

013353

SPENCER CREEK MINES LTD.

YUKON SILVER AND OWL GROUPS

60° 13' N - 130° 20' W

105 - B - 1, WATSON LAKE MD., Y.T.

by

P. H. SEVENSMA CONSULTANTS LTD.

OCTOBER 17, 1969.

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Part II, by P.H. Sevensma

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SPENCER CREEK MINES LTD.

Yukon Silver & Owl Claim Groups

Spencer Creek Area

Watson Lake M.D., Y.T. - 105-B-1

Y.S. - Lat. 60° 13', Long. 130° 24'

Owl - Lat. 60° 14', Long. 130° 18'

1. INTRODUCTION

This report is a supplement to the Property Examination Report of September 26, 1969, at which time the assay results were not yet available. This report should be used in conjunction with the previous report which contains the description of the showings.

The results obtained to date are encouraging and on this basis a fairly extensive work program is recommended.

2. PROPERTY

A total of 54 mineral claims have been staked to date and these are as follows:

<u>Claim No.</u>	<u>Tag No.</u>	<u>Date Staked</u>	<u>Date Recorded</u>	<u>Expiry Date</u>
Y.S. 1 - 8	Y19037 to Y19044	Aug. 9, 1967	Aug. 18, 1967	Aug. 18, 1970
Y.S. 9 & 10	Y19057 & Y19058	Aug. 13, 1967	Aug. 28, 1967	Aug. 18, 1970
Y.S. 11 - 32	Y19322 to Y19343	Aug. 23, 1967 to Aug. 27, 1967	Sept. 14, 1967	Sept. 14, 1970
Owl 1 - 8	Y29332 to Y29339	July 20, 1969	Aug. 5, 1969	Aug. 5, 1970
Owl 9 - 16	Not rec'd.	Aug. 26, 1969	Sept. 15, 1969	Sept. 15, 1970
Owl 16 - 22	Not rec'd.	Sept. 14, 1969	Sept., 17, 1969	Sept. 17, 1970

It is understood by the writer that the claim position information is reliable.

3. SHOWINGS

(a) Y.S. #4 (Figure 2)

The assay results on the shear zone gave better than 20 <sup>oz</sup>/t. Ag. with an approximate 0.6:1 Ag. to Pb. ratio, but a more important feature is the silver value and a 1:1 Ag. to Pb. ratio over 4' in the bedded replacement zone. It is thought that the bedded zones offer the better tonnage potential. On this particular showing it is recommended that a Crone horizontal - vertical loop EM unit be used to test its effectiveness in tracing the mineralized zones in this environment, thereby allowing accurate direction of bulldozer stripping. If this fails, the stripping must be performed with the utmost care and continual guidance by a knowledgeable field man.

The known bedded zone may be considered as a drill target at this time, but this work should not be conducted until the search along the shear for more bedded zones has been completed.

(b) Y.S. #6 (Figure 3)

The assay results on this showing are encouraging and follow-up work is essential.

The work should first involve further hand trenching on the known zones with the hope of improving the length on surface.

Bulldozer trenching either directed by an EM anomaly, if possible, or otherwise unaided, should continue across the strike of the shear zone.

The bedded zones known and any additional ones found by the trenching will warrant investigation with a diamond drill, as the size and grade of the showing are commercial.

(c) Y.S. #7 (Figure 4)

While the assay return on this showing is not high it still retains potential as a mineralizing pathway for bedded replacement zones and should be investigated with the EM. Trenching would logically follow to explore the length and width of this occurrence.

(d) Y.S. #29 (Figure 5)

An extremely encouraging assay was received from this narrow zone and together with its possibility of great length this becomes a showing with good merit. An EM survey followed by bulldozing is recommended to determine the continuity of this occurrence.

Summary of Recommendations for the Y.S. Showings

The writer has not recommended the use of chemical soil sampling over these showings because of the reasons in the conclusions of the Property Examination Report, plus the fact that a great deal of material has been moved by previous bulldozer work, thereby increasing the chance of getting contaminating soil values in areas that are unmineralized.

In the large lower areas between the four Y.S. showings reconnaissance soil sampling is thought to be of value.

Close spaced geochemical soil sampling could be used in these areas as a follow-up to the EM survey if deep overburden prevents direct bulldozer stripping.

(e) Owl Showings (Figure 6)

The Owl showings warrant a large reconnaissance soil grid, testing for Pb., Zn. and Cu. On the known showings deep bulldozer trenching and hand trenching is required, but after the soil grid has been completed.

It must be stressed that geological mapping on these showings should be conducted as early as possible.

4. SUMMARY

The work proposal is as follows:

- (1) Road to Owl plus completion of a reconnaissance soil survey over the property 500' x 200' + geological mapping.
- (2) EM and close spaced soil survey on the strike of known shear zones on Y.S. showings, but soil sampling should be confined to the lower areas.
- (3) Reconnaissance soil sampling in the lower areas, between the known showing and bulldozer trenching on the Y.S. showings.
- (4) Hand trenching and mapping to accompany all bulldozer trenching.
- (5) Follow-up by trenching on Owl anomalies and detailed mapping.
- (6) Diamond drilling on those showings exhibiting economic potential.

5. RECOMMENDATIONS

- (1) Diamond drilling could be initiated on some of the Y.S. showings at this time, but it is deemed advantageous to explore both for more targets and for extension of the existing ones before drilling is commenced.
- (2) Special note must be made again to U.V. lamping of all quartz and calcite stringers, veins or dykes found on the property.
- (3) Reconnaissance prospecting and geological mapping is required at the earliest moment in the areas North, East and Southeast of the claim group right up to the contact of the phyllites and the overlying thick sequence of limestones. It is this contact zone that may well offer the best chance of containing galena - sphalerite occurrences of economic size.

6. COST ESTIMATE

(1) Road Construction and bridges.	\$6,000.00
(2) Bulldozer trenching, 300 hours @ \$35.00 an hour.	10,500.00
(3) Linecutting, 25 miles @ \$100.00	2,500.00
(4) Sampling, 1,000 samples @ \$6.00.	6,000.00
Survey, 2 man/months & rental.	3,000.00
Hand trenching, 4 man/months @ \$750.00	3,000.00
(7) Geological mapping, 4 man/months @ \$1,500.00	6,000.00
(8) Prospecting, 4 man/months @ \$1,000.00	4,000.00
(9) Assaying	<u>2,000.00</u>
Carried forward	\$43,000.00

SPENCER CREEK MINES LTD.

SPENCER CREEK PROPERTIES

Watson Lake M.D., 105-B-1

by

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

1. SUMMARY

During the 1968 and 1969 field seasons the writer examined a number of silver-lead-zinc-tungsten occurrences in the general Spencer Creek - Boulder Creek area along the East margin in the Cassiar batholith, including the area covered by the Y.S.

In October 1968, the writer recommended a further modest work program of a prospecting nature on the latter group, with emphasis on the search for good grade occurrences of mining width.

This type of work has been carried out in 1968 with encouraging results over a large area, covered by the Y.S. and Owl claims.

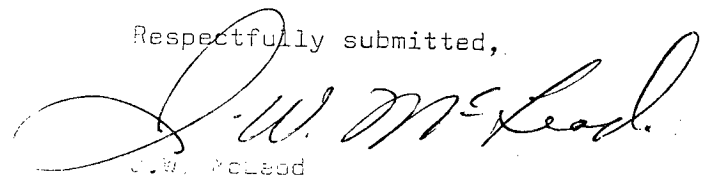
A total of eleven showings have been uncovered so far, two of which show commercial grades over mining widths, i.e.:

	<u>Width</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>
Y.S. 4	4'	11.8	11.96	5.63
Y.S. 6	6'	6.9	11.24	6.89

The other seven showings are narrower, i.e. of the order of 4" - 1', but several are high grade, and some carry significant values of copper and tungsten.

	Brought forward	\$43,000.00
(10) Camp construction		8,000.00
(11) Camp operation, 1,000 man/days @ \$10.00		10,000.00
(12) Transportation, 4 months @ \$1,000.00		4,000.00
(13) Drilling, 3,000' @ \$16.00		48,000.00
(14) Core storage		<u>1,000.00</u>
Total field work		\$114,000.00
Engineering & Supervision		<u>11,500.00</u>
		\$125,000.00
Contingencies, 10%		12,500.00
Administration, 10%		<u>13,800.00</u>
TOTAL BUDGET		<u><u>\$151,800.00</u></u>

Respectfully submitted,



J.W. McLeod  
P.E. SEVVISMA CONSULTANTS LTD.

The occurrences lie near the favorable contact of Lower Cambrian phyllites with a limestone sequence, a short distance East of the Cassiar batholith and in some cases are near andesitic or basaltic dykes.

Some of the showings follow shears and consist of near-massive galena with small amounts of sphalerite; others replace limey beds and contain a higher proportion of sphalerite.

Silver-lead ratios are of the order of 0.6:1 to 1.5:1.

The economic potential of these showings is variable.

(a) In a shear, a lens 3' wide, 200' long and 100' deep of near massive galena, represents about 12,000 tons @ 50 <sup>oz</sup>/t. Ag. and 60% Pb., with about \$200.00 per ton gross smelter return, or about \$150.00 per ton net smelter return in this location, where direct shipping is easily possible.

