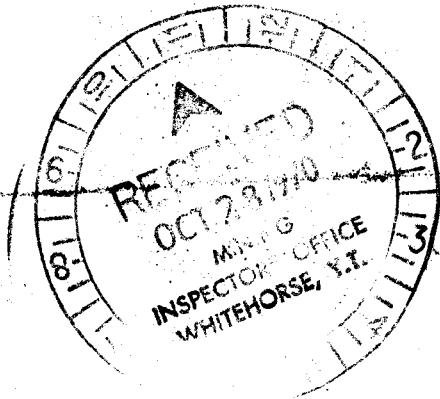


SILVER SEVEN EXPLORATION LTD.

BOULDER CREEK AREA

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

SUMMARY REPORT



This report has been examined by the Geological Investigation Unit and is recommended to the Commission to be considered as representing a year's work in the amount of

68,000

*[Signature]*

Regional Mining Engineer

Considered an appropriate work under Section 5(1) of the Quartz Mining Act.

*[Signature]*  
Commissioner of Yukon Territory

by

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

and

J.W. McLeod

P.H. SEVENSMA CONSULTANTS LTD.

September 23, 1969.

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SILVER SEVEN EXPLORATION LTD.

BOULDER CREEK PROPERTY

Lat. 60° 7'N Long. 130° 26'W

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

SUMMARY REPORT

1. INTRODUCTION

This report summarizes the field work conducted by Silver Seven Exploration Ltd. during the summer and fall of 1969.

The writer conducted various field duties under the direction of P.H. Sevensma, who at several times since 1961 has examined various showings on the property.

The report describes the results of the geological mapping, soil sampling, trenching and core logging.

In view of the encouraging results obtained, an extensive work program is recommended.

2. PROPERTY

A number of the claim posts observed by the writer indicate that the claims have been staked in accordance with the Yukon Quartz Act.

Claims, as of the time of writing, are as shown on the following table.

No.	Claims	Record Nos.	Date of Record
4	Luck 1 - 4	76755 - 76758	
8	Morn 1 - 8	Y27694 - Y27701	
8	Morn 9 - 16	Y29150 - Y29157	June 6, 1969.
2	Luck 5 - 6	Y29312 - Y29313	July 25, 1969.
16	Luck 13 - 20	Y29314 - Y29329	July 25, 1969.
6	Susan 1 - 6	Y29386 - Y29391	August 11, 1969.
8	Seven 1 - 8	Y29392 - Y 29399	September 2, 1969.
6	Seven 9 - 14	Y29400 - Y29405	September 5, 1969.
2	Seven 15 - 16	Y29420 - Y29421	
16	Zoro 1 - 16	Y29422 - Y29437	September 5, 1969.
16	Swan 1 - 16	Y29438 - Y29453	September 5, 1969.
8	Hot 1 - 8	Y29483 - Y29490	

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100                    Total claims

The claims are centered on the original Morn Group at Lat.  $130^{\circ} 26' W$  and Long.  $60^{\circ} 07' N$ . They lie between elevations of 3000' and 5200'. Access is by a good  $2 \frac{1}{2}$  miles long truck road from mile 701.6 on the Alaska Highway. Several branching truck road provide access to most parts of the property. Road mileage to the nearest supply center at Watson Lake is about 70 miles from the camp.

The nearest phone is at mile 710 on the Alaska Highway.

Timber and water supplies are abundant on the lower part of the property and water for drilling purposes is available on most of the property.

The exploration season extends from about June 1 to sometime in October under normal conditions.

### 3. REFERENCES

- i) Preliminary Summary Report by P.H. Sevensma and C.E. Zimmerman August 23, 1969 for Silver Seven Exploration Ltd.
- ii) G.S.C. Paper 63-38 page 31 Luck Group.
- iii) G.S.C. Paper 66-31 page 80-82 Fiddler Group.
- iv) G.S.C. Map 10, 1960 Wolf Lake Area.
- v) Elstone, E, F, 1962 Luck Group, unpublished report.
- vi) Little, H.W. 1959, Tungsten Deposits of Canada.
- vii) Cathro, R.J. 1969, Tungsten in Yukon, 3rd Northern Resources Conference, Whitehorse, Y.T.

### 4. GEOLOGY

The host rock of the area is essentially a light grey phyllite, with interbedded limy schists to relatively unaltered limestone beds of thicknesses varying from  $\frac{1}{2}$ " to several feet or more. The general trend of the host rock is  $325^{\circ} - 355^{\circ} / 20^{\circ} - 60^{\circ} E$ .

In a few places the limy phyllites exhibit some folding and in several places the bedding was found to dip to the west and sometimes near vertically.

An important consideration on this property is the attitude of the shear and fracture zones and of the faults, as mineralization seems in most places to be initially related to these features. For example, any bedded replacement of limestone by galena - sphalerite mineralization seems to occur initially along E.-W. trending shears. The same holds true for the emplacement of the majority of quartz veins (containing wolframite) and the occurrence of the scheelite-bearing quartz breccia and the calcite dyke. General trend of the shears is  $40^{\circ}$  -  $55^{\circ}$ : E-W and NE shears appear to be especially significant.

5. SHOWINGS:

- a) Luck: Consists of massive galena, sphalerite and pyrite in a limy zone within the phyllites and appears to conform to the bedding. The other mineral present on this showing is scheelite in small calcite stringers along the southern side of a coarse grained calcite dyke or vein which traverses the sulphide showing at  $N 80^{\circ} E$  with a steep southerly dip of about  $75^{\circ}$ . See Figure 2.
- b) Pete: This showing consists of massive galena from 1" to 8" wide found in trenches which cut the mineralized shear zone. The shear trends  $310^{\circ}$  -  $325^{\circ}$  /  $40^{\circ}$  -  $65^{\circ}$  NE and cuts  $325^{\circ}$  /  $15^{\circ}$  -  $25^{\circ}$  NE trending grey limy phyllites. See Figure 3.

- c) Fiddler-West: This showing was known in the past as the wolframite showing. The mineralization suggests greisen conditions and carries wolframite, cassiterite, chalcopyrite, galena, some silver mineral or minerals, malachite, azurite, limonite, fluorite, and minor beryl. These minerals are contained within or on the contact with a 4' - 5' thick quartz vein, which often exhibits crystals up to 2" across and 3" - 4" long. The quartz veins traverse NNW striking and East dipping phyllites and their attitude is more or less parallel to the bedding. See Fig.4.
- d) Fiddler-East: This is a newly discovered zone of scheelite occurring within a coarse quartz-phyllite breccia. The phyllite fragments are enclosed in quartz and where scheelite is in high concentration the phyllite fragments are nothing more than ghost fragments. Small solution cavities are present in parts of the mineralized breccia. See Figure 5.
- e) North Showing: An occurrence of 6" massive galena from what appears to be a shear zone, trend unknown, in an old trench approximately 3500' to the North of the Fiddler-West showing, and 1000' South of a 12' wide E-W trending siliceous dyke. See 1000' topo. map.

6. WORK COMPLETED:

- a) Luck: Work on the Luck showing consisted of linecutting and soil sampling on an 800' x 200' grid pattern. The soil samples were analyzed by Vancouver Geochemical Laboratories for Pb., Zn., and W.

Some hand trenching was performed on the calcite dyke as well as subsequent sampling of the dyke material.

A 100' = 1" transit-stadia survey map of the drill hole locations was made and approximately 2,100' of A and B size drill core was logged. The drilling was performed in 1962 by Scurry-Rainbow Oil Ltd. The logs and core assays appear in the Appendix of this report. Several silt samples were taken on Boulder Creek and one of it's tributaries and ultraviolet lamping of the North arm of Boulder Creek revealed significant amounts of fluorescent mineral similar to scheelite, but subsequent analyses of a fluorescent silt sample failed to reveal any  $WO_3$ . Outcrop mapping was performed over this group.

- b) Pete: Work on the Pete showing entailed a 50' = 1" geological map, showing location of the trenches and samples. Linecutting and soil sampling was performed over this area.

- c) Fiddler-West: A geological map, on a scale of 1" = 200' was constructed over these claims, as well as 1" = 1000' outcrop mapping.

Hand trenching with a Cobra drill and dynamite was conducted along the quartz vein at various locations and samples were sent in for assay. Some bulldozer stripping was conducted to the West of the portal and follow-up work involved ultraviolet lamping the outcrops in the trenches. Also float in this area was lamped extensively.

- d) Fiddler-East: A 1" = 50' geological map of this showing was constructed and 1" = 1000' reconnaissance mapping was completed over this showing.

Some bulldozer stripping was done over and near the showing and outcrops of quartz breccia were subsequently hand trenched by blasting and sampled. Outcrops were checked with the ultraviolet lamp.

- e) North Showing: 1" = 1000' reconnaissance geological mapping was performed here, ultraviolet lamping of float and in-place rocks was performed. One rock sample was taken for assay.

- f) Other Areas: General reconnaissance mapping, lamping and prospecting were performed on the other areas.

## 7. RESULTS:

### a) Luck: (See figure 2)

The sulphide showing on the Luck group was drilled in 1962 by Scurry Rainbow Oil Ltd. and a map and sample averages from the core are to be found in Silver Seven Exploration's Preliminary Report of August 23, 1969.

