocks has provided areas favourable for the deposition of concentrations of whatever metallic minerals the stock contained. The writer would look for these concentrations near points of deflection of the limestone marker band by bulldozer trenches across the layered rocks bisecting the deflection angles and where shallow overburden exists. The most favourable situation would probably be on the contacts of rocks of differing

* Petrology & Structure of Poplar Creek Area. Unpublished.

hardness. Detailed geological mapping should be done at each of these locations.

Mr. I.E. Thurber, B.Sc., made a detailed study of the geology of the immediate area in 1966. He describes the geology underlying the claims in a report dated Sept. 12, 1966, written for Silver Summit Mining Co. Ltd. (N.P.L.).

To the south of the Zip and Pak Group there is a wide band of peridotite. Narrow bands of talc? schists representing altered peridotite are mineralized with pyrite cubes. Contacting the peridotite on the north is a band of impure silicified limestone and it is in this formation that the Ruby Silver workings occur. To the north of these limestones, there are small pure limestone bands, dark argillaceous bands and thinly bedded silstones grading into quartzites in the vicinity of the Grand Solo workings. Into these rocks are intruded cell-like masses of granitic rocks. Widespread silicification, thought to be semi-contemporaneous with the intrusions, carries with it various amounts of sulphide mineralization. This silicification may impregnate amenable rocks or form quartz fillings in fractures, faults, bedding planes or any other openings that may occur.

In this connection the warping noted by both Read and Thurber takes on added significance.

ECONOMIC GEOLOGY

Mineralization has been noted on the ground at two places in the upper claims, and the veining in which this mineralization occurs could be seen passing behind a high peak to the north. This veining apparently connects the two mineralized areas, the Ruby workings near the summit at the southeast end of the group and the Grand Solo on a steep hogsback near the northwest end of the group. This is shown on a very detailed geological map prepared by Mr. Thurber and the trace of the vein has been transferred to the map accompanying this report. Mr. Thurber's map is available for examination. Mr. Thurber also made reference to a mine dump and evidence of an adit on the Ruby Silver which is no doubt the adit referred to previously in this report under "History." He took a number of surface samples most of which gave low assays and one face sample in the Grand Solo tunnel which yielded 96 ounces silver across 18 inches of vein matter to 6.42% lead and 0.85% zinc.

The writer obtained an assay of 0.01 ozs. Au, 55.5 ozs. Ag, 2.94% Pb, 2.54% Zn, 1.41% Cu, across 3 feet of this face in 1964.

Both the writer and Mr. Thurber obtained encouraging assays from material on the dump at the Ruby Silver occurrence, but were unable to duplicate it in any part of the exposed vein, which was nowhere suitably exposed for sampling, and nothing similar to the dump material was found in place. From the evidence obtained by Mr. Thurber it is evident that the vein is generally conformable or nearly so with the enclosing formations and that it dips to the southwest, swinging from a north-northwest strike to a northwest by west strike between the Ruby and Grand Solo workings. By cutting a bulldozer road along the south slope of Matterhorn Peak it should be possible to drill into the vein with relatively short holes dipping to the northeast. It can also be better exposed by bulldozing in the vicinity of the Ruby showings.

Mr. B. Ainsworth, Geologist, examining the property for a mining company, examined similar shears in the Falls area at the extreme west end of the claims. The shear here was about 8 feet wide, but workings on it had all caved and nothing could be learned regarding it. Later, at least one of these tunnels was cleaned out, exposing a view. Seven short diamond drill holes revealed two veins, but core recovery was poor, and the results apparently inconclusive. It is very likely that these veins and the shear are on the same structure as the Grand Solo and Ruby, thus establishing a vertical range of about 3000 feet and a strike length of well over a mile. It has hardly been adequately investigated by work done to date and the only detailed geological work is that done by Mr. Thurber during July and August 1966. The evidence of high grade silver mineralization at the Ruby and Grand Solo workings, about a mile apart on the structure, is ample justification for opening up or drilling the vein at a number of intervening points.

GEOPHYSICAL SURVEYS

A geophysical survey done by Sulmac Exploration Services Ltd., in conjunction with the geological survey of Mr. Thurber, indicated a strong conductor some 800 feet long in the vicinity of Kay Lake at the west end of the property. This could also be tested by drilling.