(b) Quartzose veins with a high silver-lead ratio and some copper and tungsten and tin as on the Owl claims. The economic potential of these occurrences is as yet unknown, but could be significant in this area, which is in a recognized tungsten belt.

(c) Replacement bodies of silver-lead-zinc mineralization, none of which have yet been tested for size in this area. An economic objective in this case would be of the order of 250,000 to 500,000 tons of the approximate grade found in Y.S. 4 and 6, i.e. 8 <sup>oz</sup>/t. Ag., 12% Pb. and 6% Zn. This would require, for instance, two bodies about 600' by 300' by 10' wide.

In view of the abundance of showings in this generally recognized favourable Lower Cambrian sequence, the probability is good that one or more of the above types will prove to be of economic size in this area. So far, a modest program has shown that narrow high grade occurrences often reflect the nearby presence of commercial grades over commercial widths.

## 2. RECOMMENDATIONS

The writer endorses fully the budget prepared by Mr. J. McLeod, a member of the staff of P.H. Sevensma Consultants Ltd., and recommends especially that an intensive search for all possible mineral occurrences be completed by geochemical and geophysical reconnaissance followed by hand trenching and/or bulldozer stripping, before any drilling is started.

This is especially important in this terrain, where even the larger and significant showings have usually an inconspicuous surface expression consisting mainly of manganese-stained oxidized patches.

Respectfully submitted,



P.H. Sevensma, Ph.D., P.Eng.  
P.H. SEVENSMA CONSULTANTS LTD.

October 17, 1969.

## APPENDIX "A"

ASSAYS

<u>Sample No.</u>	<u>Width</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>Cu.</u>	<u>W.</u>	<u>Au.</u>	<u>Type</u>
** 29498	4"	23.6	30.74	2.76	0.09	0.02	0.06	shear
** 29499	4'	11.8	11.96	5.63	0.04	0.02	0.02	bedded
** 29500	4"	26.5	42.44	2.93	0.09	-	0.01	shear
** # 7	1'	46.6	49.20	0.75	0.06	-	-	shear
** 0008	6'	6.9	11.24	6.89	0.02	0.02	-	bedded
** 0009	2'	0.5	0.73	3.50	0.02	-	-	bedded
** 0010	4"	0.1	0.39	1.03	Tr.	-	-	shear
43301	Grab 2"	1.5	0.42	0.22	0.90	-	-	vein
43302	6"	42.1	65.52	0.87	-	-	-	bedded
43303	Grab 4"	8.4	13.31	1.98	-	-	-	capping
43304	Grab 4"	3.0	3.74	0.51	-	-	-	capping
43305	Grab 8"	2.9	4.58	0.41	-	-	-	capping
4 30	Grab 4"	6.2	2.79	0.02	0.13	0.13	-	vein
4 31	Grab 6"	0.51	0.42	-	-	-	-	vein
* 4	2'	2.50	5.95	2.95	-	-	-	shear
* 4	9'	0.80	0.05	3.90	-	-	-	bedded
* 4	0 - 4"	66.30	72.55	-	-	-	-	shear
* 437	½" - 4"	47.55	61.40	1.70	Tr.	-	0.04	?
* 438	4"	8.65	10.95	2.40	-	-	-	?
* 439	4"	123.60	66.10	-	-	-	-	shear
* 443	3"	43.20	35.90	-	-	-	0.02	shear

\* Samples taken September 12th and 13, 1968, by P.H. Sevensma (see reference), and assayed by J.R. Williams & Son Ltd., File No. 307527/533, Sept. 17, 1968.

\*\* Assays by Crest Laboratories Lab. No. 271, October 2, 1969.  
Other samples assayed by Coast Eldridge, 125 E. 4th Ave., in Vancouver.

Note: Grab sample widths are minimum.

*P.H. Sevensma*



PHON 304) 876-4111  
 TELEX: 04-50353  
 CABLE ADDRESS:  
 ELDRICO

TO:

Spencer Creek Mines

c/o P.H. Severson Consultants Ltd.,

715 - 850 West Hastings Street

Vancouver, B.C.

**Certificate of Assay**  
**COAST ELDRIDGE**  
 PROFESSIONAL SERVICES DIVISION  
 WARNOCK HERSEY INTERNATIONAL LIMITED  
 125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

FILE NO. A.3-S.2-69-8600

DATE October 3, 1969

We Hereby Certify that the following are the results of assays made by us upon submitted 038 samples

MARKED	GOLD		SILVER	Lead (Pb)	Zinc (Zn)	Tungsten	Copper (Cu)	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	CENT. (10 <sub>3</sub> )	CENT.		
		\$							
43301			1.5	0.42	0.22		0.90		
43302			42.1	65.52	0.87				
43303			8.4	13.31	1.98				
43304			3.0	3.74	0.51				
43305			2.9	4.58	0.41				
43306			6.2	2.79	0.02	0.13	0.13		
43307			0.51	0.42					

Gold calculated at \$ ..... per ounce

Note. Rejects retained one week.  
 Pulps retained one month.  
 Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gain inherent in the fire assay process.

Provincial Assayer

73:

Spencer Creek Mines  
 P.R. Severson Consultants  
 715 - 850 West Hastings Street  
 Vancouver, B.C.



PHONE: (6 04) 876-4111  
 TELEX: 04-50353  
 CABLE ADDRESS:  
 ELDRICO

**COAST ELDRIDGE**  
 PROFESSIONAL SERVICES DIVISION  
 WARNOCK HERSEY INTERNATIONAL LIMITED  
 125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

FILE NO. **A.3-S.1-69-8600**  
 DATE **October 3, 1969**

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

We Hereby Certify that the following are the results of semi quantitative spectrographic analyses made on **ORE** samples submitted.

SAMPLE IDENTIFICATION	Al	Sb	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Ga	Au	Fe
43306	2.0	ND	ND	0.01	ND	0.05	ND	ND	2.0	Trace	ND	0.1	ND	ND	2.0

SAMPLE IDENTIFICATION	Pb	Mg	Mn	Mo	Nb	Ni	Si	Ag	Sr	Ta	Sn	Ti	W	V	Zn
	*	1.0	0.1	0.001	ND	Trace	Major	0.007	0.01	ND	*	0.3	ND	0.005	0.05

All results expressed as PERCENT BY WEIGHT  
 Note: Rejects retained one month.  
 Pulp retained one month.

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CHEMIST

# CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET  
VANCOUVER 3, B.C.  
PHONE 638-8586

CREST LABORATORIES LTD.  
7911 ARGYLL ROAD  
EDMONTON 32, ALBERTA  
PHONE 462-2321

## CERTIFICATE OF ASSAY

TO P.H. Sevensma & Associates Ltd.  
715 - 850 - West Hastings Street  
VANCOUVER, B.C. Attn: Mr. J.W. McLeod