The core was logged by the writer and various core sample assays follow in the appendix of this report. Various amounts of scheelite were found in the core, but no commercial grade of  $WO_3$  was encountered. The results are however, significant in some fairly wide sections.

The original sulphide sections encountered in the drilling are no longer available, therefore, the actual tungsten grade of these sections cannot be determined. In view of the assay results on the remaining core, it is probable that this grade may have been in the range of 0.02 to 0.38  $WO_3$ , as a minimum.

Some good values up to 0.99  $WO_3$  were obtained in the nearly E - W striking 5' wide calcite dyke lying along the North side of the sulphide occurrence.

The results of the soil sampling program indicate a number of areas significantly anomalous in tungsten, including the vicinity of the Luck.

It is therefore highly probable that a number of other significant occurrences of scheelite in place are present on the property, some associated with lead-zinc occurrences as on the Luck, and some associated with quartz and/or calcite bearing structures.

A detailed study of the original surface sampling by P.H. Sevensma of the stripped Luck outcrops and of the assay results of the drilling indicate a Westerly dipping wedge of good grade ore. Average grades were as follows:

<u>P.H.S. samples (13 - 16)</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>
Average over 35' length	8.40	8.51	9.90

Scurry Rainbow Drill Core

Averages:

Hole #1, over 10'	4.10	6.08	9.67
Hole #3, over 39'	1.66	1.47	8.32
Hole #4, over 21'	2.05	3.45	8.47

Further drilling of this showing in a Westerly direction is required to determine whether the occurrence increases in size in this direction. Most of the Scurry Rainbow drilling was done in a Northerly direction, i.e. into the ends of the beds and moving Easterly away from the showing into the apparent footwall of the mineralized zone.

b) Pete Showing:

This is a narrow high grade occurrence, with lenses of up to 8" wide of galena in a N 35 W striking shear, i.e. parallel to the bedding but with a steeper dip.

It lies South of a significant geochemical anomaly and this showing may be an indication of a larger occurrence present to the North. Further work should therefore, be concentrated on the geochemical anomaly.

Examination of the following assay results shows clearly that a zone of commercial grade material has been encountered and combining this with the nearby Pb. geochemical anomalies it appears quite possible that a zone of mineable width can be uncovered.

<u>Sample No.</u>	<u>Width</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Au.</u>	<u>Zn.</u>
440	4"	11.4	8.36	0.03	8.30
441	4"	159.1	34.58	0.04	1.91
442	8"	17.0	22.78	0.06	3.67

Sampled by P.H. Sevensma in September, 1968.

Assayed by Coast Eldridge, File No. A.3-S-4-68-2129.

c) Fiddler - West

On this showing the wolframite occurs as discreet concentrations within and on the contact of the quartz veins. Within the same veins at the top of the cirque galena, sphalerite, pyrrhotite, pyrite, fluorite, cassiterite and some chalcopyrite occurs throughout

the vein and on the contact with the phyllites. The silver - lead ratio here is very high suggesting the occurrence of silver in some form other than in galena, possibly as argentite. Directly to the West of the old camp and down slope toward the North arm of Boulder Creek many fluorescent pieces of quartz breccia float were found. This float train suggests a continuation of the occurrence of the scheelite quartz breccia zone or the continuation of the Fiddler - East showing. The grade of this float is thought to be much the same as the material found on the Fiddler - East showing, i.e. around 0.5%  $WO_3$  or greater. To further this idea, note the tungsten soil survey plot and the concentration of high values below the float zone and above the Pete showing. This float could not have come from the Fiddler - East showing.

The following assays on the wolframite-rich quartz vein indicates a zone of unknown extent with some very attractive Ag. - W. values. This vein and its contact with the quartz breccia zone must be considered of top priority in the future work program.

<u>Sample No.</u>	<u>Width</u>	<u>Ag.</u>	<u>Cu.</u>	<u>Pb.</u>	<u>Sn.</u>	<u><math>WO_3</math></u>
29476	3'	.76	tr.	.12	tr.	tr.
19477	3'	16.6	.02	3.24	tr.	.67
29478	2'	3.46	.29	1.74	.01	.34

Assayed by Whitehorse Assay Office, August 25, 1969,  
File No. 5633-3.

The Ag.:Pb. ratio is very high suggesting the occurrence of silver in some other form than in galena i.e. possibly argentite. Although wolframite is found in good quantities on the upper part of the vein it is not unlikely that scheelite occurs here also, in fact it is suspected that the float train found below this showing is due to a scheelite-rich zone in the quartz breccia.

d) Fiddler - East Showing:

The soil survey grid did not reach far enough North or East to show evidence of this showing, therefore it was necessary to conduct bulldozer trenching outward from the scheelite-rich outcrop and subsequent rock chip sampling.

The analyzes available are listed on figure 5 and clearly indicate the presence of scheelite in the quartz breccia over significant widths. A grab sample from approximately the same location as sample #4 gave: 2.45%  $WO_3$ . The assay was performed by G. Spalding, Whitehorse Assay Office, August 18, 1969, File No. 5622-2. Samples #1 and #6 in two of the new trenches gave encouraging assays because they either greatly extend the zone of mineralization or indicate a new zone. Insufficient trenching was performed because of the weather, but work in this area should be of top priority as the results are

definetly encouraging. A body of scheelite bearing material of mineable size may be indicated if the grade can be improved or if the tonnage can be shown to be sufficiently large.

Examination of the following assay results clearly indicates an extensive zone possibly 300' long, 7' - 14' wide and approximately 130' vertical feet exposed on the surface.

This showing must have a top priority in the future work program.

<u>Sample No.</u>	<u>Width</u>	<u>Mo.</u>	<u>WO3</u>	<u>Cu.</u>	<u>Pb.</u>	<u>Zn.</u>
1	1'	tr.	.34	.01	.02	.13
2	5'	tr.	.28	.01	.02	tr.
3	7'	tr.	.14	-	-	-
4	5'	tr.	.54	-	-	-
5	3'	tr.	.06	-	-	-
6	1'	tr.	.53	-	-	-

Assayed by Crest Laboratories, Oct. 14, 1969, Report No. 272.

e) North Showing:

The sample taken, #29497, in a narrow shear zone gave sufficient assay results and Ag. - Pb. ratios of approximately 0.6:1 deserve further investigation. This area lacks sufficient general exploration work and specific follow-up work on the known showing should be conducted.

<u>Sample No.</u>	<u>Width</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>
29497	6"	22.9	39.31	0.63

Assayed by Coast Eldridge, Sept. 23, 1969, File No. A.3-S.2-69-8359.

f) Other Areas:

Reconnaissance geological mapping, soil sampling, lamping and prospecting were performed in these areas and some anomalous zones are indicated (see figure 6).

8. SOIL SAMPLING

The reconnaissance geochemical soil sampling was performed over a portion of the claim group (see figure 6). The line spacing was at 800' intervals with samples taken along the lines at 200' intervals. A total of 555 samples were analyzed.

The analyses was conducted by Vancouver Geochemical Laboratories.

The portions tested for Pb. - Zn. were extracted with Hot HCl and HClO<sub>4</sub> and subsequently analyzed with an Atomic Absorption Spectrometer. The W-portions were fused with KNO<sub>3</sub>, NaCO<sub>3</sub> and NaCl, and subsequent colorimetric comparisons with known standards was performed.

The soil samples were taken from the "B" soil horizon which on this property is well defined, but it is generally found as a thin layer averaging 4" to 8" below the ground surface.

When the soil analyses list or the soil plots are examined, some definite anomalous zones are evident and follow-up

work on these have been recommended which usually first would involve further close-spaced soil sampling with subsequent bulldozer trenching. (See figures 6, 7, 8 & 9)

It is thought from the results obtained so far, that geochemical soil testing will work well in this area.

9. RECOMMENDATIONS:

a) Luck Showing

Close-spaced geochemical sampling:

- Over areas of high reconnaissance values.

Crone H-V loop E.M.:

- Test over known sulphide zone.

Trenching:

- Bulldozer trenching for clean-up and to extend the known zone and also to test well defined geochemical anomalies.

Lamping:

- Lamp all quartz, calcite and any acquired drill core.

Geological Mapping:

- Detailed work to accompany trenching or drilling.

Diamond Drilling:

- Four holes to test sulphide showing, but to the West to intersect the zone across the bedding. A total of 2,000' is allotted for this work.

b) Pete Showing

Close-spaced geochemical sampling:

- Over areas of high reconnaissance values.

Crone H-V loop E.M.:

- Test over known sulphide zone.

Trenching:

- Bulldozer trenching for clean-up and to extend the known zone and also to test well defined geochemical anomalies.

Lamping:

- Lamp all quartz, calcite and any acquired drill core.

Geological Mapping:

- Detailed work to accompany trenching or drilling.

Diamond Drilling:

- Not recommended at this time.

c) Fiddler - West

Close-spaced geochemical sampling:

- Over areas of high reconnaissance values.

Crone H-V loop E.M.:

- Not recommended except where high Pb. - Zn. geochemical values are obtained.

Trenching:

- Essential in extending the quartz breccia zone.

Lamping:

- Lamp all quartz, calcite and any acquired drill core.

Geochemical Mapping:

- Detailed work to accompany trenching or drilling.

Diamond Drilling:

- Recommended to test the projected quartz vein - quartz breccia junction. (see figure 10) It is estimated that 2,000' will be required on this target area.

d) Fiddler - East

Close-spaced geochemical sampling:

- Over areas of high reconnaissance values.

