

REPORT ON THE

SILVER CITY GROUP

Dawson M.D., Y.T.  
116-B-5, 64°20'N, 139°52'W

of

SILVER CITY MINES LTD.

by

P.H. SEVENSMA, Ph.D., P.Eng.

June 27, 1967

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REPORT ON THE  
SILVER CITY GROUP  
of  
SILVER CITY MINES LTD.

1. INTRODUCTION

At the request of Mr. J.A. Hanna, President of Silver City Mines Ltd., the writer has examined the Silver City property 25 miles NW of Dawson City of June 18th, 1967 and reviewed the results of all work to date.

As a result, it is recommended that the hitherto neglected NE section of the property be prospected in detail for a period of at least one month at a total cost of \$4,000; if the rumored presence of silver-lead float in this area can be confirmed, the potential of the property will be considerably enhanced.

This program can be usefully expanded by bulldozer prospecting on the South part of the Ice claims if assessment requirements are to be met.

2. PREVIOUS REPORTS

The following reports were available to the writer:

- (a) 1902 - 1905 (Photocopies) Petition for Government Tunnelling Assistance by Jeremiah J. O'Neill and partners, relating to their 3 claims Australian Girl, Yukon Beauty and Highland Chief.

Some 650' of tunnel and 50' of raising were reported. Highest assay: 800 oz/t Ag. 75% Pb, \$12.00 Au per ton. Longest tunnel: 550'.

- (b) 1928 Cockfield, Fifteenmile River area, Silver City (G.S.C.)

- (c) September 1953 J.F.V. Millar, Mining Engineer for Y.C.G.S.

- (d) May 1963 Ken Rose, for Newmont Mining Corporation.

- (e) May 1963 C.J. Brown for White Pass and Yukon Route.

- (f) July 1964 Dr. W.V. Smitheringale, for Silver City Mines Ltd.

- (g) August 1964 Ace R. Parker, for Silver City Mines Ltd.

- (h) February 1965 Dr. L.H. Green, G.S.C.

(i) August 1965 Ace R. Parker, for Silver City Mines Ltd.

(j) September 1965 A.W. Poole, for Silver City Mines Ltd.

(k) July 1966 Exploration Geophysics (Yukon) Ltd.

J.E.M. horizontal loop EM survey.

### 3. HISTORY

Staked in May 1902 by Jeremiah J. O'Neill and Associates, who drove about 700' in two tunnels and a raise and reported assays up to 800 oz/t Ag, but stopped work about 1906.

In 1926, the claims were restaked and high grade silver float was found.

In 1929, J. Risco drove two adits; in 1930, P. Rost is said to have shipped 5 tons of ore and another 15 tons or so are said to have been shipped at other periods.

In 1962 - 1963, the property was revived by W. Kaufmann, who extended Risco's adit and since that date, Silver City Mines Ltd. did additional underground work, considerable surface sluicing and some underground drilling, and had an EM survey run by Exploration Geophysics (Yukon) Ltd. in 1966.

At the time of the writer's visit on June 18th, 1967 the property was dormant.

### 4. LOCATION AND ACCESS

On the North bank of the Yukon River, 25 miles downstream from Dawson City, and 2 - 3 miles downstream from the mouth of the Fifteenmile River. (Figure 1).

This is on claim sheet 116-B-5, Latitude 64°20'N, Longitude 139°52'W, Elevation 1000' - 3100'.

The trip by small river boat takes about 1 hour 20 minutes downstream and 2 hours 40 minutes upstream from and to Dawson City.

There is good timber and plenty of water in the river valleys, but little water in the hills at higher elevations.

There is a good cabin and a plywood bunkhouse on the river bank, and a steep truck-road leads to the most recent tunnel about 425' above the river level.