October 2, 1969

Lab No. 271

Re: Spencer Creek Mines

I hereby certify THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

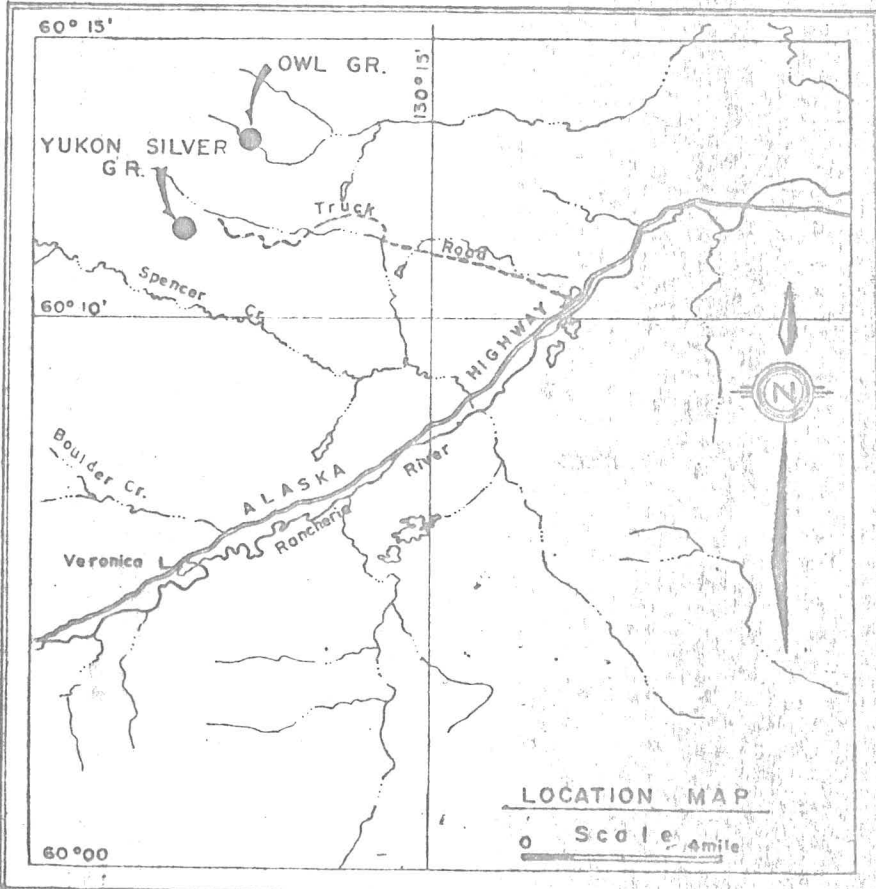
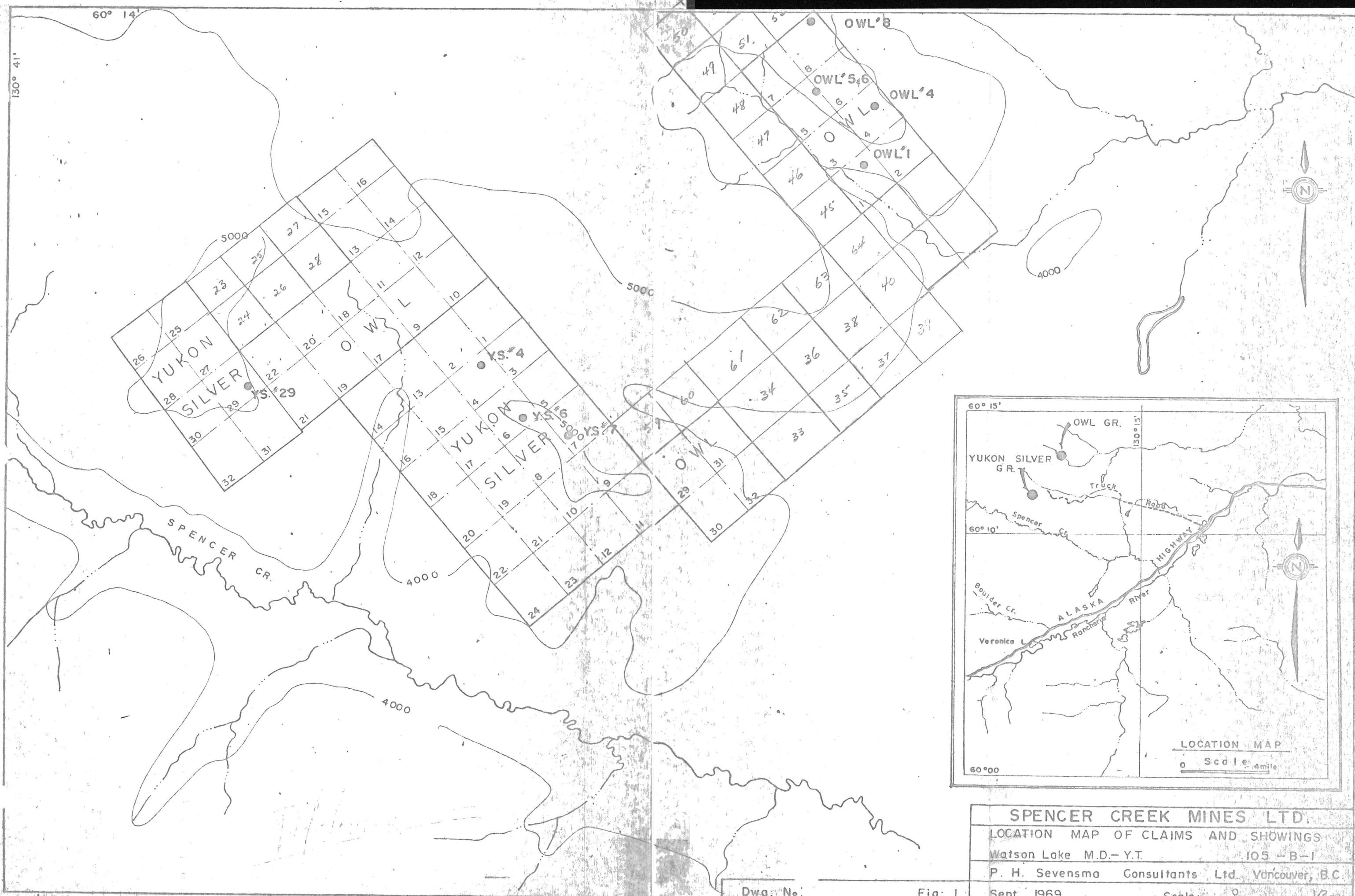
MARKED	GOLD		SILVER	COPPER	LEAD	ZINC	WO <sub>3</sub>				TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
7	---		46.6	0.06	49.20	0.75	---				
0008	---		6.9	0.02	11.24	6.89	0.02				
0009	---		0.5	0.02	0.73	3.50	---				
0010	---		0.1	trace	0.39	1.03	---				
29498	0.06	\$2.10	23.6	0.09	30.74	2.76	0.02				
29499	0.02	0.70	11.8	0.04	11.96	5.63	0.02				
29500	0.01	0.35	26.5	0.09	42.44	2.93	---				

*P.H. Sevensma*

**NOTE:**  
Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

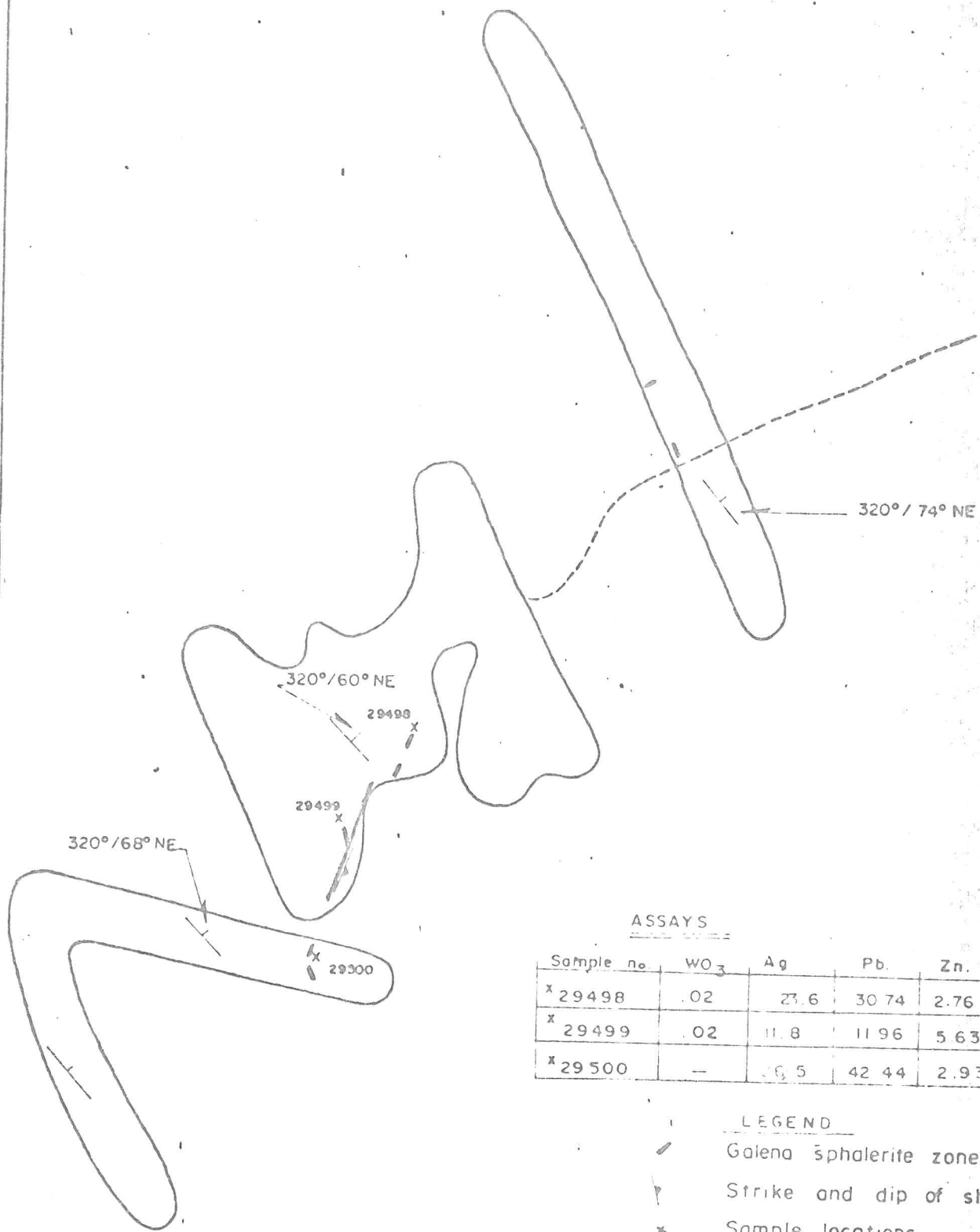
Gold calculated at \$ 35.00 per ounce

*F. B. Bueger*  
Registered Assayer, Province of British Columbia



**SPENCER CREEK MINES LTD.**  
 LOCATION MAP OF CLAIMS AND SHOWINGS  
 Watson Lake M.D.-Y.T. 105-B-1  
 P. H. Sevensma Consultants Ltd. Vancouver, B.C.  
 Sept. 1969, Scale: 0 1/2 mile

Dwg. No. \_\_\_\_\_ Fig. 1



ASSAYS

Sample no.	WO <sub>3</sub>	Ag	Pb.	Zn.	Au.	Width
x 29498	.02	23.6	30.74	2.76	0.06	4"
x 29499	.02	11.8	11.96	5.63	0.02	4'
x 29500	—	16.5	42.44	2.93	0.01	4"

LEGEND

- Galena-sphalerite zones
- Strike and dip of shear.
- Sample locations
- Trail
- Bedding

SPENCER CREEK MINES LTD.