Crone H-V loop E.M.:

- Not recommended except where high Pb. - Zn. geochemical values are obtained.

Trenching:

- Essential in extending the quartz breccia zone.

Lamping:

- Lamp all quartz, calcite and any acquired drill core.

Geochemical Mapping:

- Detailed work to accompany trenching or drilling.

Diamond Drilling:

- After accurate surveying, it is estimated that at least three sections require drilling at about 700' per section, with one -50° and one -70° hole per section. Approximately 2,000' is allotted for this work.

e) North Showing

Close-spaced geochemical sampling:

- General wide spaced reconnaissance geochemical soil survey.

Crone H-V loop E.M.:

- Use with reconnaissance geochemical survey if it is found advantageous.

Trenching:

- Bulldozer and subsequent hand trenching of the known showing and any anomalies obtained by reconnaissance geochemical survey.

Lamping:

- Lamp all quartz, calcite and any acquired drill core.

Geological Mapping:

- Reconnaissance and detailed mapping.

Diamond Drilling:

Some drilling is budgeted under the contingency allowance.

f) Other Areas

A number of areas away from the five main showings have revealed significant geochemical anomalies over 100 p.p.m. Pb. and from 20 - 50 p.p.m. W. (See figure 6)

Further detailed soil-sampling followed by bulldozer trenching is recommended in these target areas but no specific diamond drilling has been provided for at this time.

10. SUMMARY

Various amounts of soil sampling, trenching, geological mapping and diamond drilling are the phases of work recommended on the zones outlined.

Priorities after investigation of the Fiddler - East and West showings cannot be decided at this time, but the funds and flexibility in the program must be provided so as to allow for their implementation as it is deemed necessary.

All of the showings hold merit in the mind of the writer and each must eventually be tested by the best methods available.

11. COST ESTIMATEA. Office Studies

1. Topo map 1" = 400' from airphotographs	\$2,000.00
2. Photogeological studies.	<u>2,000.00</u>
	<u>\$4,000.00</u>

B. Field Program

1. Road improvements, culverts.	5,000.00
2. Bulldozer trenching, 600 hours @ \$35.	21,000.00
3. Linecutting & picketing, 40 m. @ \$100.	4,000.00
4. Soil sampling, 1,000 samples @ \$8.	8,000.00
5. E.M. surveying, 4 man-months & rental	5,000.00
6. Geological mapping, 8 man-months @ \$1,500.	12,000.00
7. Prospecting, 6 man-months @ \$1,000.	6,000.00
8. Assaying, 300 assays @ \$30.	9,000.00
9. Camp construction	8,000.00
10. Camp operation, 1500 man-days @ \$10.	15,000.00
11. Transportation, 8 vehicle-months @ \$1,000.	8,000.00
12. Communications, radio	3,000.00
13. Surveying	<u>10,000.00</u>
Total	<u>\$114,000.00</u>

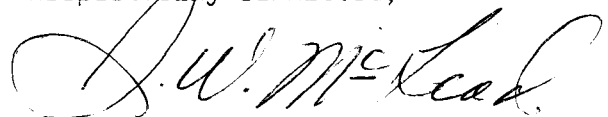
C. Drilling

1. 6,000' @ \$16.	96,000.00
2. Core storage	2,000.00
3. Metallurgical testing	<u>3,000.00</u>
	<u>\$101,000.00</u>

Engineering and Supervision, 10%	\$22,000.00
Administration, 10%	24,000.00
Contingencies, 10%	<u>26,000.00</u>
	<u>\$72,000.00</u>

TOTAL BUDGET	<u>\$291,000.00</u>
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Respectfully submitted,



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

October 23, 1969.

APPENDIX "A"

ASSAYS

<u>Sample</u>	<u>Width</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>WO<sub>3</sub></u>	<u>Sn.</u>	<u>Mo.</u>	<u>Cu.</u>	<u>Au.</u>
A	3'	-	-	-	.02	-	-	-	-
B	3'	-	-	-	.99	-	-	-	-
C	4'	-	-	-	.18	-	-	-	-
D	Grab	-	-	-	.01	-	-	-	-
E	Grab	-	-	-	.01	-	-	-	-
1	1'	-	.02	.13	.34	-	tr.	.01	-
2	5'	-	.02	tr.	.28	-	tr.	.01	-
3	7'	-	-	-	.14	-	tr.	-	-
4	5'	-	-	-	.54	-	tr.	-	-
5	3'	-	-	-	.06	-	tr.	-	-
6	1'	-	-	-	.53	-	tr.	-	-
29476	3'	.76	.12	-	tr.	tr.	-	tr.	-
29477	3'	16.6	3.24	-	.67	tr.	-	.02	-
29478	2'	3.46	1.74	-	.34	.01	-	.29	-
29497	6"	22.9	39.31	0.63	-	-	-	-	-
* 440	4"	11.4	8.36	8.30	-	-	-	-	.03
* 441	4"	159.1	34.58	1.91	-	-	-	-	.04
* 442	8"	17.0	22.78	3.67	-	-	-	-	.06

Assayed by Crest Laboratories, Report No. 272, October 14, 1969 and Whitehorse Assay Office, August 25, 1969, File No. 5633-3.

\* Sampled by P.H. Sevensma, September, 1968.  
Assayed by Coast Eldridge, File No. A.3-s-4-68-2129.

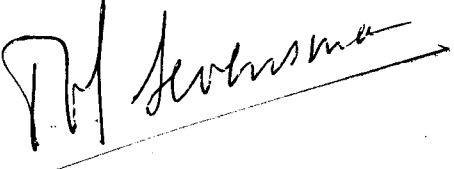


APPENDIX "B"

CORE ASSAYS

<u>Sample No.</u>	<u>Hole No.</u>	<u>From</u>	<u>To</u>	<u>Width</u>	<u>WO<sub>3</sub></u>
29479	1	22'	31'	9'	tr.
29480	1	115'	119'	4'	0.29
29481	1	120'	123'	3'	0.05
29482	1	136'	141'	5'	0.14
29483	1	141'	146'	5'	0.03
29484	2	26'	28'	2'	tr.
29485	3	57'	59'	2'	0.38
29486	3	138'	141'	3'	tr.
29487	5	47'	48'	1'	tr.
29488	5	50'	51'	1'	tr.
29492	11	92'	96'	4'	0.12
29491	11	96'	100'	4'	0.07
29490	11	100'	104.5'	4.5'	tr.
29489	11	104.5'	109'	4.5'	tr.
29493	11	122'	126'	4'	0.04
29494	11	126'	130'	4'	0.03
29496	12	79'	82'	3'	0.20
29495	12	84'	88'	4'	tr.

Assayed by Coast Eldridge, File No. A.3-S.2-69-8114 and A.3-S.2-69-8359,  
September, 1969.

  
W. Johnson

# CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET  
VANCOUVER 3, B.C.  
PHONE 688-8586

CREST LABORATORIES LTD.  
7911 ARGYLL ROAD  
EDMONTON 82, ALBERTA  
PHONE 469-2391

## CERTIFICATE OF ASSAY

TO P.H. Severn & Associates Ltd.  
715 - 550 West Hastings Street  
VANCOUVER, B.C.

October 14, 1959

Lab No. 272

**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	MOLY.	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	Percent	
1				0.01	0.02	0.13	trace	0.34			
2				0.01	0.02	trace	trace	0.28			
3				---	---	---	trace	0.14			
4				---	---	---	trace	0.54			
5				---	---	---	trace	0.06			
6				---	---	---	trace	0.53			
A				---	---	---	---	0.02			
B				---	---	---	---	0.99			
C				---	---	---	---	0.18			
D				---	---	---	---	0.01			
E				---	---	---	---	0.01			

*Check sum.*  
V.H. Severn

**NOTE:**

Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

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

V.H. Severn  
Registered Assayer, Province of British Columbia

TO:

P.H. Sevensma Consultants Ltd.,  
715 - 850 West Hastings Street  
Vancouver, B.C.

cc:  
Mr. J.W. McLeod  
P.O. Box 75  
Watson Lake, Y.T.



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



PHONE: 9 876-3111  
TELEX: 6636953  
CABLE ADDRESS:  
ELDRICO

FILE NO. A.3-S.2-69-3114

DATE September 3, 1969

We Herely Certify that the following are the results of assays made by us upon submitted DRILL CORE samples

MARKED	GOLD		SILVER	Tungsten	Copper (Cu)	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER (WO <sub>3</sub> ) CENT.	PER CENT.				
29479	Trace	\$ -	0.2	Trace	Trace				
29480				0.29					
29481				0.05					
29482				0.14					
29484				Trace					
29485				0.38					
29486				Trace					
29487				Trace					
29488				Trace					

*[Handwritten Signature]*

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 checks have not been adjusted to compensate for losses and gain inherent in the fire assay process.

*[Handwritten Signature]*

Provincial Assay

TO:

P.H. Sevensma Consultants Ltd.,

700 - 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



PHONE: (604) 876-4111  
TELEX: C4-50353  
CABLE ADDRESS: ELDRICO

FILE NO. A.3-s.2-69-8359

DATE September 23, 1969

We hereby certify that the following are the results of assays made by us upon submitted DRILL CORE samples

MARKED	GOLD		SILVER	Tungsten (WO <sub>3</sub> )	Lead (Pb)	Zinc (Zn)			
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
29483		\$		0.03					
29489				Trace					
29490				Trace					
29491				0.07					
29492				0.12					
29493				0.04					
29494				0.03					
29495				Trace					
29496				0.20					
29497			22.9		39.31	0.63			

*P.H. Sevensma*

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

Note: Samples stored for a maximum of one year for re-assay.  
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.