## 5. PROPERTY

The property consists of 96 claims, as follows:

<u>Names</u>	<u>Grant Nos.</u>
Seven claims covering the original discovery area:	
Eureka	57764
Silver King	78604
Silver Dollar	78605
Apex 1, 2 and 4	78606, 78607, 78609
Argentum	78610

Eighty-nine located claims:

Silver City 1 - 4	79191 - 79194
Silver Star 1 - 3	79195 - 79197
Star 1 - 8	79198 - 79201 and 79226 - 79229
Gin 1 - 14	79202 - 79223
Rum 1 - 10	79210 - 79217 and 79224 - 79225
Key 1 and 2	76322 & 76539
Ice 1 - 48	87322 - 87369

## 6. GEOLOGICAL STRUCTURE

The claim area lies on the North flank of an E-W trending anticline with a 10 - 30° Westerly plunge, in sedimentary-volcanic formations dipping between 10° and 40° North.

There is some pronounced E-W near-vertical faulting, i.e. about parallel to the river.

Rhyolite porphyry occurs, probably as an intrusive.

The float area occurs on the lower 500' of the slope, which rises over 2000' at an overall angle of about 27° from the Yukon River.

This slope is an area of multiple slides, caused by a combination of steep faults parallel to the river, lower slopes in schistose rocks and upper slopes in harder quartzitic and volcanic rocks. Gentle cross folding along more Northerly axial planes is indicated.

The Tintina Fault lies about five miles North of the Yukon River in this location.

## 7. LITHOLOGY

The upper parts of the slope exhibit quartzites and argillaceous members, overlying light to dark grey-green dioritic rocks, which in turn overlie a light-brown weathering quartz-dolomite rock with both mariposite and occasional nickel stain.

There is a relatively thick section (perhaps 100') of sericite-graphite schists, which appear to overlie the dioritic rock in some areas, and to be interbedded with quartz-carbonate rock in other areas.

As the property has never been mapped geologically and has been severely affected by a number of slides, none of the relationships have been established factually as yet.

The quartz-carbonate rock is the most significant member and is the host rock of all the reported mineralized occurrences; all available reports suggest that this mineralization is about parallel to the bedding, but it could well be associated with more Northerly trending cross faults, or, perhaps with one or more of the steep E-W or ENE trending faults, one of which was intersected in a tunnel, showing a  $2\frac{1}{2}$ ' wide fault-gouge.

The rhyolite-porphry forms a big, coarse talus slope with blocks of up to 8' in diameter. It is located in place in a large patch, suggesting a crosscutting rather than a sill-like body.

## 8. MINERALIZATION

Galena, tetrahedrite, sphalerite, chalcopyrite and siderite have been reported, associated with quartz-carbonate rock.

The quartz-carbonate rock is of the type normally associated with serpentinized ultrabasics in many areas, and the dioritic "volcanic" is therefore believed to be a phase of an ultrabasic intrusive.

The aeromagnetic map (116-B-5, G.P. 4298) shows that no significant magnetism is associated with this body of presumably ultrabasic rock in the tunnel area.

A relatively weak magnetic high on the West edge of the property trends across the river, where it is associated with asbestos fibre occurrences on the W.C. Group held by Sphere Explorations on Woodchopper Creek, suggesting the presence of ultrabasic rock on the Gin Group of claims.

Another weak anomaly lies over part of the Rum and Ice claims.

In the absence of any geological mapping it is not certain whether the observed fault zones are normal or reverse, and no satisfactory hypothesis on possible mineral control can be developed.

The quartz-carbonate rock is nowhere known to be a significant host rock in the various belts of serpentines known in the NW Pacific; the quartzite-argillite-graphite-sericite schist assemblage has a potential, proven elsewhere, to contain strata-bound sulphide deposits as well as crosscutting silver-bearing occurrences.

The most significant mineral occurrences reported on the property are high-silver low-lead ones.

Amongst the 50 odd old assays listed, which have never any width or other size quoted, there are only five which exhibit a low silver-lead ratio of less than one, with the majority having ratios of from 5 to 10.

These values suggest strongly that the silver is related to tetrahedrite-bearing galena occurrences; these tend to occur in crosscutting features rather than along the bedding.

As for size, the extent of the various slides is such that a deposit of economical size could be entirely hidden under the thick cover of slide, which is about one mile long.

## 9. POTENTIAL

The work done to date has proven to be high cost and has not provided any new insight into the economic potential of the original discoveries. The latter, however, suggest the possibility of economic silver-lead veins in the area.