Spencer Cr. showing Y.S. 4

Watson Lake M.D.-Y.T.

105-B-1

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

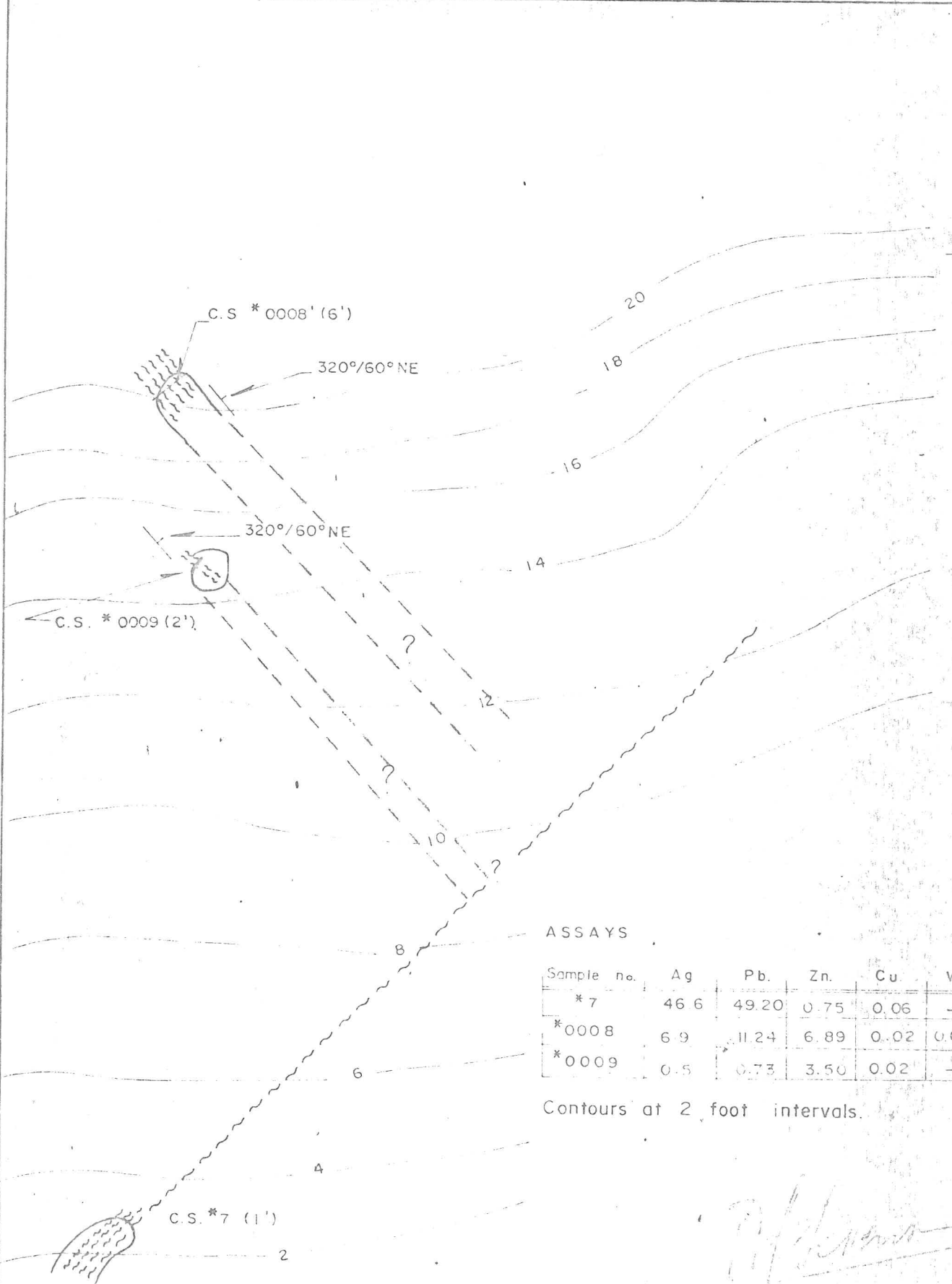
Dwg. No.

Fig: 2

Sept. 1969,

Scale:

0 50'



ASSAYS

Sample no.	Ag	Pb.	Zn.	Cu	WO <sub>3</sub>	Width
*7	46.6	49.20	0.75	0.06	—	1'
*0008	6.9	11.24	6.89	0.02	0.02	6'
*0009	0.5	0.73	3.50	0.02	—	2'

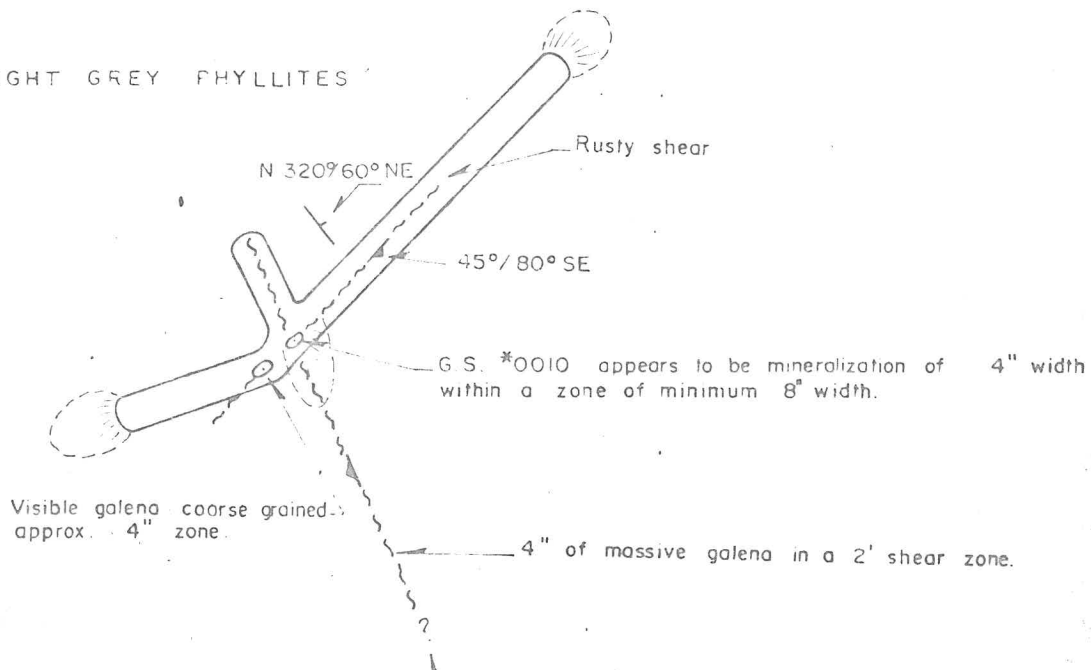
Contours at 2 foot intervals.

*[Handwritten signature]*

<b>SPENCER CREEK MINES LTD.</b>	
Geological sketch showing Y.S. 6	
Watson Lake MD--Y.T.	105 — B — 1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Dwg. No. Fig: 3	Sept. 1969, Scale: 0 — 20'



LIGHT GREY PHYLLITES



NOTE: From sample pit possible 1200' length but spotty outcrop.