*W. G. G. G.*

Provincial Assayer

SILVER SEVEN EXPLORATION LTD.  
BOULDER CREEK PROPERTY  
105-B-1, Watson Lake M.D., Y.T.  
SUMMARY and RECOMMENDATIONS

by

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

1. INTRODUCTION

The writer has examined the area covered by the Silver Seven Exploration Ltd. claims at various times since 1961, as well as a number of nearby showings.

It is characteristic of this area that mineralized outcrops are in general inconspicuous. Silver-lead-zinc occurrences are reflected by small manganite-bearing areas, which by trenching often reveal substantial showings of good grade. Narrow high-grade silver-lead bearing shears often reflect the presence nearby of zones of commercial width and grade.

Tungsten occurrences were originally found at the top of the dome-shaped mountain, where there are more exposures than on the slopes. The latter are covered by a substantial grass matt with scattered scrubbalsam and outcrops are practically nil, although overburden seldom exceeds 5' - 10', except in the lower areas, where substantial thicknesses of glacial overburden occur locally.

The 1962 drilling on the Luck showing was mainly guided by self-potential work, which is unsatisfactory and often misleading in this phyllitic terrain, and additional drilling is fully justified down the Westerly dip of the beds.

This latter dip indicates some nearby major structure, as the regional dips are Easterly to North Easterly.

The original drilling was not performed under geological direction.

Some of the reconnaissance geochemical lead-zinc anomalies are stronger than the one near the Luck showing, especially the one NW of the Pete showing.

In view of the 1:1 silver:lead ratio prevailing in this area, the probability of finding a deposit of commercial size and grade near one of the above anomalies is considered good; the order of magnitude of a deposit of this type should be at least several hundred thousand tons of a grade of the order of 4 <sup>oz</sup>/t. Ag. and 15% Pb. + Zn.

The probability of finding smaller deposits of silver-lead with little or no zinc is also good.

A deposit of the latter type of, say 20,000 tons @ 50 <sup>oz</sup>/t. Ag. and 60% Pb. would in this area provide a net smelter return of some \$150.00 a ton. The size of a deposit of this type need only be about 200' x 100' x 5'.

With regards to tungsten, it is likely that the price of this metal will remain at about \$43.00 U.S. per short ton unit of 20 lbs. The economics of a scheelite deposit depends upon the combination of size and grade.

It is the writer's considered opinion that the quartz-calcite-phyllite breccia is a major structure of areal significance related to greisen-conditions. These conditions are clearly present in the muscovite-bordered high temperature wolframite-bearing veins, which carry also tin, fluorite, some chalcopryrite and some high-silver minerals.

From personal observation in presently caved trenches, it is known to the writer that parallel veins occur some 100' - 150' vertically below the original discovery.

The most satisfying working hypothesis at present is that the area where the greisen-like veins meet the quartz breccia is likely to be the most promising economic target area.

It is also likely that this breccia zone is richest in scheelite in those areas where the breccia-fragments consist of limestone rather than phyllite.

In the writer's opinion, this structure presents a good potential for a sizeable deposit of scheelite with a grade of the order of 0.75 - 1.00%  $WO_3$ , which would be economical in this area providing the metallurgical recoveries are satisfactory.

In addition, there is a possibility of significant tin and/or silver values in this structure.

In view of the difficulty of obtaining good outcrop, it is essential that all exposed areas be well surveyed before actual drilling starts on the targets that have so far been identified.

It is equally important that other potential target areas, as revealed by geochemical anomalies, be assessed before the start of drilling on the known targets, as some of these areas could well show better economical potential.

It is expected that assaying may at times encounter difficulties and great care must be taken to combine samples into fairly large units to reduce the number of determinations.

At the time of writing, some check assaying by the firm of Ledoux in Teaneck, New Jersey, is still in progress. There are indications of the presence of another heavy mineral with a fluorescence comparable to the fluorescence of scheelite, and in general estimates of tungsten-grades have tended to run about three times higher than actual assays received so far.

## 2. RECOMMENDATIONS

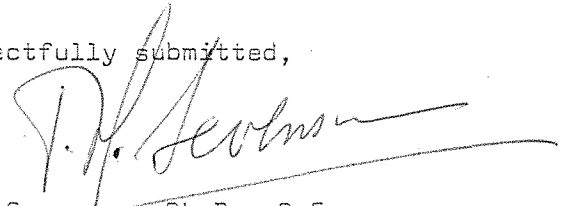
Work carried out intermittently since its discovery in 1943 on the property under consideration has met with increasingly promising success and the recent discovery that the tungsten-bearing quartz-calcite-phyllite breccia is a major structure and suggests

the possibility of an economic tungsten occurrence on the property.

In addition to the significant Luck showing, a number of geochemical anomalies suggest also a good probability of success in discovering one or more silver-lead-zinc occurrences of economic size.

An intensive program of exploration is therefore recommended on this property, for which a budget of \$291,000.00 has been estimated.

Respectfully submitted,

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

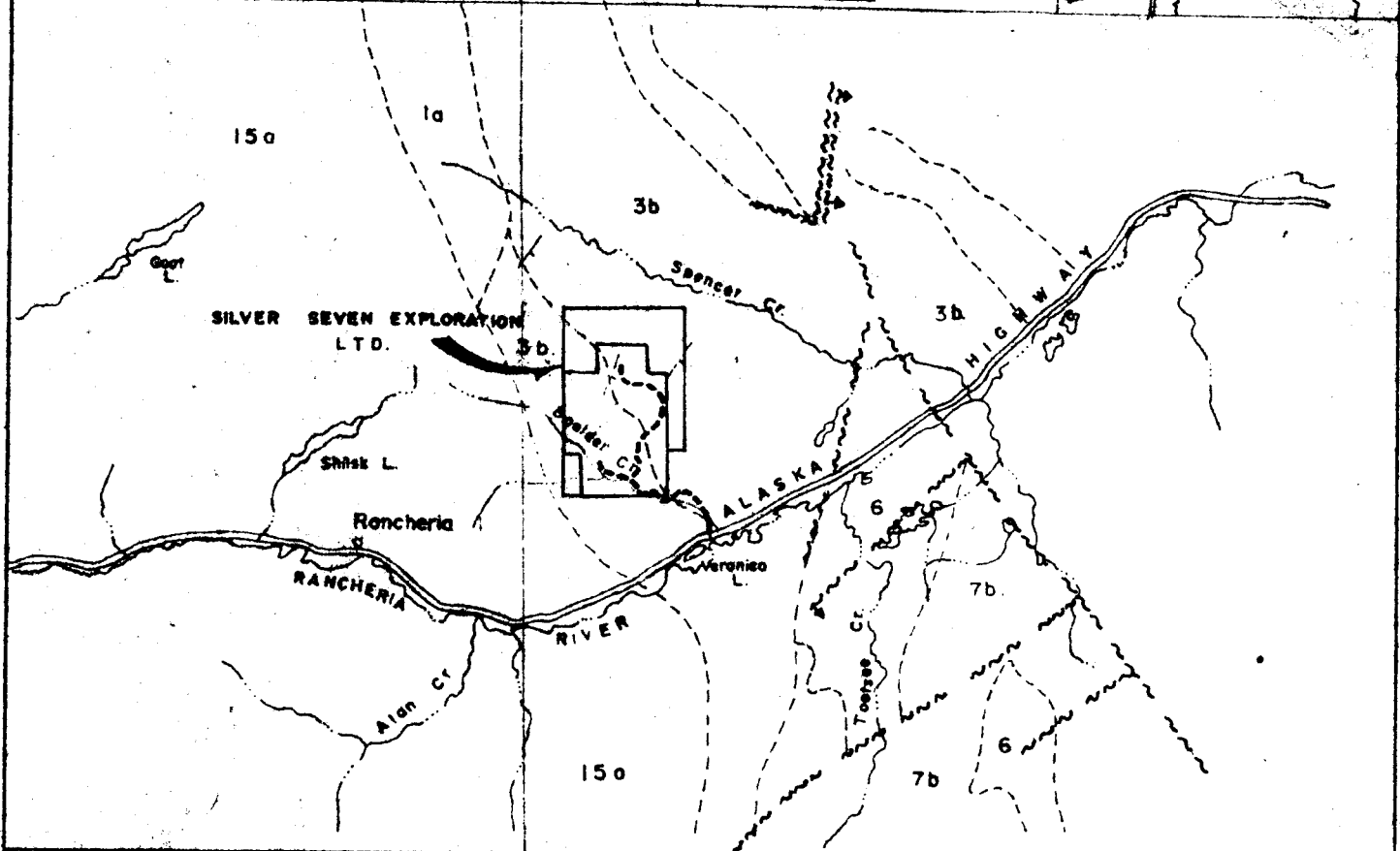
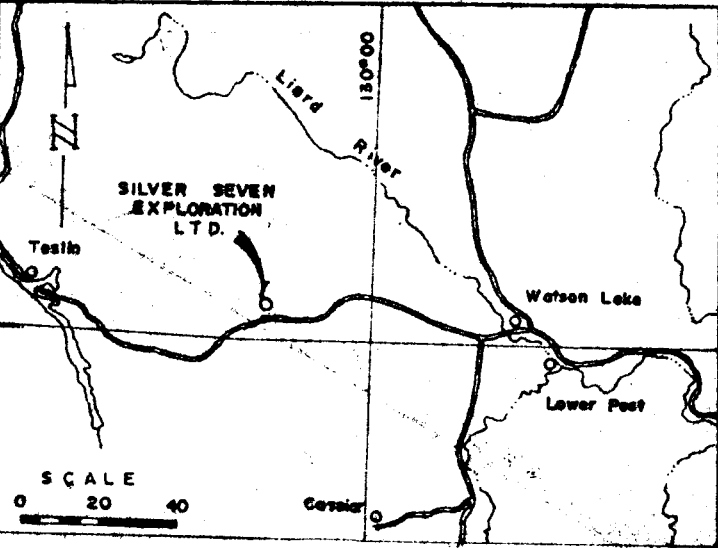
P.H. Sevensma, Ph.D., P.Eng.