It should be stressed that there are persistent rumors that coarse galena float has been encountered in placer test pits on one of the two creeks flowing into Fifteenmile River on the NE part of the Ice claims. These pits were dug many years ago, probably in the early 1900's.

It is strongly recommended that both these creeks be carefully prospected by an experienced and aggressive two-man prospecting party, capable of recognizing old pits of this type.

If this work is successful, the potential of the property would be considerably enhanced and further follow-up work would be justified.

If anything suggests that additional work should be done on the slope above the Yukon River, this slope should be geologically mapped in detail on a scale of 1" = 200', using a number of surveyed reference points, before any other more extensive programs are considered.

Particular attention should be paid to the rhyolite porphyry, which could have an important control on the mineralization.

## 10. SUMMARY AND RECOMMENDATIONS

Even in the absence of officially certified records, it is certain that the area covered by the present Silver City claims has revealed an unusual quantity of high-silver float during a period of about 65 years of intermittent prospecting, suggesting that a significant silver-lead deposit could be present.

Anywhere from 5 to 22 tons of hand-sorted float is said to have been shipped, probably averaging in the vicinity of 200 oz/t Ag.

In the general frame-work of the economic geology of the Yukon, the area is a definite silver anomaly of interest.

The morphology of the float area does not lend itself to any further programs of physical work without detailed geological guidance.

It is therefore strongly recommended that the two creeks on the NE part of the property be carefully prospected for galena float near old placer test pits, this work to be supplemented by silt and soil sampling. A sum of \$4,000 should be set aside for this program, which two experienced men should complete in a period of from one to two months.

Before any further programs are considered in the slide area, this slope should be geologically mapped in detail on a scale of 1" - 200' using a few permanent, identifiable survey stations for tie-in of geological features and old workings.

This program, requiring two men for about six weeks at a total cost of \$6,000, will be fully justified if the recommended prospecting venture is successful.

If assessment requirements are to be met at some date before any large program has been prepared, prospecting with a bulldozer on the Ice claims, starting just West of the mouth of the Fifteenmile River, is recommended at a cost of about \$5,000 and confined to the slopes with a Southerly exposure. This program could be combined with the recommended prospecting program.

## 11. COST SUMMARY

<u>Phase I</u>	
(a) Prospecting NW part of Ice claims	\$ 4,000
(b) Bulldozer prospecting, south part of Ice claims	5,000
<u>Phase II</u>	
(c) Geological mapping	<u>6,000</u>
Total exploration work	<u>\$15,000</u>

The cost of further development of the property cannot be estimated at



present, as the scope of such work will depend upon the results of the recommended prospecting program .

Respectfully submitted,

"P. H. Sevensma"

P.H. Sevensma, Ph.D., P. Eng.

PHS/lz

June 27, 1967

CERTIFICATE

I, PETER H. SEVENSMA, of Vancouver, B.C., do hereby certify that:

1. I am a graduate of the University of Geneva, Switzerland (Physics and Chemistry, 1937; Geology and Mineralogy, 1937) where I obtained my Ph.D. in Geological and Mineralogical Sciences in 1941.
2. I am a Consulting Geological Engineer and a registered member in good standing of the Association of Professional Engineers in British Columbia and of the Association of Professional Engineers of Yukon Territory.
3. From February 1948 until December 1965 I have been engaged continuously in mining and exploration geology in the employ of Cominco Ltd. As a Senior Exploration Geologist, I have worked extensively both in Eastern and Western Canada.
4. I have personally examined the property which forms the subject of this report on June 18th, 1967.
5. I have not received or acquired, nor do I expect to receive or acquire, directly or indirectly any interest in any of the properties or securities of Silver City Mines Ltd.