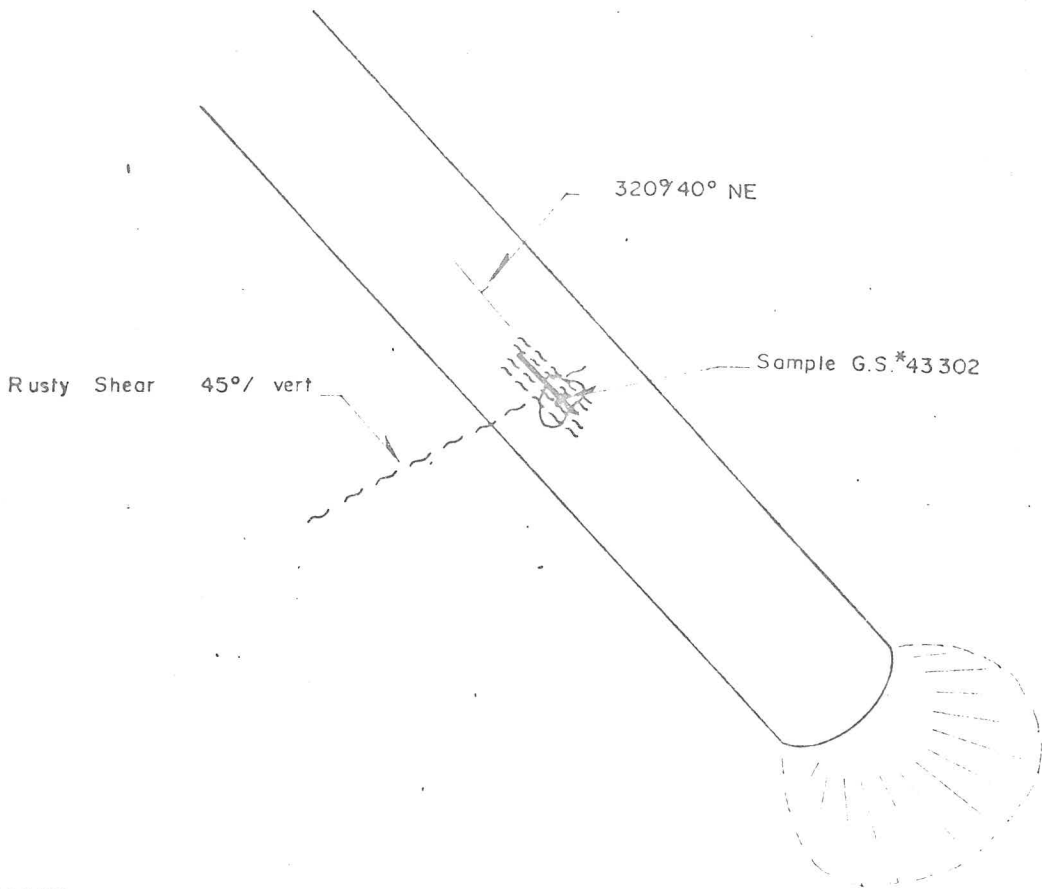
Assay

Sample no.	Ag.	Pb.	Zn.	Width
*0010	0.1	0.39	1.03	4"

*[Handwritten signature]*

<b>SPENCER CREEK MINES LTD</b>	
Y.S. *7 showing with trench and sample loc.	
Watson Lake M.D.-Y.T.	105-B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Dwg. No. Fig: 4	Sept. 1969, Scale: 0  100'

OWL 22 (approx.)  
 Y.S. 29 (approx.)

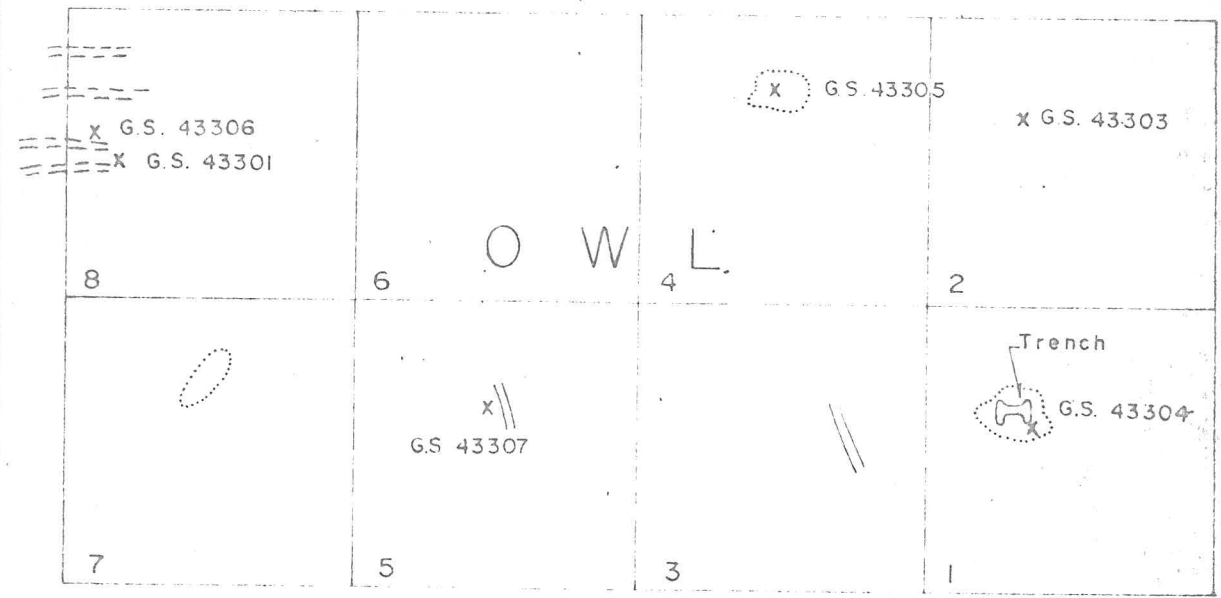
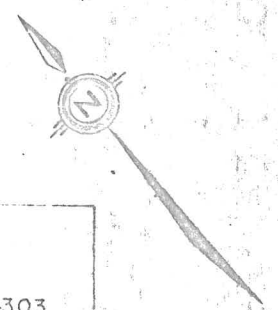


Assay

Sample no.	Ag.	Pb.	Zn	Width
*43302	42.1	65.52	0.87	6"

*Handwritten signature*  
 Y.S. 29 (approx.)  
 Y.S. 31 (approx.)

<b>SPENCER CREEK MINES LTD.</b>	
Y.S. 29 showing with trench and sample location.	
Watson Lake M.D.—Y.T.	105 -B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Dwg. No.:	Fig: 5
Sept. 1969	Scale: 0  20'



**ASSAYS**

Sample no.	Ag.	Pb.	Zn.	Cu.	W.	Width
43301	1.5	0.42	0.22	0.90	N.S.	2"
43303	8.9	13.31	1.98	N.S.	N.S.	4"
43304	3.0	3.74	0.51	N.S.	N.S.	4"
43305	2.9	4.58	0.41	N.S.	N.S.	8"
43306	6.2	2.79	0.02	0.13	0.13	4"
43307	0.51	0.42	N.S.	N.S.	N.S.	6"

Spectrographic Sn: over 0.1%

**LEGEND**

- // Greenstone dykes
- Manganese cappings
- Quartz veins

**NOTE:** Rocks on the claim group are dominantly phyllites and interbedded limy schists and limestone

G.S. — Grab sample, width quoted are minimum.

**SPENCER CREEK MINES LTD.**

OWL Showings with sample locations.

Watson Lake M.D.—Y.T. 105—B—1

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

Dwg. No.:

Fig: 6

Sept. 1969,

Scale: 0 1000'

SPENCER CREEK MINES LTD.  
Yukon Silver and Owl Claim Group  
Spencer Creek Area  
Watson Lake M.D., Y.T., 105-B-1

PROPERTY EXAMINATION REPORT

1. INTRODUCTION

The writer visited the property on August 31, September 1, 10, 13 and 14 of 1969. The purpose of the visit was to sample and map the mineralized zones, some of which have been trenched after an examination by P.H. Sevensma in September 12, & 13, 1968.

The samples taken total 14 and were sent to Coast Eldridge, 125 East 4th Avenue in Vancouver, B.C. for assay.

2. PROPERTY

The property consists of two claim groups, the Yukon Silver claims 1 - 32 and the Owl claims 1 - 22, & 29 - 32 with the Owl 23 - 28 being staked at the time this report is being written.

It is understood by the writer that ownership of the Yukon Silver claims 1 - 32 is presently being transferred to Mr. G.R.E. Leverman of Whitehorse, Yukon Territory, president of Spencer Creek Mines, and that Spencer Creek Mines Ltd. has clear title to the Owl claim group.

The claim locations that were observed appear to have been staked in accordance with the Yukon Quartz Act.

3. HISTORY

The claims cover numerous lead-silver showings some of which were known as early as the 1940's.

In 1964 Canex Aerial Explorations performed road construction to the property and some bulldozer stripping which led to the discovery of some of the present showings.

In 1967, Pacific Giant Steel conducted additional bulldozer stripping.

Neither company appears to have considered it necessary to investigate further the mineralization uncovered with the exception of some long, winding geochemical soil survey lines.

From 1967 until this year, claims have laid essentially dormant except for intermittent, but persistent prospecting by Mr. Leverman.

4. LOCATION and ACCESS

The Yukon Silver claims are situated between 4,000' and 5,000', at latitude  $60^{\circ} 13'$  and longitude  $130^{\circ} 24'$ , on claim sheet 105-B-1.

The Owl claims are situated between 4,000' and 5,000', at latitude  $60^{\circ} 14'$  and longitude  $130^{\circ} 18'$ , on claim sheet 105-B-1.

The Yukon Silver claims are accessible by pick-up truck from the Alaska Highway. The road to the property is approximately 13 miles long, extending from Mile 692.5 on the Alaska Highway Northwest to the property.

Timber is available on the property below 4,700' and water is available both above and below timberline for camp purposes, but the water above timberline is only available in a few selected localities.

The nearest supply centre is 57 miles away in Watson Lake, Y.T., but because of the road access to the property, this presents no problem with regard to supplying a camp.

Surface work could be conducted on the property from June to September without any difficulties.

#### 5. GEOLOGY

The area contains and is probably underlain by predominantly light grey phyllites, interbedded limy schists and relatively unaltered limestone beds. The beds of interlayered material in the phyllites range from 1" to 4' or greater. The phyllites are very consistent over the area and trend approximately N 40° W/40° - 65° NE.

The mineralization, galena and some sphalerite with significant amounts of silver is found mainly in two environments. First in shear fillings, often with limonite, abundant manganese staining, some calcite stringers and often with residual quartz nodules in the shear and along bedding. This association is an expression of relatively deep weathering on the property, along fairly steep dipping shear zones. The second environment is as replacement bodies outward from the shear, which usually traverses the bedding of the metasediments, along preferred limy beds. The

extent of replacement has not yet been tested but the potential for a series of replacement zones along the shear exists because of the occurrence of abundant limy layers in the phyllites.