October 23, 1969.



60° 15'

130° 30'



**LEGEND**

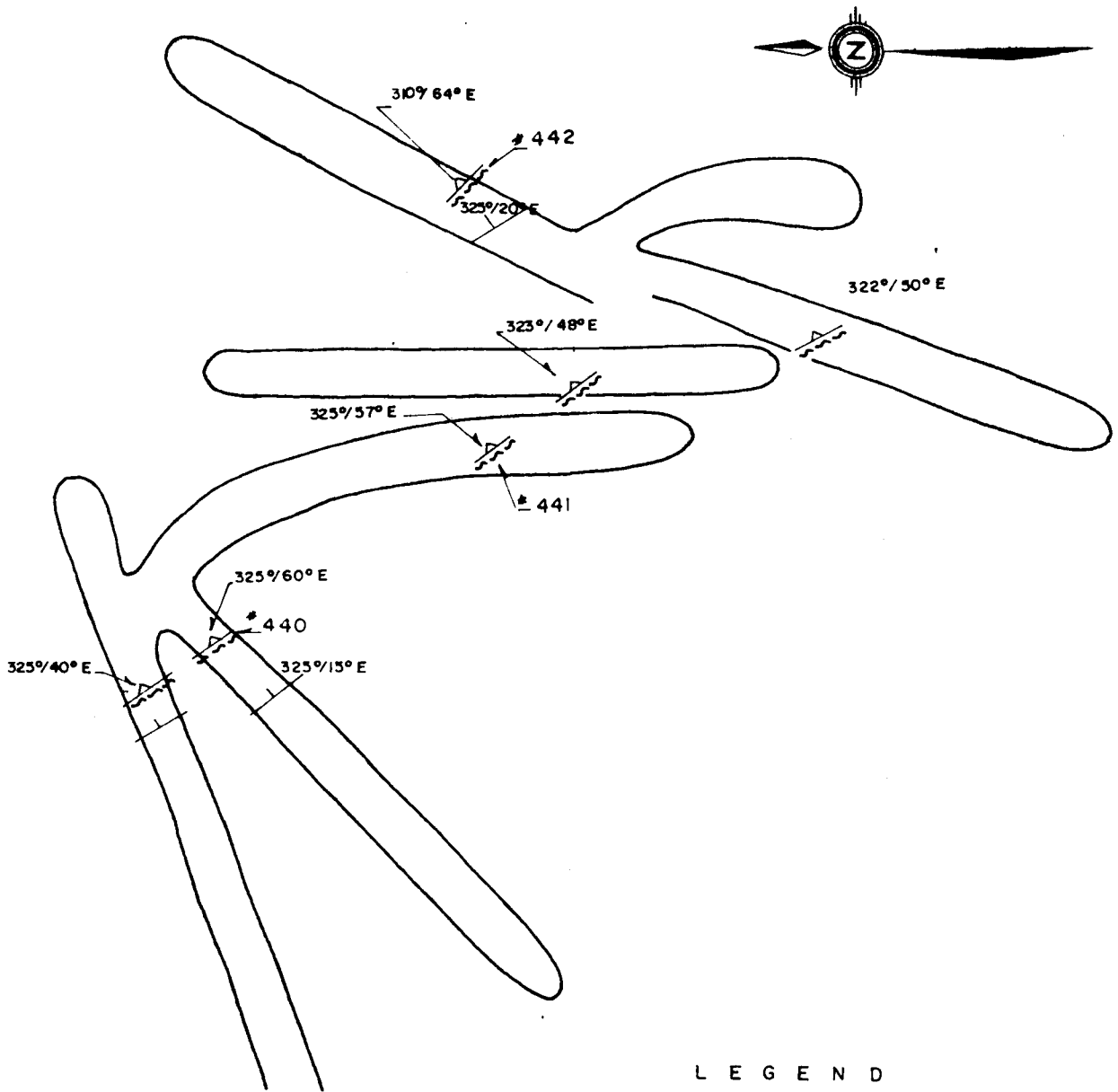
- 7b. Argillites and Phyllites.
- 3b. **LOWER CAMBRIAN**  
Phyllites and Minor Limestone
- 1a. **EARLIER LOWER CAMBRIAN**  
Biotite Schist and gneiss.
- 15a. **INTRUSIVE**  
Quartz Monzonite } Cassiar Batholith  
and Granodiorite

*P. H. Sevensma*

NOTE: Claims boundary approximate.





<b>SILVER SEVEN EXPLORATION LTD.</b>	
<b>REGIONAL GEOLOGY — PROPERTY LOCATION</b>	
Watson Lake M.D.—Y.T.	105 — B — 1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Dwg. No.                      Fig. 1	Aug. 1969                      Scale: 0  4 miles





L E G E N D

NOTE: Country rock is limy phyllites.

-  Mineralized shear 4" to 8"
-  Strike and dip of shear.
-  Bedding.
-  Numbers designate samples

ASSAYS

Sample no.	Width	Ag.	Pb.	Au.	Zn.
# 440	4"	11.4	8.36	0.03	8.30
# 441	4"	159.1	34.58	0.04	1.91
# 442	8"	17.0	22.78	0.06	3.67

Samples by P.H. Sevensma, Sept. 1968.  
 Assayed by Coast Eldridge, file no. A.3-S-4-  
 - 68 - 2129.

*P.H. Sevensma*

SILVER SEVEN EXPLORATION LTD.

PETE GR. TRENCHES and SAMPLE LOCATIONS  
 Watson Lake M.D.-Y.T. 105-B-1

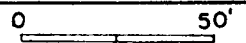
P. H. Sevensma Consultants Ltd. Vancouver, B.C.

Dwg. No.:

Fig: 3

Sept. 1969.

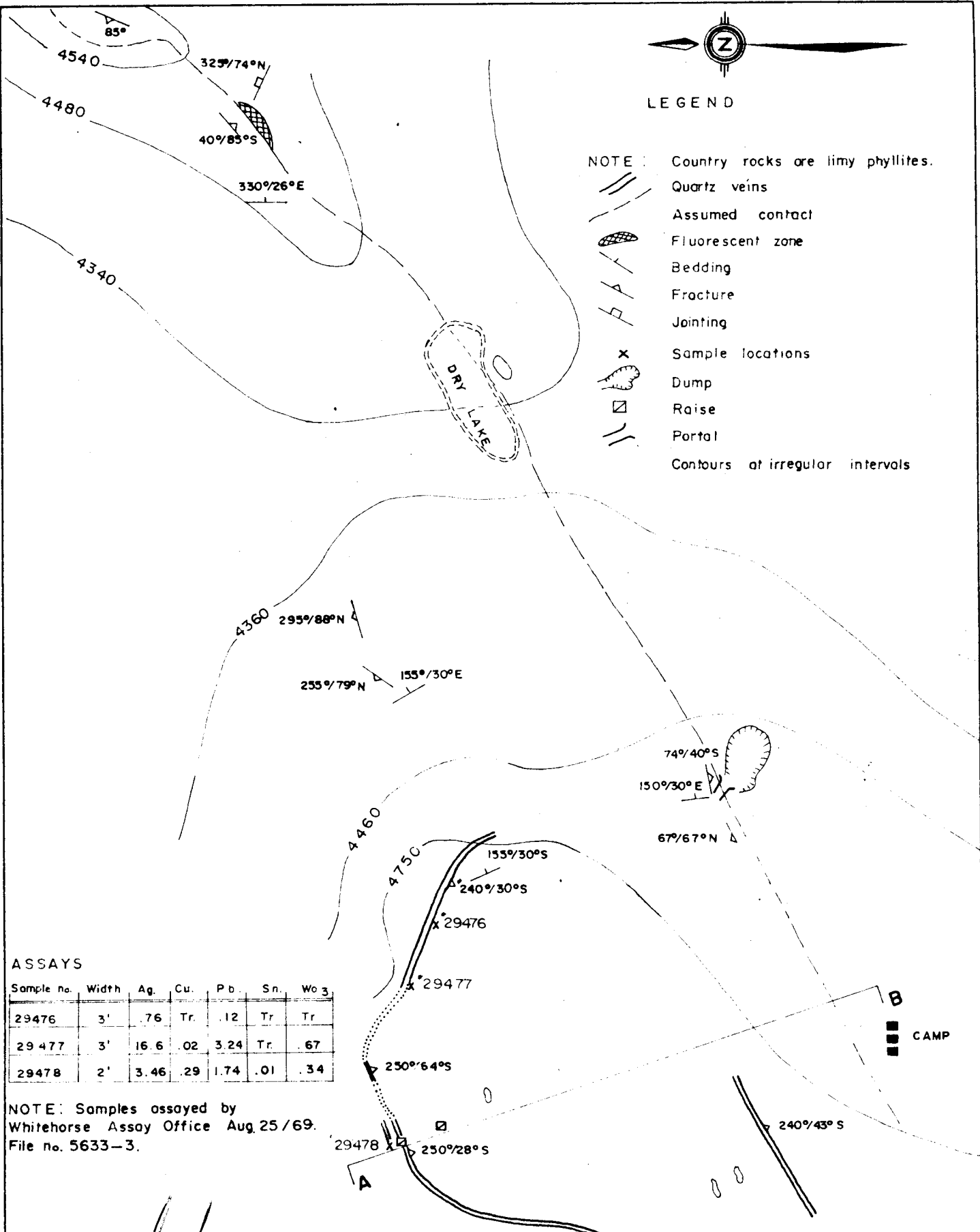
Scale:





LEGEND

- NOTE: Country rocks are limy phyllites.
- Quartz veins
  - Assumed contact
  - Fluorescent zone
  - Bedding
  - Fracture
  - Jointing
  - Sample locations
  - Dump
  - Raise
  - Portal
  - Contours at irregular intervals



ASSAYS

Sample no.	Width	Ag.	Cu.	Pb.	Sn.	Wc <sub>3</sub>
29476	3'	.76	Tr.	.12	Tr.	Tr.
29477	3'	16.6	.02	3.24	Tr.	.67
29478	2'	3.46	.29	1.74	.01	.34

NOTE: Samples assayed by Whitehorse Assay Office Aug. 25/69. File no. 5633-3.

*P. H. Sevensma*

SILVER SEVEN EXPLORATION LTD.

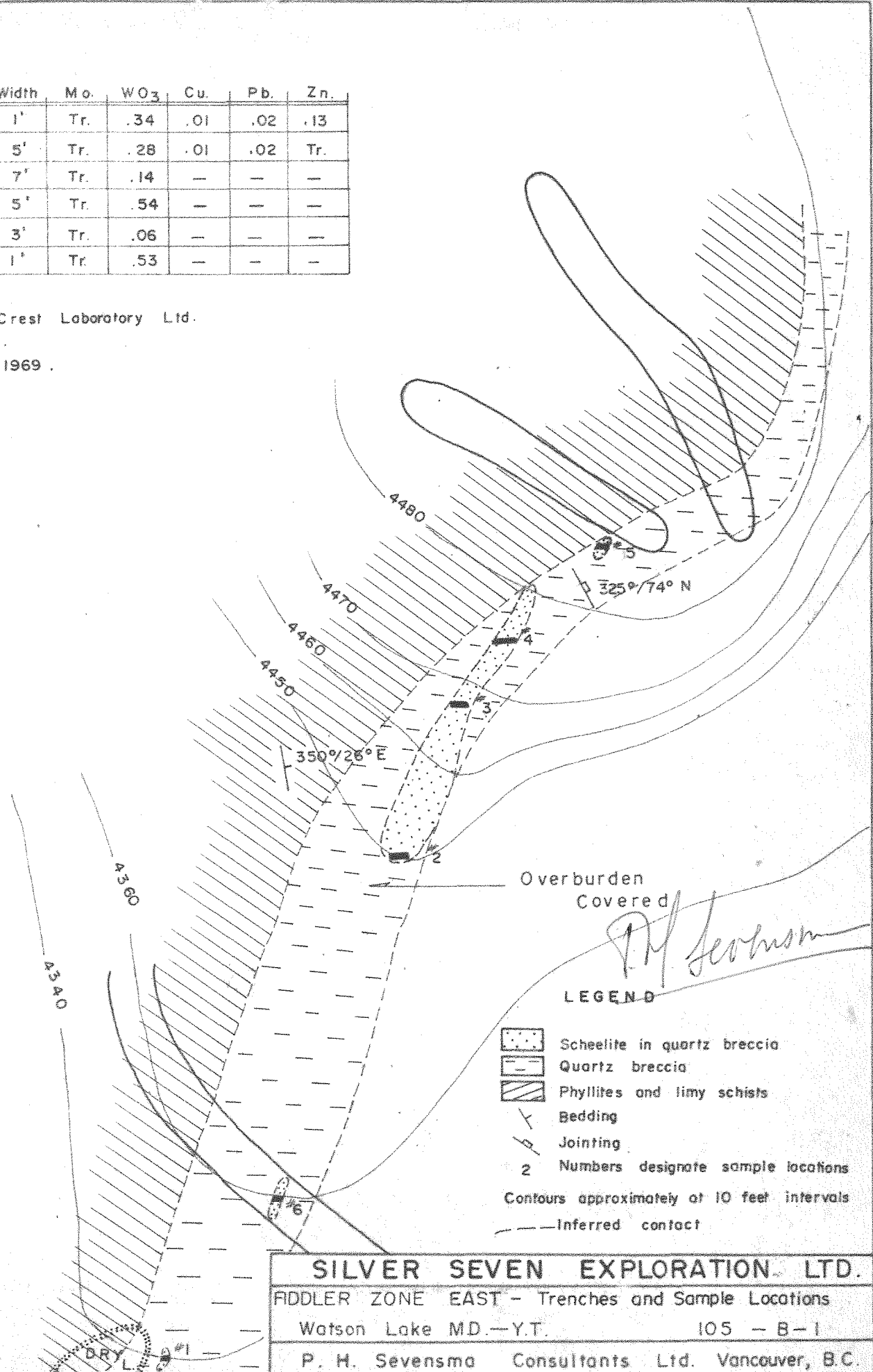
FIDDLER GR. West.-Trenches and Sample Locations  
Watson Lake M.D.-Y.T. 105 -B-1

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








ASSAYS

Sample no.	Width	Mo.	WO <sub>3</sub>	Cu.	Pb.	Zn.
1	1'	Tr.	.34	.01	.02	.13
2	5'	Tr.	.28	.01	.02	Tr.
3	7'	Tr.	.14	—	—	—
4	5'	Tr.	.54	—	—	—
5	3'	Tr.	.06	—	—	—
6	1'	Tr.	.53	—	—	—

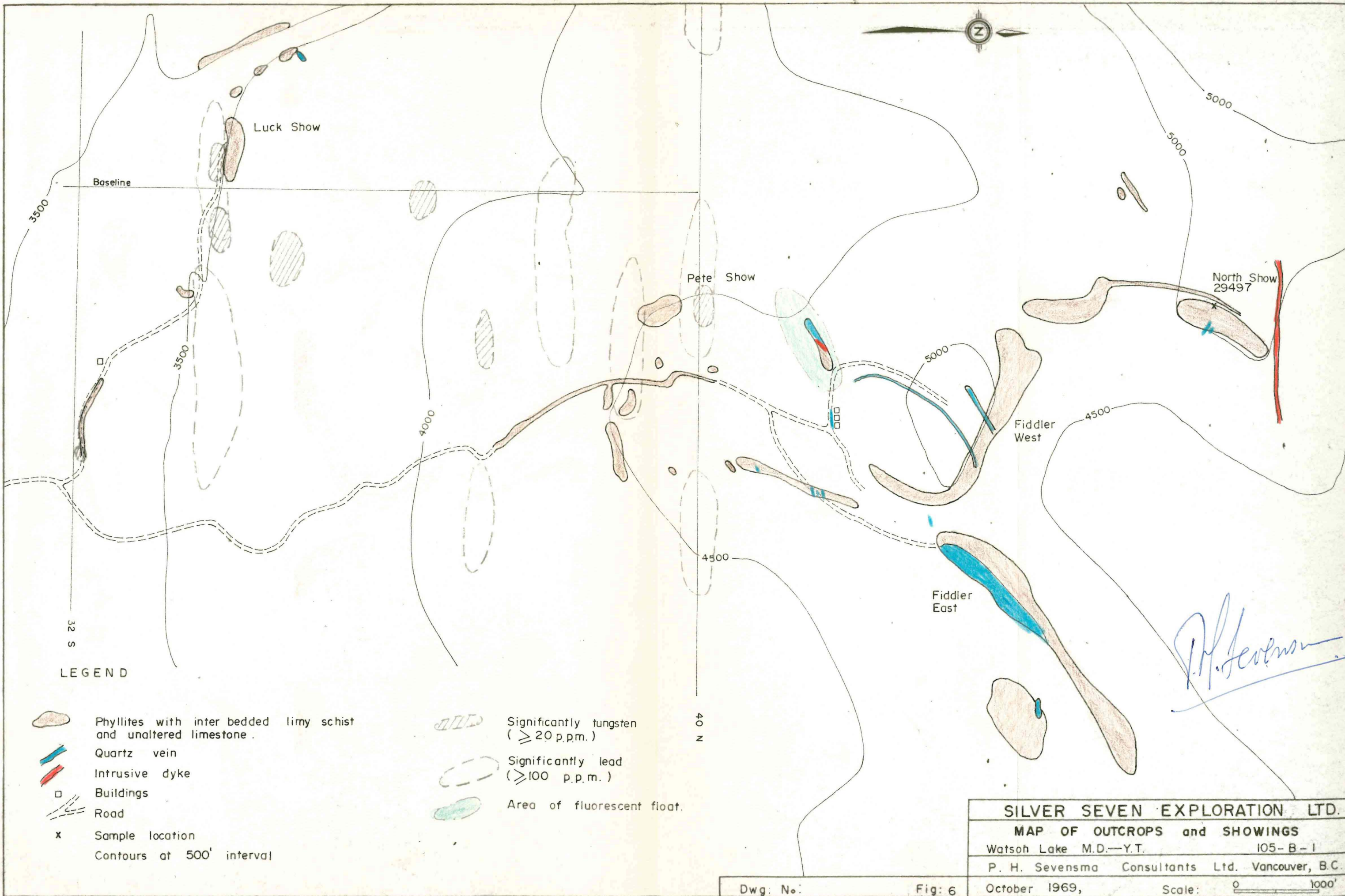
Assay by Crest Laboratory Ltd.  
 Rep. no. 272.  
 October 14, 1969.