Respectfully submitted,

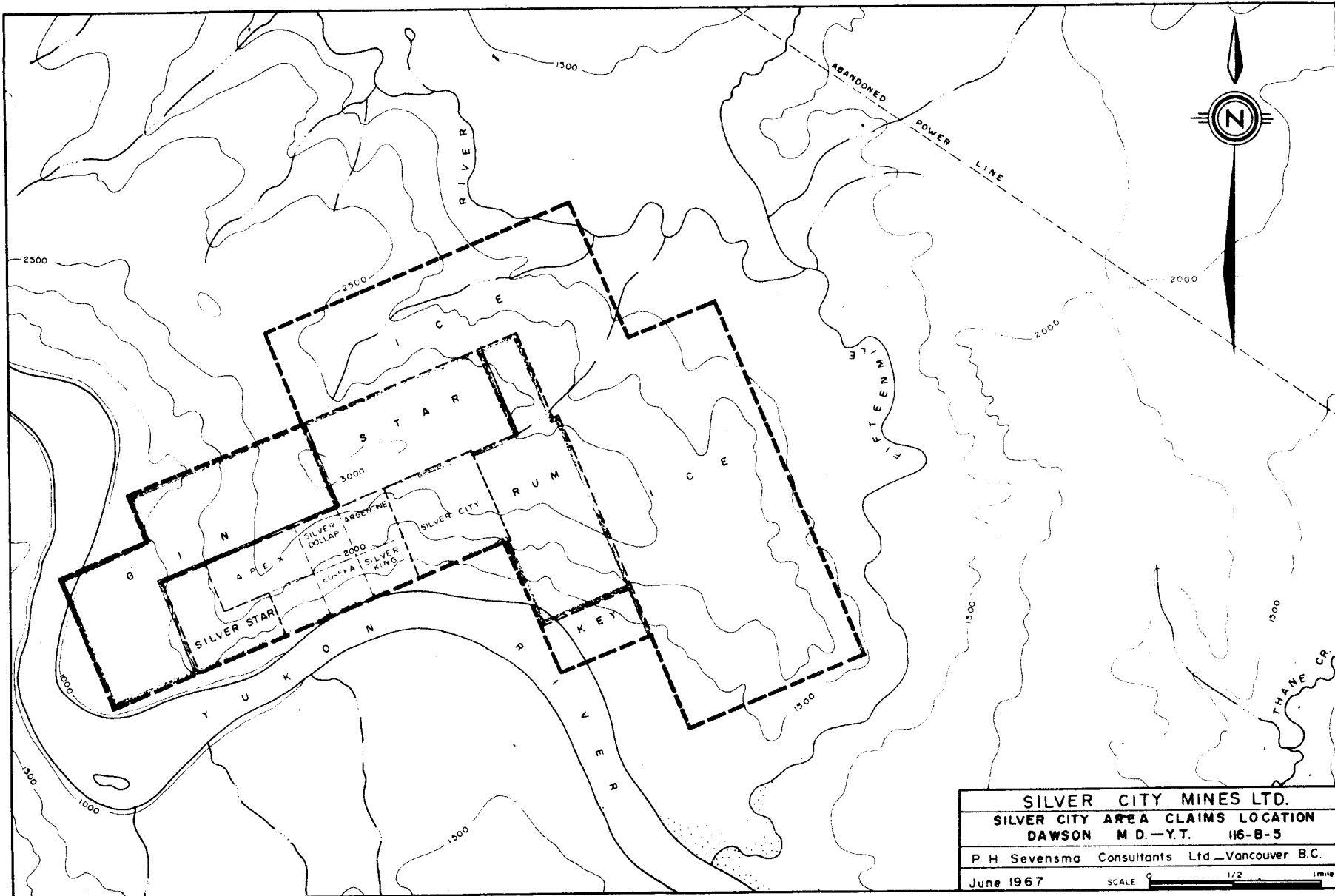
"P. H. Sevensma"

P.H. Sevensma, Ph.D., P. Eng.

