

ASSESSMENT REPORTS

MAP No. 105M-14

TYPE OF WORK: Progress Report

REPORT FILED UNDER	Silver Spring Mines Ltd.
DATE PERFORMED	DATE FILED: Dec. 1968
LOCATION - LAT.	63° 57'
LONG.	135° 24'
CLAIM Nos.	(see back)
WORK DONE BY	P.H. Sevensma Consultants Ltd.
WORK DONE FOR	Silver Spring Mines Ltd.
REMARKS	Three distinct lithologic units are recognized which are summarized. The major structural feature of the area is a faulted dome-like anticline. Three major trenches have been excavated to expose bedrock at the contact between "greenstone" and the underlying "schists". Figures show the location of ore and soil samples taken in the area.

Vien exposed in one trench (No. 3) It is workable ore grade.

CLAIM NOS.

<u>Claim Name</u>	<u>Grant No.</u>
Paddy	59313
" 2,3	83253-54
" 4,5	83721-22
Carol 1-4	80239-42
" 5	80348
" (f)	81152
Joe (f)	80453
Joe 2 (f)	84489

SILVER SPRING MINES LTD.

Paddy Group Mineral Claims

Mayo M.D., Y.T., 105-M-14

Lat. 63° 57' N., Long. 135° 24' W.

INTERIM PROGRESS REPORT

by

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

December 5, 1968.

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SILVER SPRING MINES LTD.

Paddy Group Mineral Claims

Mayo M.D., Y.T., 105-M-14

Lat. 63° 57' N., Long. 135° 24' W.

INTERIM PROGRESS REPORT

1. INTRODUCTION

Mineral claims comprising the Paddy group were acquired by the company during the latter part of September, 1968. An intensive program of surface exploration was initiated using a D-8 bulldozer to expose bedrock in areas known, or judged favorable for the occurrence of sulphide bearing vein-faults. Work by the previous owner of the property had exposed a number of very narrow veins, and perhaps more significantly, an abundance of large irregular sulphide vein fragments or boulders which yielded high (\pm 200 oz.) silver values.

This report summarizes results of the recent work, as observed by the writer on November 22 to 25 last, and on studies conducted by Messers. Aikins and Fabro of my staff during the past several weeks.

2. LOCATION and ACCESS

The property lies astride the Territorial highway between the communities of Elsa and Keno City. Mayo, a service and distributing center is some 40 miles distant and Whitehorse is approximately 300 miles to the south by a well maintained gravel highway. Claims occupy part of the north flank of Galena Hill and extend from the floor of the McQuesten River Valley at 2,300 feet elevation to an elevation of 3,500 feet. Christal Creek and its minor tributaries provide an adequate supply of water for year round exploration.

3. CLAIM STATUS

The Paddy group is comprised of the following mineral

claims:

<u>Name</u>	<u>Grant No.</u>	<u>Renewal Date</u>
Paddy	59313	November 1, 1970.
Paddy No. 2 & 3	83253 & 83254	" " "
Paddy No. 4 & 5	83721 & 83722	" " "
Carol No. 1 - 4	80239 - 80242	" " "
Carol No. 5	80348	" " "
Carol (f)	81152	" " "
Joe (f)	80453	" " "
Joe No. 2 (f)	84489	" " "

Key claim posts have been located in the field and claim boundaries are approximately as shown on the appropriate maps as enclosed with this report. A survey would however, be required to establish legal boundaries.

4. REGIONAL GEOLOGY

The quartzites, argillites, schists and phyllites which form the host formation were long considered as belonging to the Yukon Group of Precambrian or Palaeozoic age. More recent work, by L.G. Green and J.A. Roddick (Paper 62-7) and D. Tempelman-Kluit (Paper 66-1), suggests a Mesozoic age ranging from Jurassic to early Cretaceous. Three distinct lithologic units are recognized throughout the mineral belt, these are:-

- Upper Schist: Graphitic schist, graphitic phyllite, thin-bedded quartzite, quartz-mica schist, limestone and quartz-sericite schist.
- Central Quartzite: Thick-bedded cherty quartzite, thin-bedded quartzite, graphitic phyllite, graphitic schist, argillite.
- Lower Schist: Quartz-sericite schist, graphitic schist, graphitic phyllite, tb. quartzite, calcareous schist. Thick-bedded quartzite, tb. quartzite, phyllite, graphitic schist.