6. SHOWINGS

(a) Y.S. #4

The host rock is a light grey phyllite trending N 40° W/50° - 65° NE.

The mineralization consists of coarse grained to massive, fine grained galena, some sphalerite, pyrite, chalcopyrite and abundant manganese and limonite stain. Some mineralization occurs along shear zones crossing the bedding; these appear to be the narrowest, 2" to 6" in width. The other occurrence of mineralization conforms to the bedding and is found in one place to be approximately 4' wide.

Within the latter zone are found some quartz nodules which could represent either residual siliceous zones in the original beddings, or quartz veins. In a few places manganite crystals are found in small solution cavities.

The shear and replaced zones are victims of weathering to a depth in excess of 6 feet which was tested with a pit.

The lateral extent of the replaced zones is not known and this work remains of top priority in any future field work program.

The writer took samples 29498, 29499, 29500; assay returns are awaited from Coast Eldridge.

In September 1968, P.H. Sevensma took samples 437, 438, 439, and 445 from the same trenches, but not exactly the same localities. These are:

<u>Sample No.</u>	<u>Width</u>	<u>oz/t. Ag.</u>	<u>% Pb.</u>
437	½" - 4"	47.55	61.40
438	4"	8.65	10.95
439	4"	123.30	66.10
443	3"	43.20	35.90

Assays by J.R. Williams & Sons Ltd., File No. 307527/33, September 17, 1968.

The report containing this information is found on the reference sheet at the end of this report.

(b) Y.S. #6

The host rocks on this showing are light grey phyllites with interbedded limy schist and relatively unaltered limestone beds. The beds of limy material within the phyllites range in thickness from 1" to several feet or more. The N 320°/60° E trend of the phyllites is maintained in this showing.

The mineralization is again of two dominant types, shear fillings in zones from 2" to 2' wide along N 45° E trending fractures, dipping approximately vertically. The mineralization is often coarse grained galena to massive in zones up to 2" thick, but associated minerals are

impossible to detect because of deep weathering along the shear zone. The galena occurs with a rusty, limonitic gauge.

The second type of mineralization is in replaced zones (probably limy beds, as residual particles are sometimes found) but shearing may also be preferred in this direction also.

The mineralization is mainly galena, from coarse to fine grained to massive (with schistosity). It is encouraging that pieces of galena were picked up across the entire 6' zone in the face of the pit. The zone may be wider than 6' at the face of the pit, but this can not be determined until the pit is widened out.

Both mineral occurrences are accompanied by conspicuous Mn-stain and some crystalline manganite.

A greenstone dyke approximately 6' across outcrops to the NW within 1,000 feet of this showing and may actually strike-up against the showing.

Calcite stringers and small quartz nodules or veinlets are present in some places in the mineralized zones. The writer took samples 0007, 0008 and #7 (fig. 4).

(c) Y.S. #7

The showings consist of two hand trenched pits within old bulldozer trenches.

The most Southerly pit appears to be on a shear zone

approximately 8" wide, within which is found coarse grained galena 4" across. The zone is broken-up (gougy) and rusty stained.

The most Northerly pit appears to be on the junction of the shear and the replacement zone. The replacement zone conforms to the bedding of the N 320°/60° E trending phyllites and is approximately 2' wide with 4" of coarse grained galena found within it. The writer took sample # 0010 (see figure 4).

(d) Y.S. #29

This showing occurs in one of a number of bulldozer trenches found on Y.S. claim #29 and #30. Only one trench was deepened by pick and shovel and sampled because of the lack of time available to the writer, but it appears likely, by manganese stained zones in other trenches to the SW that this zone may extend on surface for approximately 700 feet. The investigation of this area will have to be included in a future work program.

The mineralized zone sampled is approximately 6" in width and conforming to the bedding of N 40° W/40° NE. The mineralization is relatively coarse grained to massive galena with residual limestone particles, also the zone carries some manganite in a limonitic host.

A shear trending N 45°, dipping approximately vertical cuts across the bedding at this point. It is this shear

by the reddish Mn - Fe stain in the trenches to the SW.

The writer took sample #43302 (see figure 5).

(e) Owl Showing

The Owl showings occur in bedded phyllites and interbedded limy schists and are cut in two locations by greenstone dykes 6' - 8' across.

On the NW claim of the group, Owl #8, occurs an abundance of quartz veins containing galena in places and trending approximately the same direction as the bedding (N 320°).

The group has yet to be mapped, but the abundance of manganite cappings and Mn - Fe stained zones suggests the possibility of finding a number of other silver-lead occurrences in place.

All samples taken with the exception of the quartz-galena sample from Owl #8 (G.S. 43301 and G.S. 43306) are from manganite capped or deeply weathered zones and all deserve further work especially blasting and hand trenching to allow for a more precise assessment of the trend of the zones and to acquire more representative samples. The writer took samples 43301, 43303, 43304, 43305, 43306 and 43307 (see figure 5).

7. ASSAYS

<u>Sample No.</u>	<u>Width</u>	<u>Aq.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>Cu.</u>	<u>W.</u>	<u>Au.</u>	<u>Types</u>
29498	4"							shear
29499	4'							bedded
29500	4"							shear
# 7	1'							shear
0008	6'							bedded
0009	2'							bedded
0010	4"							shear
43301	Grab							vein
43302	6"							bedded
43303	Grab							?
43304	Grab							?
43305	"							?
43306	"							vein
43307	"							?
* 434	2'	2.50	5.95	2.95	-	-	-	shear
* 435	9'	0.80	0.05	3.90	-	-	-	bedded
* 436	0 - 4"	66.30	72.55	-	-	-	-	shear
* 437	$\frac{1}{2}$ " - 4"	47.55	61.40	1.70	Tr.	-	0.04	?
* 438	4"	8.65	10.95	2.40	-	-	-	?
* 439	4"	123.60	66.10	-	-	-	-	shear
* 443	3"	43.20	35.90	-	-	-	0.02	shear

\* Samples taken September 12th and 13th, 1968 by P.H. Sevensma (see reference).

Assays by J.R. Williams & Son Ltd., File No. 307527/533, Sept. 17, 1968.

All other samples assayed by Coast Eldridge, 125 E. 4th Ave., in Vancouver

6. CONCLUSIONS and RECOMMENDATIONS

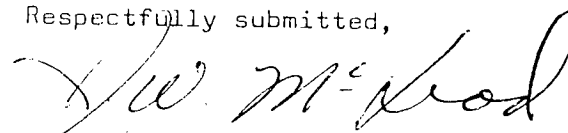
On the four Y.S. showings enough information is available on the trend of the structures (bedding and shears) to direct trenching with a good D7E with ripper, with the idea of deep trenching and stripping to extend known zones. This could be followed up by more hand trenching and blasting if deemed necessary, but it is very likely that diamond drill targets could be accurately located at this stage.

On areas outside the trend of known showings, i.e. away from the strike of known mineralized beds or shears, it is imperative that geochemical reconnaissance surveys be conducted, including back-up geophysical survey from the same points if an effective method can be found, thereby hopefully averting needless bulldozer work.

It is the writer's belief that a conventional Pb - Zn soil survey should be used with care in this area because:

- (a) Lack of well developed soils in the higher areas.
- (b) The rapid runoff in this area, causing strong diversion of metal concentrations.
- (c) Extremely close spacing needed to accurately outline narrow mineralized zones, would be very expensive if the whole claim area were to be assessed, as it should be.

Respectfully submitted,



J.W. McLeod,  
P.H. SEVENSMA CONSULTANTS LTD.

September 26, 1969.

SUMMARY - EVALUATION  
U.S. and Owl Groups  
of  
SPENCER CREEK MINES LTD.

I have personally examined the area covered by the present Y.S. claims in September 1968, at which time I recommended work of the type subsequently conducted by Mr. G. Leverman.

I have had occasion to examine a number of the showings in the general area since 1959 and have observed that many very significant manganese-stained patches reveal underlying mineralized shears and replacement zones. when trenched, sometimes very small, sometimes of significant size.

These manganese-stained zones are the best first guide to silver-lead occurrences in the area and have been observed by Mr. McLeod in great number on the Owl claims.

Pending receipt of the assay results of McLeod's samples, at which time our report will be finalized, it is of interest to note that the silver-lead ratio in the area is generally close to 1:1, with variations from 0.5:1 to about 2:1.

In view of the number of shears and replacement zones,  
and the density of manganese-stained areas on the Owl claims,  
further investigation of the economic potential of this area is  
fully warranted.

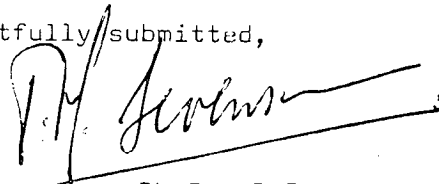
.....

When our report is completed, a budget estimate will be prepared, (covering some additional road construction to the Owl occurrences,) stripping, trenching by blasting, geological mapping and geochemical prospecting.

The purpose of this program will be to locate the most promising targets in the claim area.