June 27, 1967

&

December 12, 1967



<b>SILVER CITY MINES LTD.</b>		
<b>SILVER CITY AREA CLAIMS LOCATION</b>		
<b>DAWSON</b>	<b>M.D.-Y.T.</b>	<b>116-B-5</b>
P. H. Sevensma Consultants Ltd. Vancouver B.C.		
June 1967	SCALE	0 1/2 1 mile

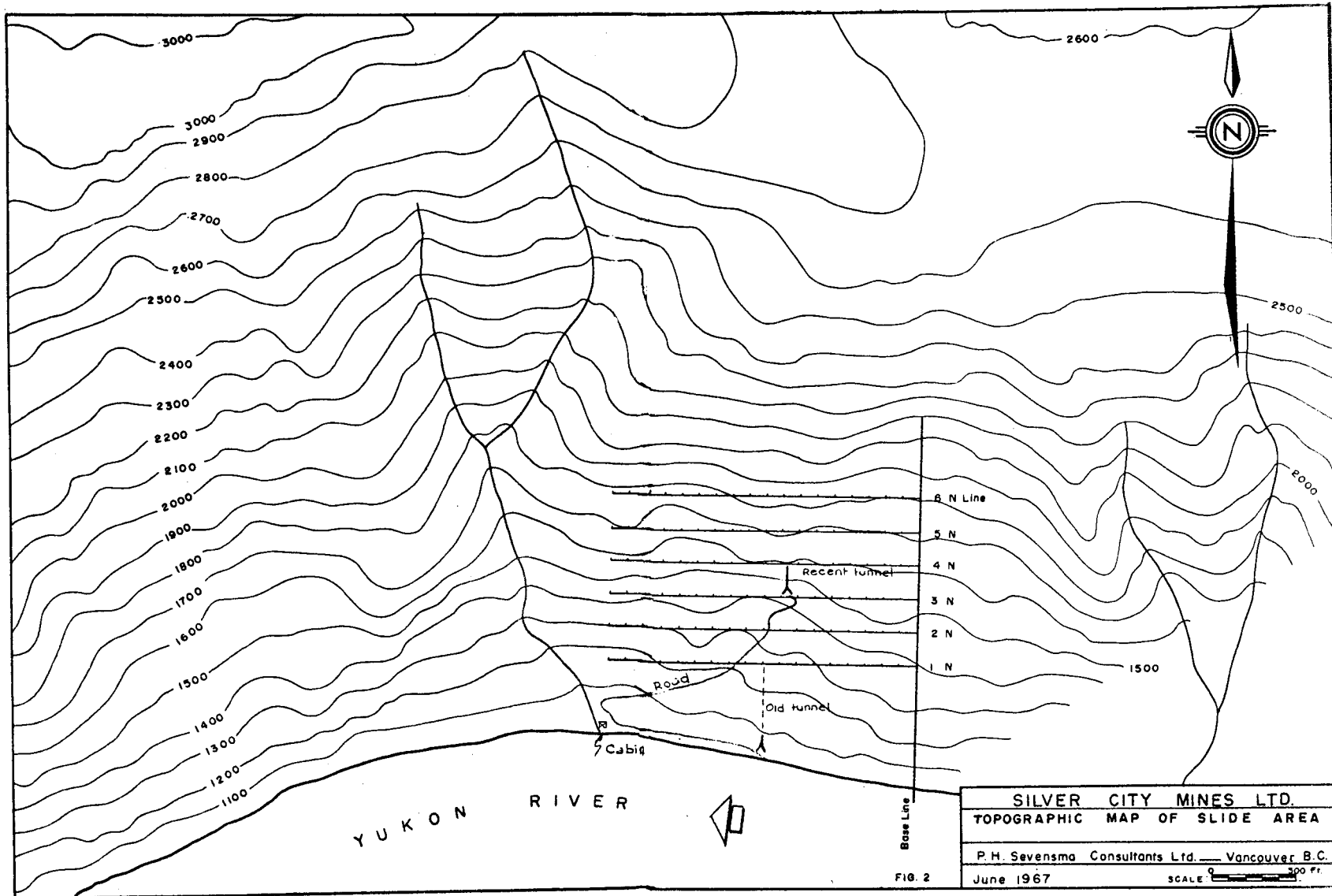


FIG. 2

SILVER CITY MINES LTD.	
TOPOGRAPHIC MAP OF SLIDE AREA	
P. H. Sevensma Consultants Ltd. Vancouver B.C.	
June 1967	SCALE 300 FT.