RECOMMENDATIONS

It is recommended that the following program be commenced for the purpose of proving the ore potential of the above described vein structure:

1. Complete road to property by extending the Kootenay Forest Products road eight miles.
2. Bulldoze the vein system on the Ruby Silver, and if possible open the old adit. Bulldoze drill stations.
3. Locate suitable drill sites close to the summit of the Matterhorn Ridge and Peak, and where possible, on the hogsback west of Peak in the vicinity of the Grand Solo tunnel, and drill the structure.
4. Provide up to 1,000 feet of tunnelling and raising.
5. Drill the electromagnetic anomaly near Kay Lake.
6. Prospect lower claim group.

Estimated Cost of proposed Program

1.	Complete road	$ 33,000.00
2.	Camp installation and operation	10,000.00
3.	Helicopter transport	5,000.00
4.	Drilling	36,000.00
5.	Bulldozing	10,000.00
6.	Up to 1,000' of tunnelling & raising	70,000.00
7.	Prospect lower group	3,000.00
8.	Supervision and Engineering	5,000.00
		$ 172,000.00
	Contingencies 10%	17,200.00
	Total Expenditure	$ 189,200.00

The construction of several miles of road by Kootenay Forest Products circumventing the canyon of Mobbs Creek has alleviated

the access problem and the increasing demand and price for silver, is making it imperative that properties such as this be investigated; therefore, these points add justification to the proposed program.

Respectfully submitted,

J. A. Mitchell, P. Eng.

West Vancouver, B. C.
March 6, 1970

BIBLIOGRAPHY

1. Petrology and Structure of Poplar Creek Map Area, British Columbia, by P.W. Read. Unpublished Thesis.

2. Report on Geological Survey on Property of Silver Summit Mining Company Ltd., 1966, by I.E. Thurber, B.Sc., of Sulmac Exploration Services Ltd.

3. Miscellaneous references in the Reports of the Minister of Mines of British Columbia as far back as 1898.

CERTIFICATION

I, James Alexander Mitchell of 2991 Mathers Avenue, West Vancouver, B. C., do hereby declare that:

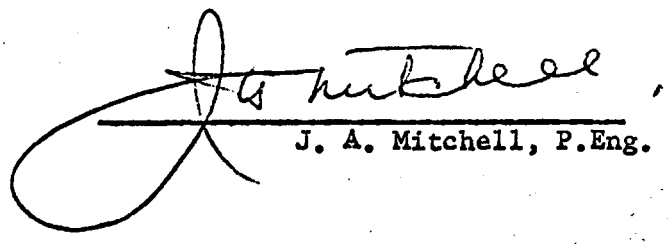
1. I am a member in good standing of the Association of Professional Engineers of British Columbia.

2. I graduated in Mining Engineering from the University of British Columbia in 1932 and have been practising my profession since that time. At present, I am practising as a consultant.

3. This report is based on an examination made of the property in 1964, plus the information obtained from other reports of more recent date, both published and unpublished.