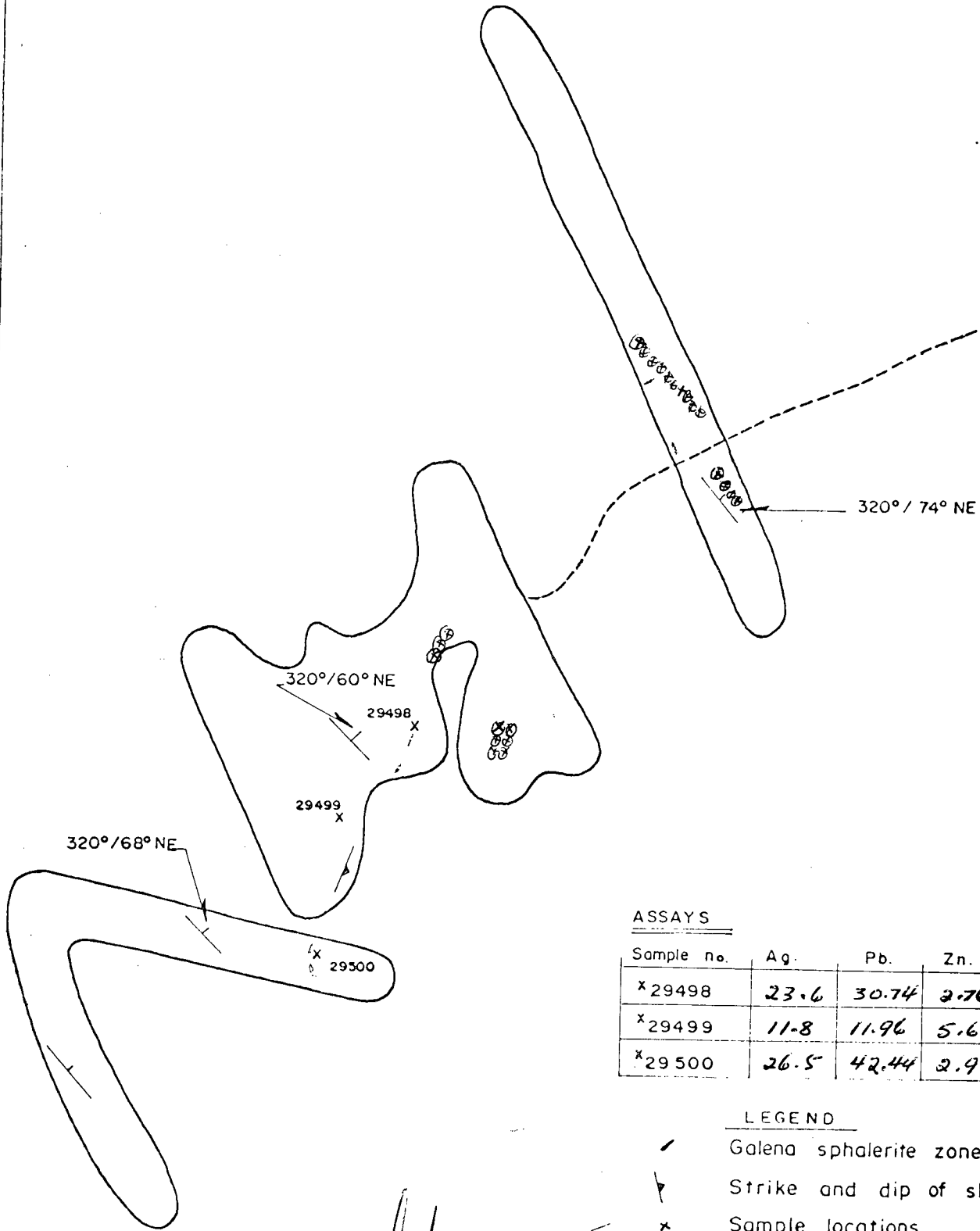
It is very likely that one or more of these targets will be of sufficient interest to warrant more extensive work, including assessment by drilling.

Respectfully submitted,



P.H. Sevensma, Ph.D., P.Eng.  
P.H. SEVENSMA CONSULTANTS LTD.

September 26, 1969.



ASSAYS

Sample no.	Ag.	Pb.	Zn.	Width
x 29498	23.6	30.74	2.76	4"
x 29499	11.8	11.96	5.63	4'
x 29500	26.5	42.44	2.93	4"

LEGEND

- Galena sphalerite zones
- ↘ Strike and dip of shear.
- x Sample locations
- - - Trail
- / Bedding
- ⊙ GALENA SHOWINGS - GREL.

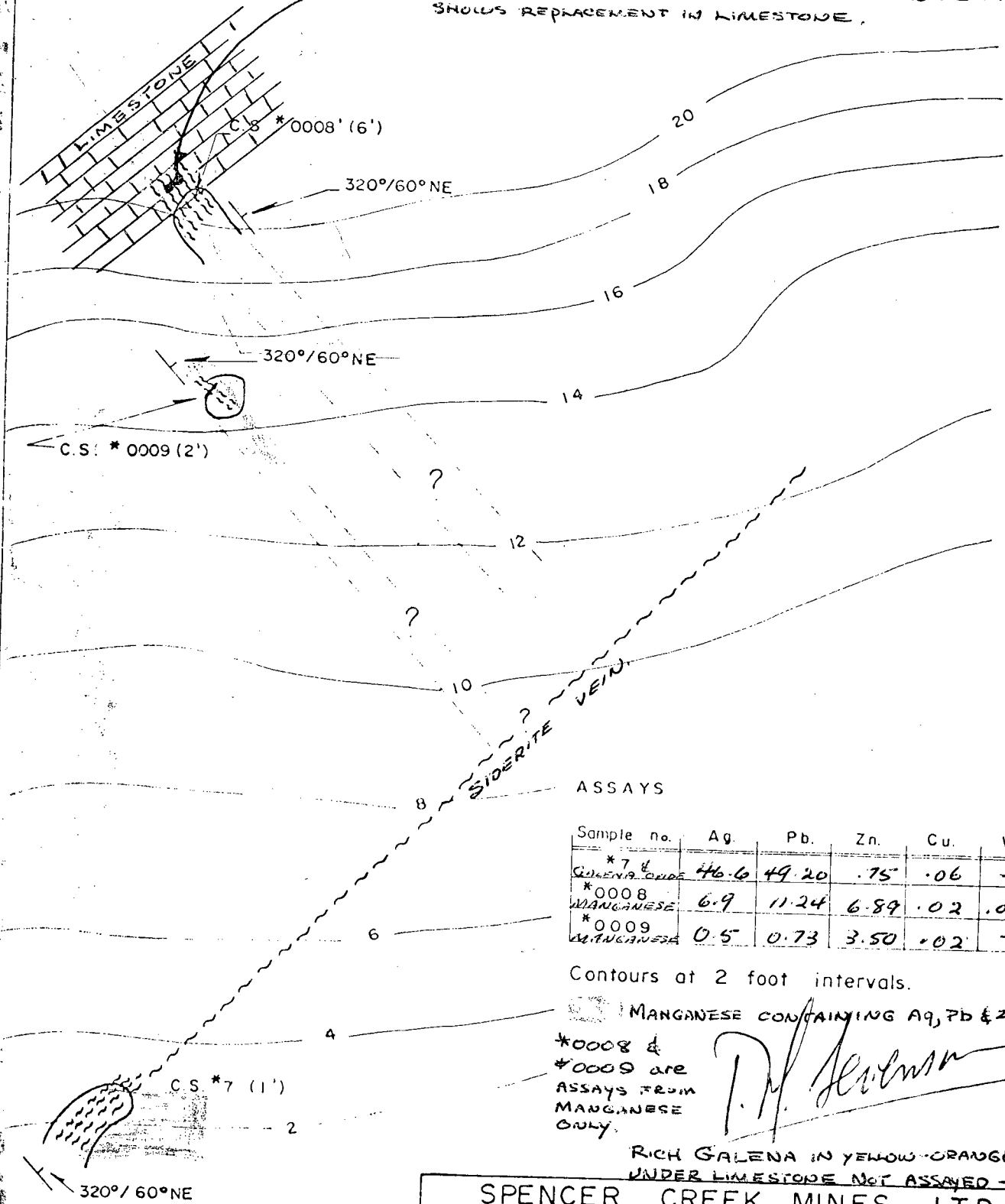
*P. H. Sevensma*

**SPENCER CREEK MINES LTD.**

Spencer Cr. showing on YS:4 North of near camp  
Watson Lake M.D.-Y.T. 105-B-1

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


RICH GALENA NOT ASSAYED - SAMPLE OF THIS GALENA IN POSSESSION OF G. LEVERMAN AT WHITEHORSE WHICH SHOWS REPLACEMENT IN LIMESTONE.



ASSAYS

Sample no.	Ag.	Pb.	Zn.	Cu.	W	Width
*7 & GALENA OXIDE	46.6	49.20	.75	.06	-	1'
*0008 MANGANESE	6.9	11.24	6.89	.02	.02	6'
*0009 MANGANESE	0.5	0.73	3.50	.02	-	2'

Contours at 2 foot intervals.

 MANGANESE CONTAINING Ag, Pb & Zn  
 \*0008 & \*0009 are ASSAYS FROM MANGANESE ONLY.