LEGEND




-  Scheelite in quartz breccia
-  Quartz breccia
-  Phyllites and limy schists
-  Bedding
-  Jointing
-  Numbers designate sample locations
- Contours approximately at 10 feet intervals
-  Inferred contact

**SILVER SEVEN EXPLORATION LTD.**  
 FIDDLER ZONE EAST - Trenches and Sample Locations  
 Watson Lake MD.-Y.T. 105 - B-1  
 P. H. Sevensma Consultants Ltd. Vancouver, B.C.



LEGEND

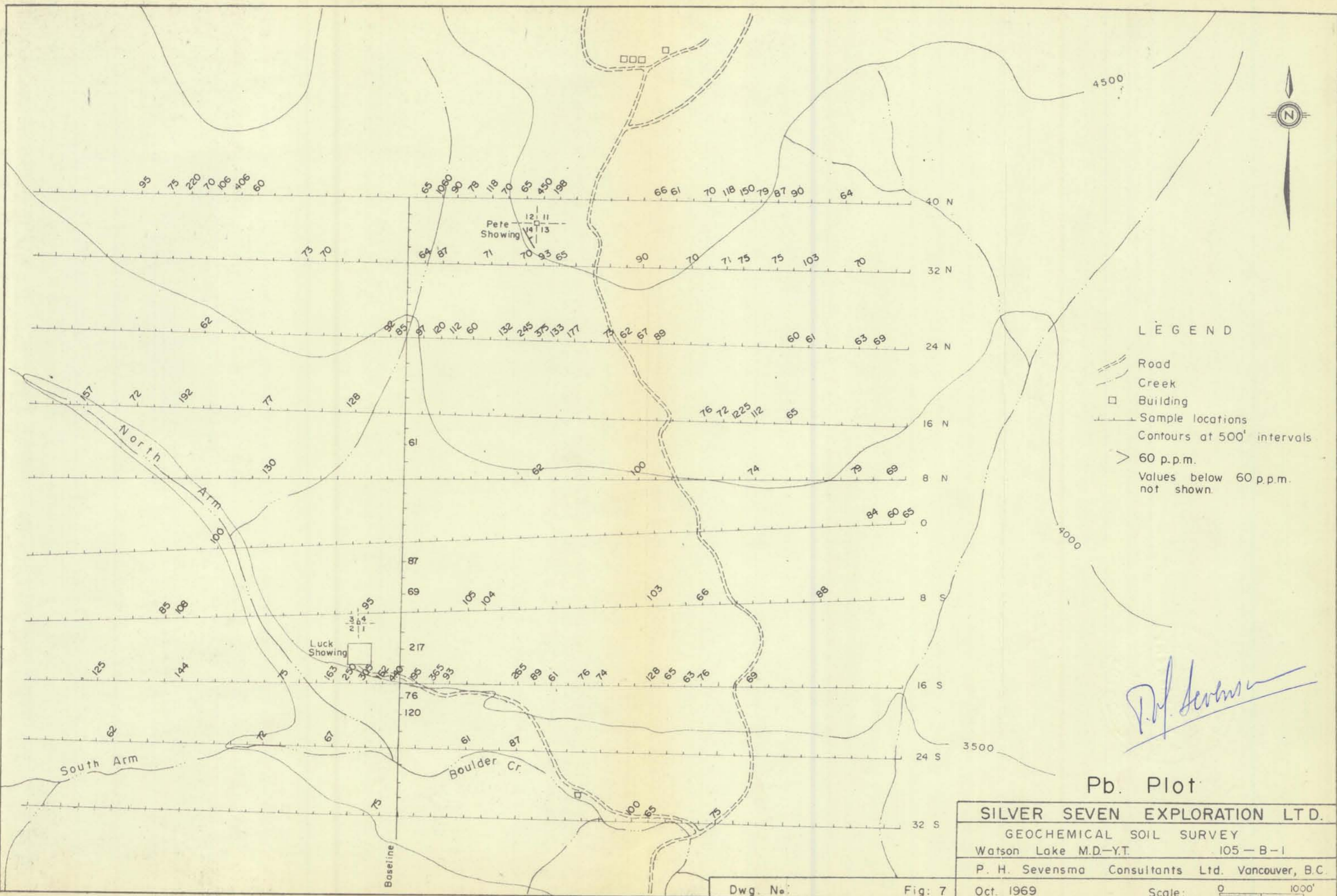
-  Phyllites with inter bedded limy schist and unaltered limestone.
  -  Quartz vein
  -  Intrusive dyke
  -  Buildings
  -  Road
  -  Sample location
- Contours at 500' interval

-  Significantly tungsten ( $\geq 20$  p.p.m.)
-  Significantly lead ( $\geq 100$  p.p.m.)
-  Area of fluorescent float.

**SILVER SEVEN EXPLORATION LTD.**  
**MAP OF OUTCROPS and SHOWINGS**  
 Watson Lake M.D.—Y.T. 105-B-1  
 P. H. Sevensma Consultants Ltd. Vancouver, B.C.  
 October 1969, Scale: 0 1000'

Dwg. No.:

Fig: 6



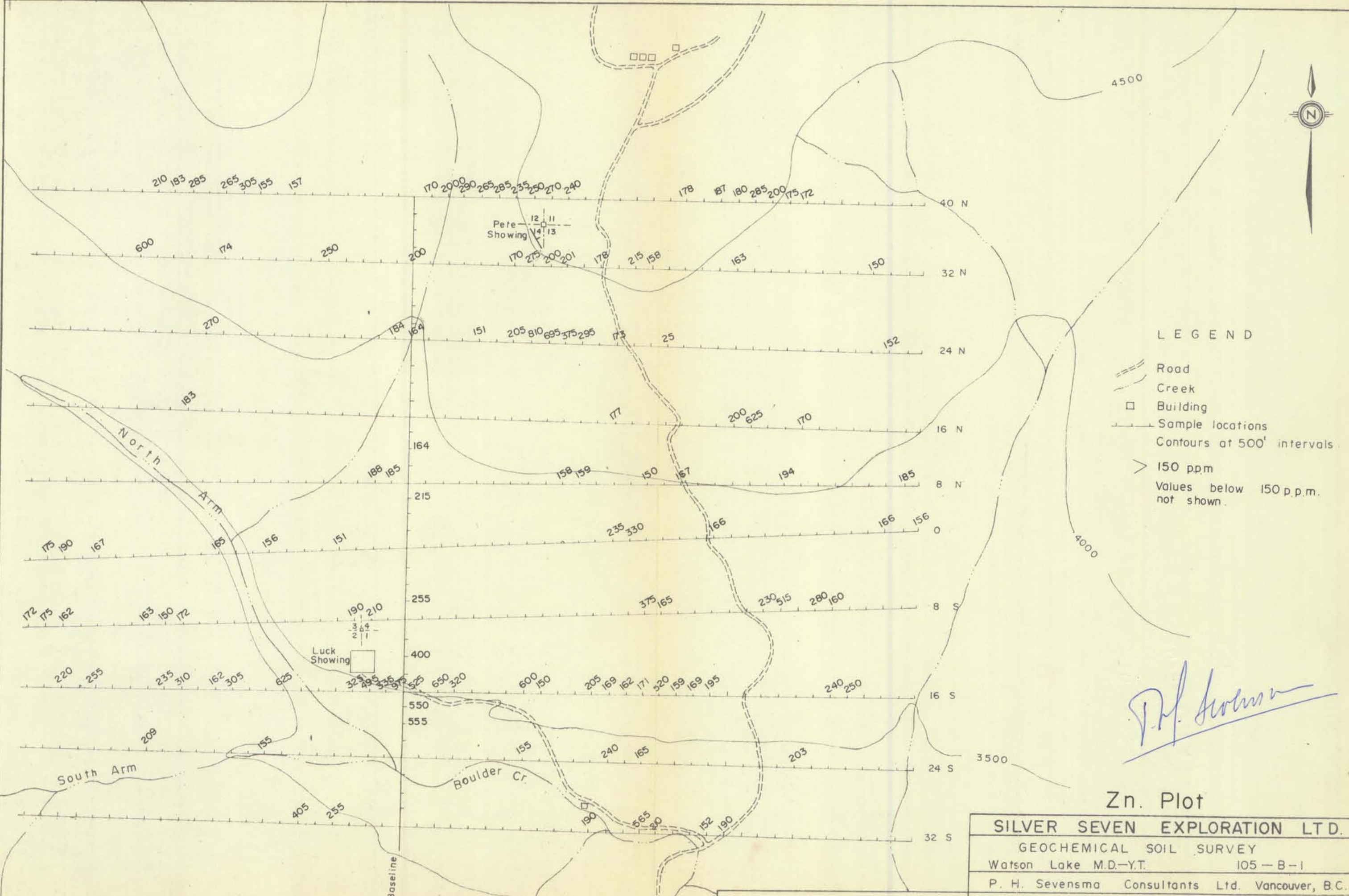
- LEGEND**
- Road
  - Creek
  - Building
  - Sample locations
  - Contours at 500' intervals
  - 60 p.p.m.
  - Values below 60 p.p.m. not shown.