This sedimentary sequence has been intruded by a series of greenstone lenses or sills.

Most of the greenstone bodies occur in the Lower Schist formation and in the schist member of the central quartzite.

Several small, poorly exposed outcrops of Quartz-Feldspar porphyry are located at scattered points throughout the district.

A pre-ore biotite lamprophyre dyke, one of several in the area, is located on the eastern part of the claim group, and extends onto the adjoining property where it is displaced by the Formo vein-fault.

The major structural feature of the area, a faulted dome-like anticline referred to as the McQuesten Anticline, has its axis north of the Keno silver belt along the McQuesten River valley. The sedimentary strata therefore exhibit a near east-west strike and dip 30° to the south, in the area now under study. In detail however, the structure may be quite complex, and the northern half of the claims lie close to or on the anticline axis, as evidenced by flat dips.

As the "vein faults" contain the major concentrations of economic minerals, careful attention is directed to the study of fault and fracture patterns. The following general structural relationships prevail:-

	<u>Strike</u>	<u>Dip</u>
Bedding	N 80° E	± 25° S
Vein faults	± N 30° - 65°E	55° - 80° SE
Post-ore faults	± N 45° W	40° - 50° SW

5. PROPERTY, GEOLOGY

Natural rock exposures on the property are confined with minor exceptions, to the massive varieties of greenstone which are characteristic of this stratigraphic sequence in the Lower Schist formation. The remainder of the area is covered by residual soils developed from the decomposition of the underlying schists, organic muck, peat and locally by shallow deposits of glacial till. All soil below the top several inches in late summer is permanently frozen.

Three major trenches have been excavated in attempts to expose bedrock at the contact between "greenstones" and the underlying "schists". This work has been concentrated in and adjacent to surface lineaments, float occurrences and narrow quartz-siderite veins. Figure 2 shows a number of the more significant features noted.

The exposure of what appears to be a substantial ore shoot in trench number 3 provided a well defined zone for investigation. Initial stripping through a sequence of schistose sediments uncovered gneissic lenses of galena intercalated with the schists and apparently having their source in a steeply dipping fracture zone. One layer of massive sulphide appeared continuously over a strike length of 40 feet from the fracture zone. Weathering effects hampered the evaluation of the fracture zone. It was therefore suggested that blasting and hand trenching be employed in an effort to reach fresh, unaltered rock. On completion of this trench, which measured 48 feet in length by \pm 4 feet and had an average depth of 10 feet, both veins were exposed as persistent, fresh predominately galena bearing shear structures.

Vein material exposed in the trench was examined and two chip samples were taken. It would now appear that these are two well defined massive sulphide zones trending N50° - 55°E with an irregular fracture zone branching at an angle some 20° to the North. This latter zone is characterized by discontinuous lenses of coarse-grained sulphide, predominantly sphalerite. Figure 3 shows the major features of the number 3 trench together with assay values returned from samples taken on this zone.

Figure 2 shows the geological setting over a wider area and the location of ore and soil samples taken during the assessment of the other areas of interest. Analytic results of the soil samples are as follows:-

<u>Loc. No.</u>	<u>Sample No.</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>
1	300	12	175	25
2	301	35	750	100
3	302	30	575	1,370
4	46428	15	30	150

Note: Samples 1 to 3 taken by H.S. Aikins, Analyzed by Coranex Ltd.

Sample no. 4 taken by P.H. Sevensma, Analyzed by Coast Eldridge Ltd.