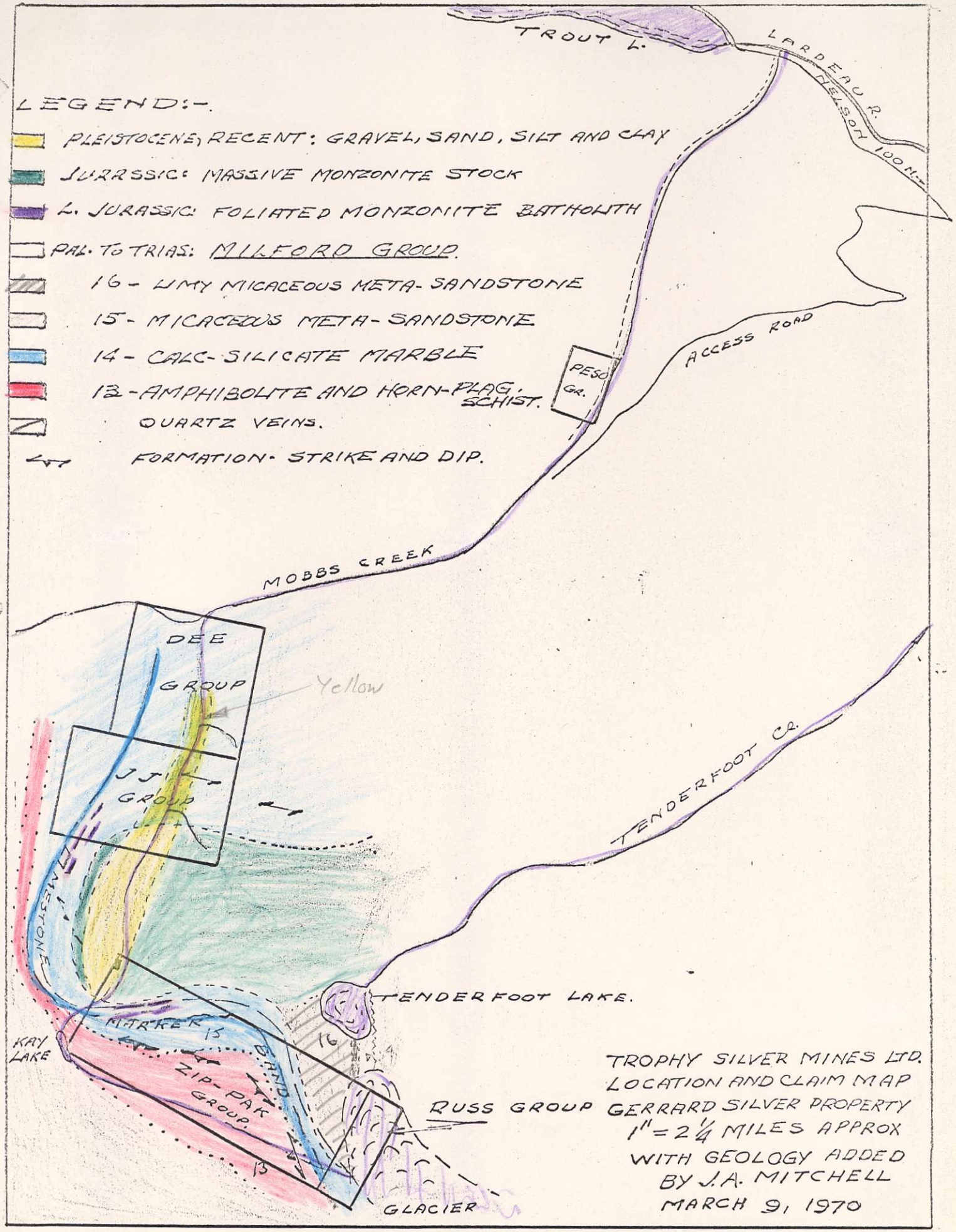
4. I have no interest in the properties or securities of Trophy Silver Mines Ltd., nor do I expect to receive any.

5. This report may be used for the purpose of a Prospectus, if so desired.



J. A. Mitchell, P.Eng.

Dated at West Vancouver, B. C.
March 6, 1970


TROUT L.
LARDEAU R.
NELSON 100 M.
LEGEND:-.
PLEISTOCENE, RECENT: GRAVEL, SAND, SILT AND CLAY
JURASSIC: MASSIVE MONZONITE STOCK
L. JURASSIC: FOLIATED MONZONITE BATHOLITH
PAL. TO TRIAS: MILFORD GROUP.
16 - LIMY MICACEOUS META-SANDSTONE
15 - MICACEOUS META-SANDSTONE
14 - CALC-SILICATE MARBLE
13 - AMPHIBOLITE AND HORN-PLAG. SCHIST.
QUARTZ VEINS.
FORMATION - STRIKE AND DIP.
PESO GR.
ACCESS ROAD
MOBBS CREEK
DEE GROUP
Yellow
JJ GROUP
TENDERFOOT CR.
LIMESTONE
TENDERFOOT LAKE.
MARKER
15
16
KAY LAKE
BAND
ZIP-PAK GROUP.
13
RUSS GROUP
GLACIER
TROPHY SILVER MINES LTD.
LOCATION AND CLAIM MAP
GERRARD SILVER PROPERTY
1" = 2 1/4 MILES APPROX
WITH GEOLOGY ADDED
BY J.A. MITCHELL
MARCH 9, 1970

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