*P.H. Sevensma*

### Pb. Plot

SILVER SEVEN EXPLORATION LTD.	
GEOCHEMICAL SOIL SURVEY	
Watson Lake M.D.-Y.T.	105-B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Oct. 1969	Scale: 0 1000'

Dwg. No. Fig: 7



LEGEND

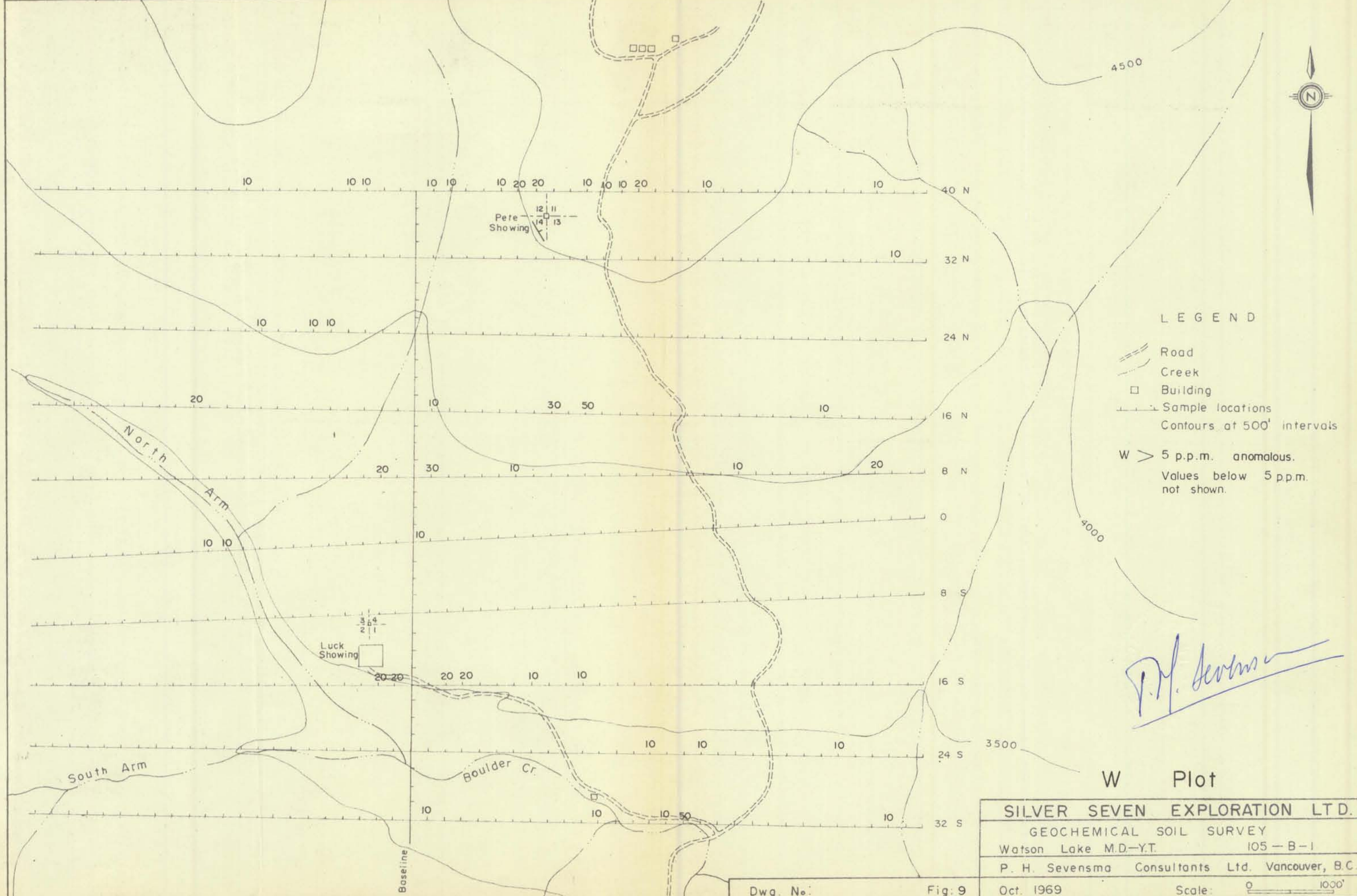
- Road
- Creek
- Building
- Sample locations
- Contours at 500' intervals
- 150 p.p.m.
- Values below 150 p.p.m. not shown.

*P.H. Sevensma*

### Zn. Plot

SILVER SEVEN EXPLORATION LTD.	
GEOCHEMICAL SOIL SURVEY	
Watson Lake M.D.-Y.T.	105 - B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Oct. 1969	Scale: 0 1000'

Dwg. No. Fig: 8



LEGEND

- Road
- Creek
- Building
- Sample locations
- Contours at 500' intervals

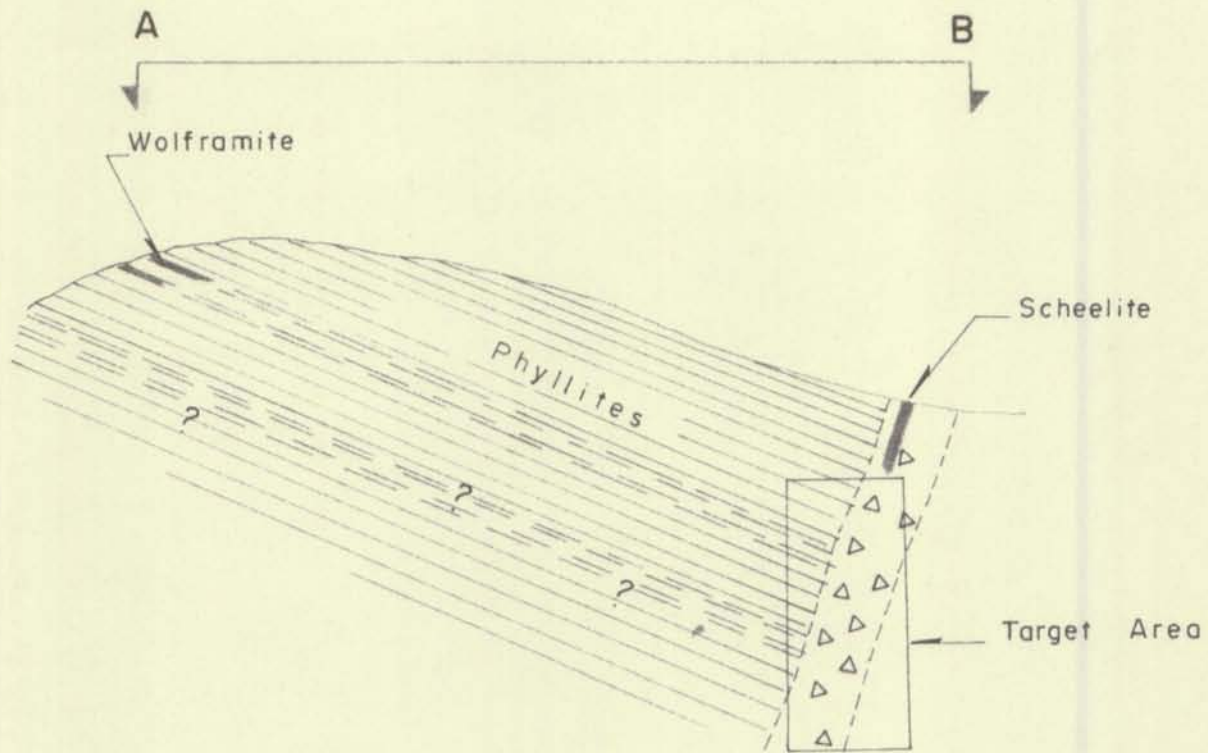
W > 5 p.p.m. anomalous.  
 Values below 5 p.p.m. not shown.

*P. H. Sevensma*


W Plot

SILVER SEVEN EXPLORATION LTD.	
GEOCHEMICAL SOIL SURVEY	
Watson Lake M.D.-Y.T.	105-B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Oct. 1969	Scale:

Dwg. No. Fig. 9



*P. H. Sevensma*

<b>SILVER SEVEN EXPLORATION LTD.</b>	
SCHEMATIC CROSS-SECTION A-B, FROM Fig 4.	
Watson Lake M.D.-Y.T.	105-B-1
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Oct. 1969,	Scale: 

Dwg. No.:

Fig: 10