(Total extraction and A.A. analysis used on all samples)

All samples represent various exposures of oxidized soil encountered in stripping and road building operations. In the absence of more extensive data on metal threshold values in this immediate area it is difficult to provide a meaningful interpretation of these values.

Lead values are perhaps the most definitive in these circumstances and it is highly probable that lead values above 200 p.p.m. are located very near a bedrock source of this element. The silver values recorded here are all anomalous, which fact alone suggests the need for

further study before drawing an inference from these data. Location no. 3 provides the only anomalous Zn. value.

Three samples were submitted for an analysis from trenches 1 and 2. * Results are as follows:-

<u>Sample No.</u>	<u>Oz. Au./t.</u>	<u>Oz. Ag./t.</u>	<u>% Cu.</u>	<u>% Pb.</u>	<u>% Zn.</u>
471	.07	304.75	Tr.	66.80	5.14
472	.03	78.15	.40	15.85	Tr.
473	.01	10.90	-	1.92	-

* All samples analyzed by J.R. Williams & Sons Ltd., Vancouver, B.C.

Sample 471 was a specimen of galena and freibergite occurring as float adjacent to what is reported to be a mineralized fracture in quartzite just below the diorite (?) contact. Bulldozer stripping and some drilling and blasting have been employed in an attempt to better expose this zone, but it has not yet been possible to examine the mineralized portion of the fracture. A fracture noted in the overlying greenstones may be the equivalent zone, but within the greenstone it is represented by 1 to 2 inches of quartz devoid of any sulphide mineralization. Samples 472 and 473 were from a 6" vein in massive greenstone bearing N40°E and dipping 75° to the SE. Samples were taken from the weathered portion of this vein and represent oxidized sulphides and the carbonates respectively.

6. SUMMARY

The vein exposed in trench no. 3 and its likely extensions as indicated by the exposure in trench no. 2 provides a target with definite ore potential. Several thousand pounds of "high-grade" were set aside from the trenching operations on zone no. 3 and a fifteen pound sample has been submitted to the Trail Smelter for evaluation as shipping ore.

Results of this test are not as yet available, but a gross value in the order of \$400.00 per ton is indicated by prior assay results. The potential of this vein is however, best judged by experience in the district which has shown that the individual lodes or ore-shoots may range in size from a few hundred tons to the more than one-million tons in the system of faults and ore bodies which comprise the Hector-Calumet deposit. The thorough testing of this vein should be given priority over any other work.

The zone indicated by work on trench no. 1 will require testing to evaluate the nature and extent of the vein believed to be the source of sample no. 471. A hand excavated pit or shallow shaft would be of value in establishing the attitude of any ore bearing structure.

The encouraging geochemical results obtained from the north side of Christal Creek provide evidence of zones of mineralization not yet exposed. The abandoned works will require careful examination to determine the reason for the fairly extensive work conducted at a time when only extremely high-grade ores were of economic significance.

It is noted that an ore shoot containing 50,000 tons of recoverable ore of the tenor indicated in trench no. 3 would have a gross value of 10 million dollars in the volume represented by a sheet 2½ feet thick, 100 feet deep and 1,000 feet long. Geological evidence further suggests that the contact between the schists and the underlying argillaceous and quartzitic rocks as exposed in trench no. 3 is favored as a control for ore emplacement. What may be regarded as the minimum objective of the current program is thus seen to present a relatively small target. Careful geological guidance of each stage of the planned work will be essential.

7. RECOMMENDATIONS

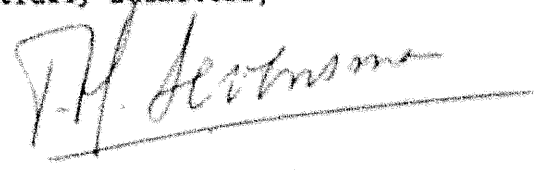
Provision for the following work should be made although results of all aspects of the program should be evaluated in the field as work progresses: -