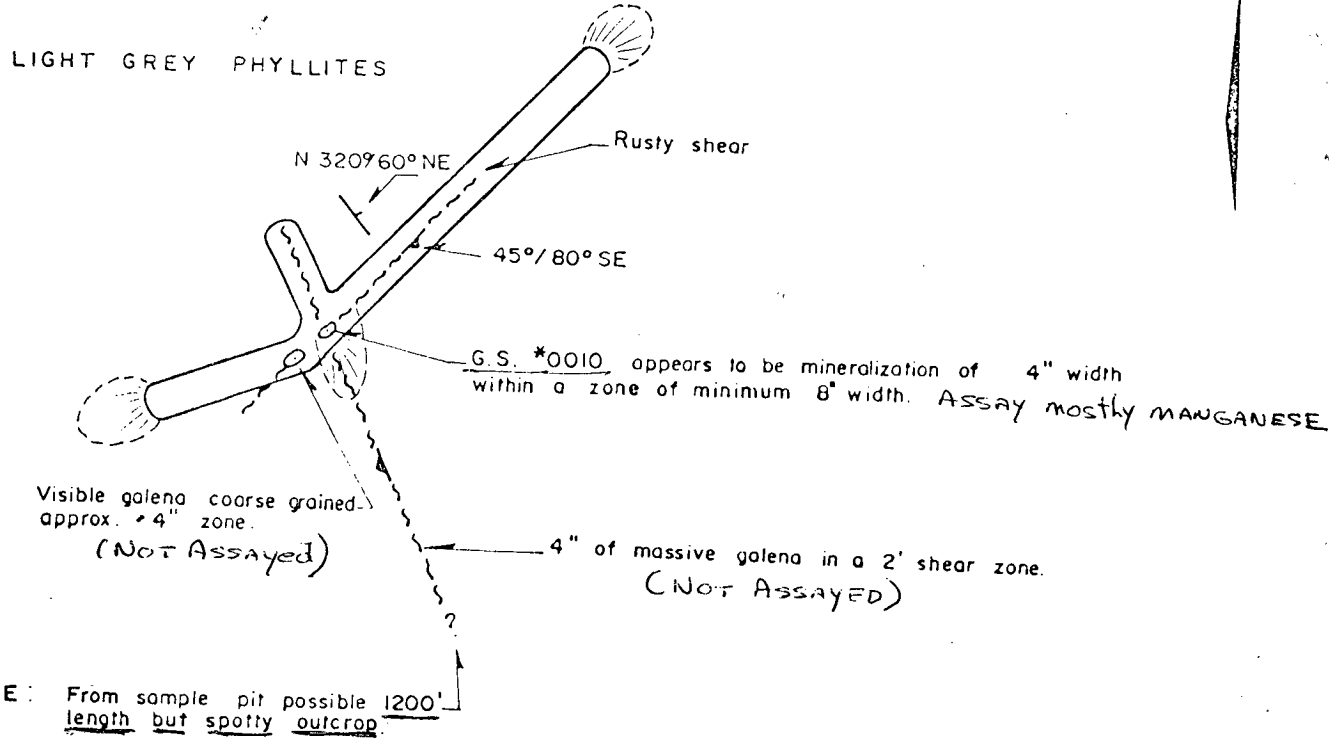
*P. H. Sevensma*

RICH GALENA IN YELLOW-ORANGE OXIDE UNDER LIMESTONE NOT ASSAYED - GREL.

SPENCER CREEK MINES LTD.

Geological sketch sample location from Y.S 6  
 Watson Lake M.D.-Y.T. showing 105 - B - 1

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



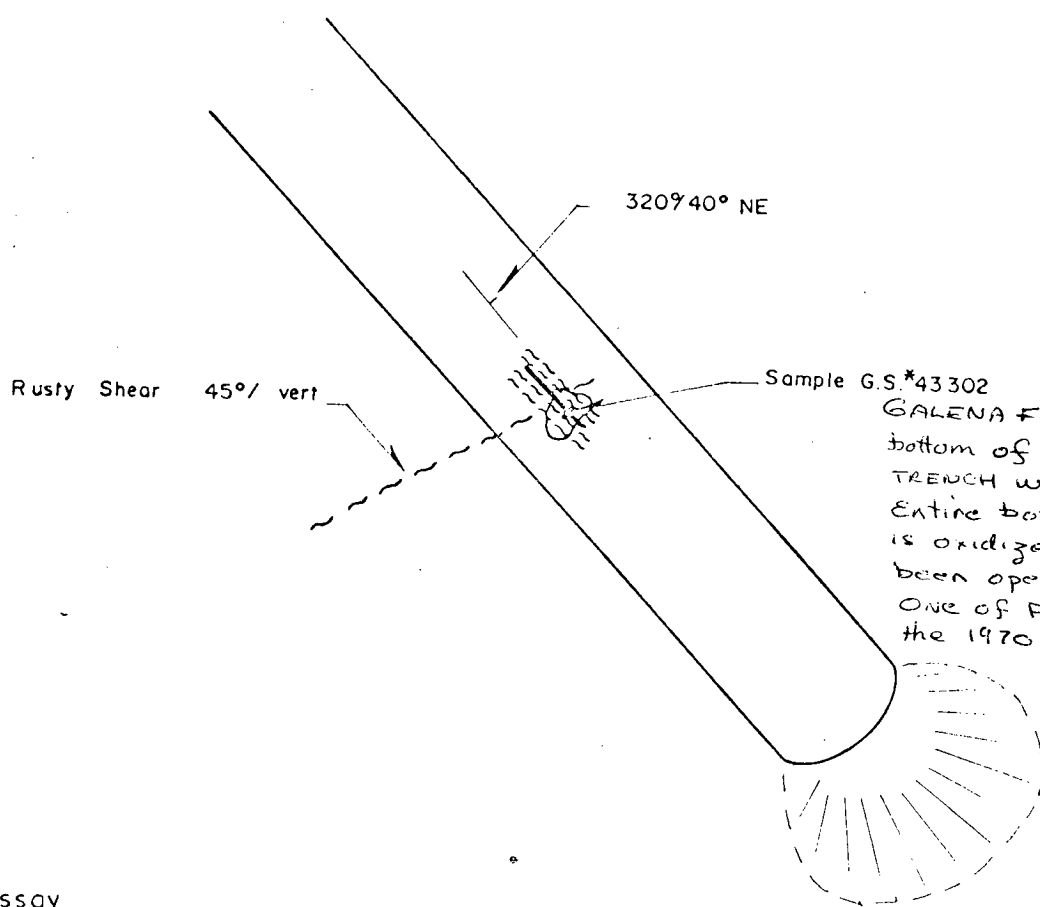
Assay

Sample no.	Ag.	Pb.	Zn.	Width
*0010	0.1	0.39	1.03	4"

*P. H. Sevensma*

SPENCER CREEK MINES LTD	
Y.S. *7 showing with trench and sample loc.	
Watson Lake M.D.-Y.T.	105-B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	

OWL 22 (approx.)  
 Y.S. 29 (approx.)



GALENA FROM 2-ft hole in  
 bottom of 12 ft wide CAT DUG  
 TRENCH WHICH IS NOW 6 ft deep.  
 Entire bottom of this trench  
 is oxidized AND has never  
 been opened up to date -  
 One of first requirements on  
 the 1970 PROGRAM. GREH

Assay

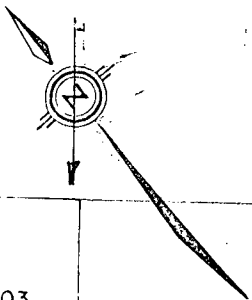
Sample no.	Ag.	Pb.	Zn	Width
*43302	42.1	65.52	0.87	6"
<u>GALENA</u>				

*P. H. Sevensma*  
 Y.S. 29 (approx.)  
 Y.S. 31 (approx.)

SPENCER CREEK MINES LTD.	
Y.S. 29 showing with trench and sample location.	105 -B-1
Watson Lake M.D.-Y.T.	
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	

55

Notes: Quartz veins dip steeply



X G.S. 43306  
X G.S. 43301

X G.S. 43305

X G.S. 43303

53

8

6

O W L

4

2

X  
44

51

X  
G.S. 43307

Trench  
X  
G.S. 43304

7

5

3

1

43

DIORITE  
PLUG

ASSAYS

Sample no.	Ag.	Pb.	Zn.	Cu.	W.
43301	1.5	0.42	0.22	0.90	N.S.
43303	8.4	13.31	1.98	N.S.	N.S.
43304	3.0	3.74	0.51	N.S.	N.S.
43305	2.9	4.58	0.41	N.S.	N.S.
43306	6.2	2.79	0.02	0.13	0.13
43307	0.51	0.42	N.S.	N.S.	N.S.

LEGEND

- Greenstone dykes
- Manganese cappings
- Quartz veins

NOTE: Rocks on the claim group are dominantly phyllites and interbedded limy schists and limestone  
G.S. — Grab sample.

*P. H. Sevensma*

SPENCER CREEK MINES LTD.  
OWL Showings with sample locations.  
Watson Lake M.D.—Y.T. 105—B—1  
P. H. Sevensma Consultants Ltd. Vancouver, B.C.