Geological Mapping and Supervision 6 man months @ \$1,000.00 per month	\$6,000.00
Bulldozer trenching, road construction, etc. 500 hours @ \$40.00 per hour	20,000.00
Equipment Rental (compressor, loader, percussion drills, etc.)	3,000.00
Drilling and Blasting Operations (labor and supplies)	7,500.00
Diamond Drilling (subject to further evaluation of percussion drilling) 2,000 feet of AQ and/or BQ drilling @ \$15.00 per ft.	30,000.00
Sampling and Assaying (excluding geochemical samples)	2,000.00
Linecutting and General Labour 6 man months @ \$600.00 + 25% per month	4,500.00
Camp Operation and Maintenance	10,000.00
Light Trucks and Transportation	3,000.00
Communications	1,500.00
Consulting Fees and Expenses (including minor geochemical and geophysical studies)	7,500.00
Administration, head office and overhead	<u>5,000.00</u>
Sub-total	\$100,000.00
Contingency allowance	<u>20,000.00</u>
	<u>\$120,000.00</u>

It is recommended that work be resumed about mid-March with initial emphasis on camp improvement, bulldozer and hand-trenching and

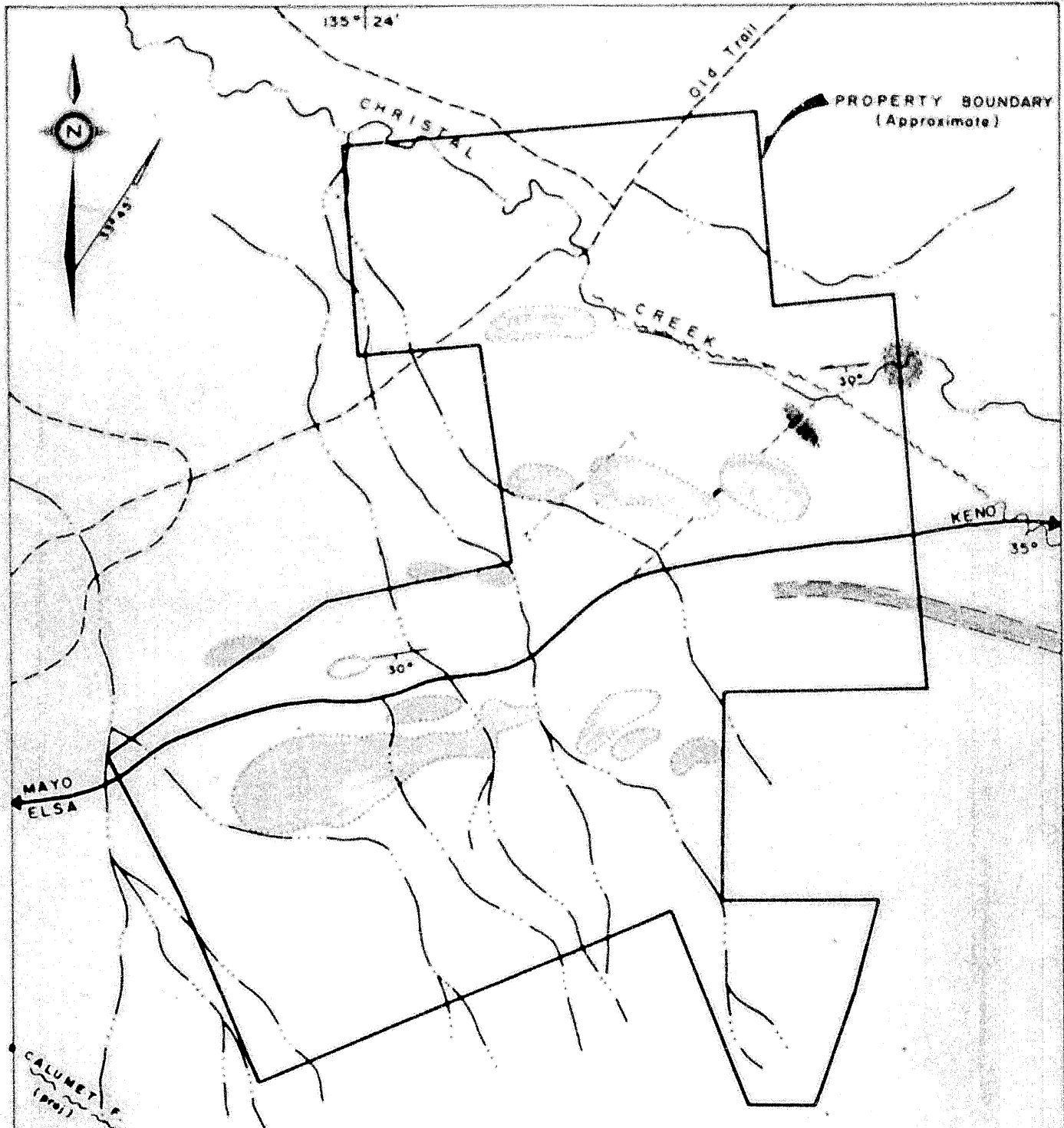
general preparatory work. Drilling should not be initiated until snow conditions permit detailed mapping of surface exposures.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "P.H. Sevensma", is written over a horizontal line.



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

December 3, 1968.








LEGEND

INTRUSIVE ROCKS (Mesozoic)

-  Lamprophyre
-  Diorite (Greenstone)

SEDIMENTARY ROCKS (Mesozoic ?)

-  Lower Schist Formation.

-  Area of outcrop
-  Bedding, schistosity
-  Fault, indicated, inferred.
-  Vein fault, indicated, inferred.

Ref. G.S.C. Bulletin III; Paper 66-1

P.H. Sevensma

DRAGON
(Vein fault)


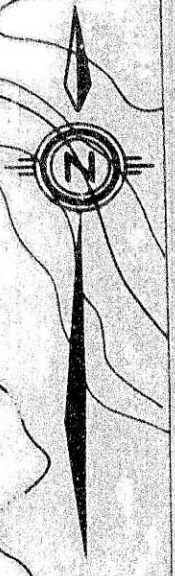
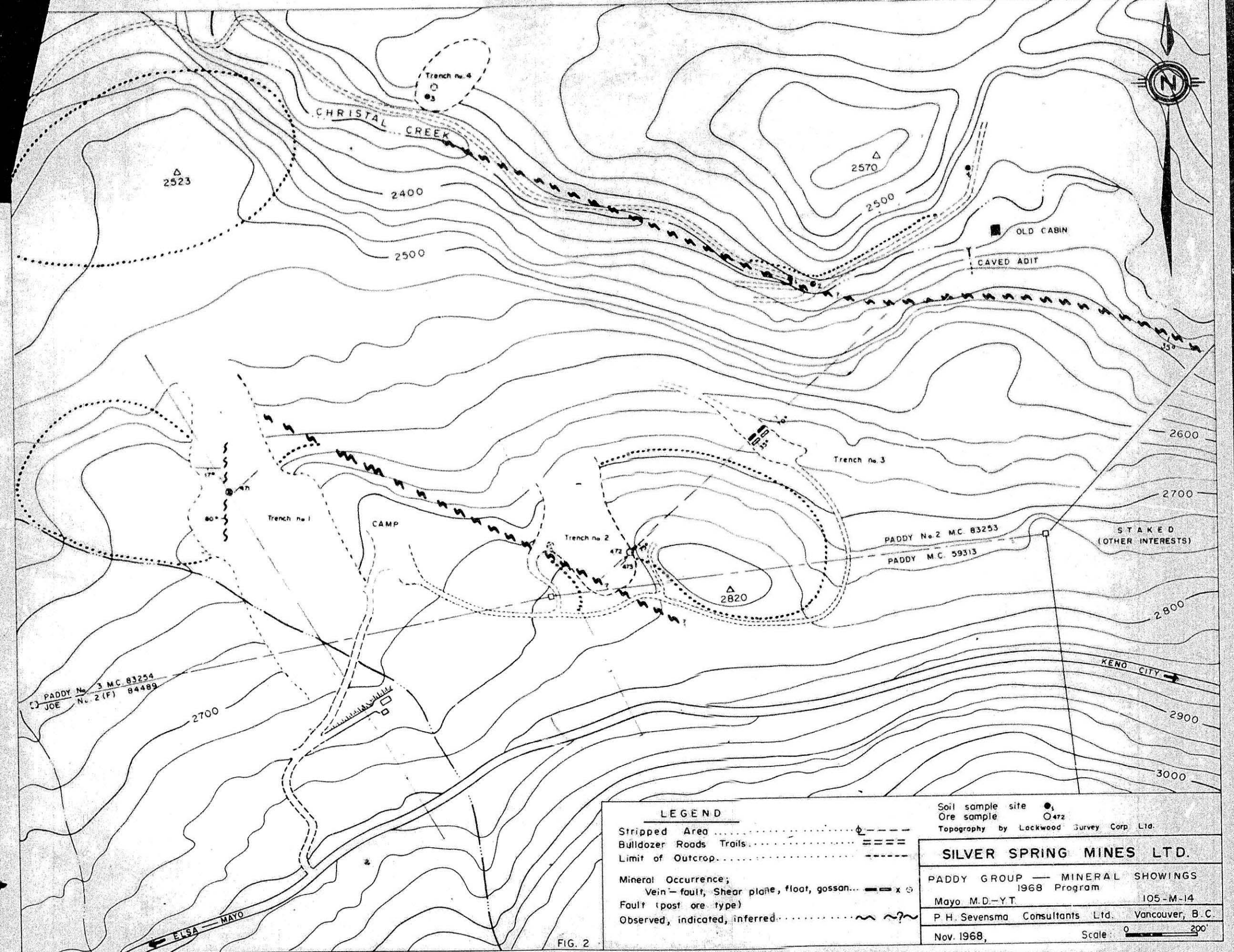
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PADDY GROUP—REGIONAL GEOLOGY	
Mayo M.D.—Y.T.	105 -M- 14
P. H. Sevensma Consultants Ltd. Vancouver B.C.	
November 1968,	Scale: 

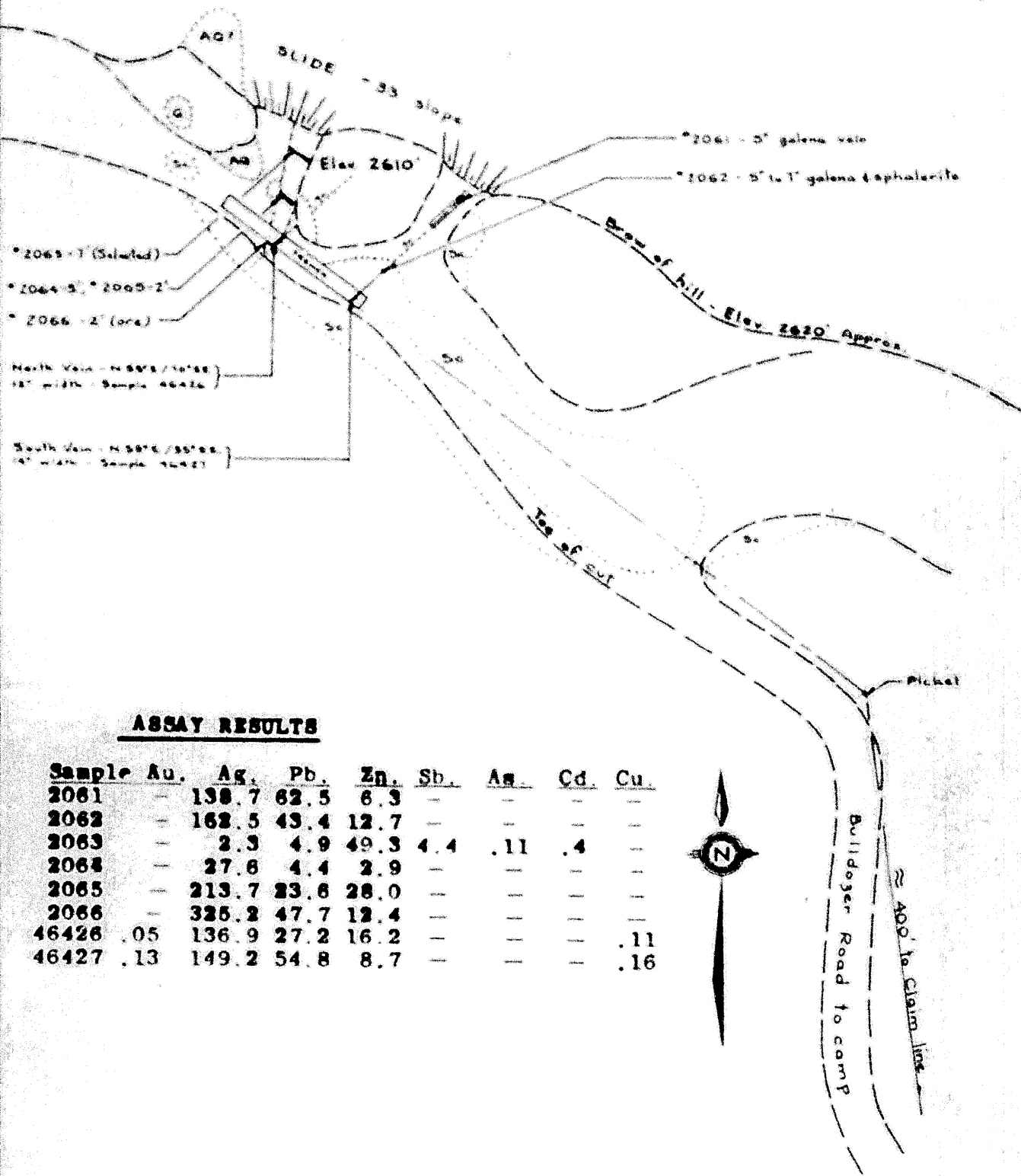
FIG. 1



LEGEND	
Stripped Area	⊖ - - - - -
Bulldozer Roads Trails	⊖ = = = = =
Limit of Outcrop	⊖ - - - - -
Mineral Occurrence;	
Vein - fault, Shear plane, float, gossan	- - - x ⊖
Fault (post ore type)	- - - - -
Observed, indicated, inferred	⊖ ~ ~ ~ ~ ~

Soil sample site	●
Ore sample	○ 472
Topography by Lockwood Survey Corp. Ltd.	
SILVER SPRING MINES LTD.	
PADDY GROUP — MINERAL SHOWINGS	
1968 Program	
Mayo M.D.-Y.T.	105-M-14
P. H. Sevensma Consultants Ltd.	Vancouver, B. C.
Nov. 1968,	Scale: 0 200'

FIG. 2



ASSAY RESULTS

Sample	Au.	Ag.	Pb.	Zn.	Sb.	As.	Cd.	Cu.
2061	-	138.7	62.5	6.3	-	-	-	-
2062	-	162.5	43.4	12.7	-	-	-	-
2063	-	2.3	4.9	49.3	4.4	.11	.4	-
2064	-	27.8	4.4	2.9	-	-	-	-
2065	-	213.7	23.6	28.0	-	-	-	-
2066	-	325.2	47.7	12.4	-	-	-	-
46426	.05	136.9	27.2	16.2	-	-	-	.11
46427	.13	149.2	54.8	8.7	-	-	-	.16



Bulldozer Road to camp
 ≈ 400' to Claim line

SILVER SPRING MINES LTD.

PADDY no. 2 M.C.—Geology and Assay Plan

Mayo MD.—Y.T. 105-M-14

P. H. Sevensma Consultants Ltd—Vancouver B.C.

Nov. 12, 1968.

Scale: 0 40'

FIG. 3

P. H. Sevensma